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Faculty of Health Sciences
Bachelor of Science Honours in Biomedical Science/ Bachelor of Science Honours in Cosmetics Sciences
BSM 1122 Medical Terminology (Non-GPA Course)
1st Year 1st Semester
End Semester Assignment-Based Examination

Date	**: 14th November 2025**
Time	**: 09.00 a.m. – 11.00 a.m. (Two hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write the answers in black or blue ink.

Question 1 **(100 marks)**

1.1 Explain the role of medical terminology in healthcare communication. (25 marks)

1.2 Explain how prefixes and suffixes modify the meanings of root words with suitable examples. (25 marks)

1.3 Explain how medical terminology is used in diagnosis and treatment documentation. Provide examples from at least two body systems. (25 marks)

1.4 Explain with examples how combining forms are used to construct complex medical terms. (25 marks)

Question 2 **(100 marks)**

2.1 Analyze the term **"polyneuropathy"** and describe the meaning of each part. (25 marks)

2.2 Illustrate directional terms of human body using a label diagram. (25 marks)

2.3 Write five medical terms related to each of following systems and write the meaning of those after analyzing the main components of those i.e. Prefix, Root, Combining vowel, Suffix.

2.3.1 Respiratory system (25 marks)

2.3.2 Endocrine system (25 marks)

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Faculty of Health Sciences
Bachelor of Science Honours in Industrial Pharmaceutical Science/ Bachelor of Science Honours in Medical Health Product Management
BSM 1122 Medical Terminology
1st Year 1st Semester
End Semester SEQ Examination

Date	**: 14th November 2025**
Time	**: 09.00 a.m. – 11.00 a.m. (Two hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **FOUR** questions.
- Answer **ALL** questions.
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Question 1 **(100 marks)**

1.1 A surgeon needs to make an incision that divides the body into equal right and left halves to access the spinal cord.
  1.1.1. Which anatomical plane will the surgeon use? (15 marks)
  1.1.2. Why is it the most appropriate choice? (15 marks)

1.2 If a CT scan of the abdomen is taken to compare the position of organs on the anterior and posterior sides of the body, which body plane is most suitable for the scan? (15 marks)

1.3 During thoracic surgery, the surgeon must avoid damaging the membrane that lines the chest wall and covers the lungs.
  1.3.1 Identify this membrane. (15 marks)
  1.3.2 What are structural and functional significance of it? (15 marks)

1.4 Illustrate the nine regions of the abdomen area. (25 marks)

Question 2 **(100 marks)**

2.1 Analyze following terms, breaking the terms into prefix, root, and suffix.
(15 marks x5 = 75 marks)

		Prefix (If present)	Root	Suffix	Combining vowel (If present)	Meaning
Ex	**Arteriosclerosis**		*arteri /o = artery*	*-sclerosis = hardening*	*o in the word arterio*	*Arteriosclerosis means hardening or thickening of the arterial walls, which reduces elasticity and blood flow*
2.1.1	**Tachycardia**					
2.1.2	**Hypoxia**					
2.1.3	**Gastroenterology**					
2.1.4	**Hepatomegaly**					
2.1.5	**Cholecystitis**					

2.2 Compare dysmenorrhea and amenorrhea? (25 marks)

Question 3 **(100 marks)**

3.1 Identify the **prefix** shared by following words and state how it changes each term's meaning. (25 marks)

Hyperglycemia, Hypertension and Hyperthermia

3.2 Identify the **suffix** shared by following words and state how it changes each term's meaning. (25 marks)

Appendectomy, Mastectomy, Tonsillectomy

3.3 Identify the **prefix** shared by following words and state how it changes each term's meaning.

Pericardium, Periosteum and Perinephric (25 marks)

3.4 Identify the **suffix** shared by following words and state how it changes each term's meaning. (25 marks)

Anemia, Leukemia, Bacteremia

Question 4 **(100 marks)**

Fill in the blanks in followings. (10 marks X 10 = 100 marks)

4.1. The term ***osteoporosis*** literally means a condition of _____ bones.
4.2 The root ***aden/o*** means _____.
4.3 The suffix ***-genesis*** in ***spermatogenesis*** means _____.
4.4 The root ***mamm/o*** refers to the _____.
4.5 The prefix ***auto-*** in ***autoimmune*** means _____.
4.6 The root ***derm/o*** or ***cutane/o*** refers to the _____.
4.7 The prefix ***hypo-*** in ***hypoglycemia*** means _____.
4.8 The root ***my/o*** refers to _____.
4.9 The root word ***angi/o*** refers to a _____.
4.10 The suffix ***-algia*** in ***neuralgia*** means _____.

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Faculty of Health Sciences

Bachelor of Science Honors in Industrial Pharmaceutical Science/ Bachelor of Science Honors in Medical and Health Product Management

BSM 1153 General Pharmaceutics/ BSM 1144 General Pharmaceutics

Batch 10

1st Year 1st Semester

End Semester Examination - SEQ

Date : 11th of November 2025

Time : 9.00 a.m. - 12.00 noon (Three hours)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** structured essay type questions.
- Answer **ALL** the questions.
- Final answers should be given legibly in black or blue ink.

Question 01 **(100 marks)**

1.1 What is "Pharmaceutics"? (20 marks)

1.2 List the characteristics of a drug. (20 marks)

1.3 Outline the functions and services of the State Pharmaceuticals Corporation (SPC). (30 marks)

1.4 State the differences between hard gelatin capsules and soft gelatin capsules. (30 marks)

Question 02 **(100 marks)**

2.1 List **four (04)** types of aqueous solution dosage forms. (20 marks)

2.2 Write an account on sterile dosage forms. (25 marks)

2.3 Mention **five (05)** types of excipients used in solid dosage forms. (25 marks)

2.4 Outline the function of following types of excipients, giving **one (01)** example for each.

2.4.1 Buffers (15 marks)

2.4.2 Antioxidants (15 marks)

Question 03 **(100 marks)**

3.1 Distinguish between "pharmacopoeia" and "formulary". (25 marks)

3.2 Write a short account on British Pharmacopoeia (BP). (25 marks)

3.3 State **five (05)** advantages of glass as a packaging material. (25 marks)

3.4 Outline the use of metals as packaging materials. (25 marks)

Question 04 **(100 marks)**

4.1 List **four (04)** essential components of a manufacturing label. (20 marks)

4.2 State **four (04)** common instructions given on dug labels. (20 marks)

4.3 How does micobial contamination of medicines affect the patients safety? (30 marks)

4.4 Outline the importance of controlling temperature inside a manufacturing plant. (30 marks)

Question 05 **(100 marks)**

5.1 State **five (05)** reasons to follow good manufacturing practices (GMP) within a pharmaceutical plant. (20 marks)

5.2 What is current good manufacturing practices (cGMP)? (20 marks)

5.3 Mention **three (03)** uses of analytical reference standards (ARS). (30 marks)

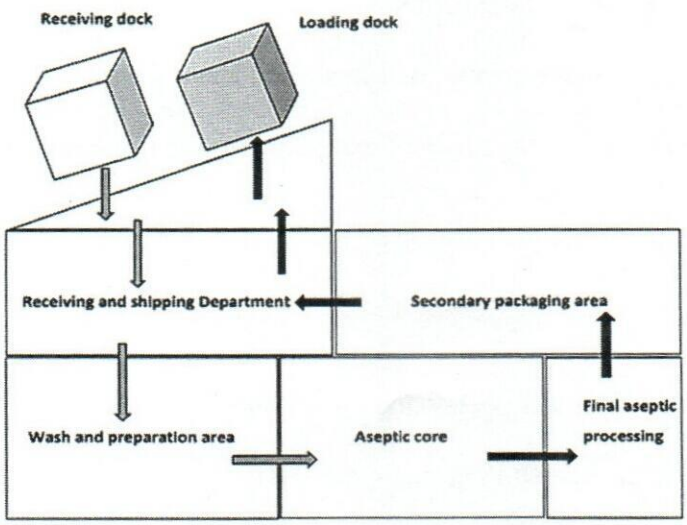
5.4 Outline the procedure of preperation of analytical reference standards from working standards. (30 marks)

Question 06 **(100 marks)**

6.1 State **five (05)** factors that influence the layout of a pharmaceutical plant. (20 marks)

6.2 What is the reason for maintaining a pressure cascade within a drug manufacturing plant? (30 marks)

6.3 Following figure shows a pharmaceutical plant layout. Comment on the desirability of this plant layout. (20 marks)



6.4 Write a short note on the material movement and the personnel movement within a pharmaceutical plant. (30 marks)

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Faculty of Health Sciences
B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/ B.Sc. (Hons) Cosmetic Science
End Semester Examination-SEQ
Batch 10
BSM1133 – Biology
1st Year 1st Semester

Date: 04th of November 2025
Time: 09.00 am – 12.00 pm – Three Hours

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX Structured Essay Type Questions**.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

Question 01 **(100 Marks)**

1.1 "Cells are the building blocks of life." Discuss this statement with reference to the cell theory. **(30 Marks)**
1.2 List any **five (05)** characteristics that distinguish living organisms from non-living things. **(20 marks)**
1.3 What is homeostasis? Give **one (01)** example. **(20 marks)**
1.4 Describe the main structural components of a eukaryotic cell and explain the function of each. **(30 Marks)**

Question 02 **(100 Marks)**

2.1 Describe the pathway of blood through the heart. **(30 Marks)**
2.2 What is the difference between oxygenated and deoxygenated blood? **(20 marks)**
2.3 Draw a labelled diagram comparing the cross-section of an artery and a vein, highlighting differences in wall thickness, lumen size, and valves. **(20 Marks)**
2.4 Briefly describe the major functions of the lymphatic system. **(30 Marks)**

Question 03 **(100 Marks)**

3.1 List the main constituents present in human saliva. **(20 Marks)**
3.2 What are accessory digestive organs, and mention why are they important? **(30 Marks)**
3.3 List the main organs of the respiratory system. **(20 Marks)**
3.4 Briefly describe how breathing in (inspiration) and breathing out (expiration) happen. **(30 Marks)**

Question 04 **(100 Marks)**

4.1 What are the **four (04)** primary function of nervous system **(20 Marks)**
4.2 Write **two (02)** examples for the somatic reflexes and **two (02)** examples for autonomic reflexes. **(20 Marks)**
4.3 Define "neuralgia" and provide **three (03)** examples. **(30 marks)**

4.4 Mention the effects of sympathetic and parasympathetic nervous systems on each organ mentioned in the table below. **(30 Marks)**

Organ	Sympathetic nervous system	Para sympathetic nervous system
Lungs	A.	a. .....
Digestive system	B.	b. .....
Eye	C.	c. .....

Question 05 **(100 Marks)**

5.1 State **three (03)** phases of urine production. **(25 Marks)**

5.2 Write **one (01)** main function of each of the following organs in urinary system **(25 Marks)**

i. Bladder ii. Ureter iii. Urethra iv. Nephron

5.3 Write **one (01)** main function of each of the following organs in male reproductive system **(25 Marks)**

ii. Testes ii. Prostate gland iii. Epididymis iv. Vas deferens (sperm duct)

5.4 Write **one (01)** main function of each of the following organs in the female reproductive system. **(25 Marks)**

i. Ovaries ii. Fallopian tubes (uterine tubes) iii. Uterus iv. Vagina

Question 06 **(100 Marks)**

6.1 List all the bones in **axial** and **appendicular skeleton separately**. **(30 Marks)**

6.2 List **five (05)** functions of Skeletal system. **(20 marks)**

6.3 Name the **three (03)** types of muscle tissue and give one example of each. **(20 Marks)**

6.4 Name five (05) endocrine glands, and for each gland, state one hormone it secretes and one main function of that hormone. **(30 Marks)**

Endocrine gland	**One (01)** hormone secreted	**One (01)** function
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

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Beyond A Graduate

Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences/ BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 10
1st Year 1st Semester
End Semester SEQ Examination

Date : **30th of October 2025**
Time : **9.00am-12.00pm (Three Hours)**

QUINSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QESTION 01 **(100 marks)**

1.1 Define the term Information and Communication Technology (ICT) and how is it used to manage and handle information in businesses? (25 marks)
1.2 Briefly describe the generations of computers from the first to the fifth generation. (25 marks)
1.3 Identify the different types of computers and how are they different in use and speed. (25 marks)
1.4 "Computers do some basic steps to change raw data into useful information". Briefly outline the each steps. (25 marks)

QUESTION 02 **(100 marks)**

2.1 Define the Operating System (OS) and mention how it helps the computer and programs along with examples. (25 marks)
2.2 State the main types of user interfaces and how are they different from each other? (25 marks)
2.3 Name four important settings in an OS along with their functions. (25 marks)
2.4 Name five important things about managing files in a computer. (25 marks)

QUESTION 03 **(100 marks)**

3.1 "Computer memory is like the human brain." Outline the role of memory in a computer. (25 marks)
3.2 Name the main types of computer memory and the advantages and disadvantages of each. (25 marks)
3.3 Mention the difference between ROM and RAM. (25 marks)
3.4 Briefly describe secondary storage along with examples. (25 marks)

QUESTION 04 **(100 marks)**

4.1 Define the term database and mention the use of databases in hospitals or schools. (25 marks)
4.2 State the layers of a database system along with example. (25 marks)
4.3 Mention the two main ways to collect data along with examples. (25 marks)
4.4 Outline the steps to collect data. (25 marks)

QUESTION 05 **(100 marks)**

5.1 Mention the main uses of the Internet and three advantages and three disadvantages. (25 marks)
5.2 Write an email asking your teacher to let you skip a class using a correct email format. (25 marks)
5.3 Compare and contrast the internet and the web along with the use of web. (25 marks)
5.4 Name five (05) companies that provide Internet, operating systems, and databases. (25 marks)

QUESTION 06 **(100 marks)**

6.1 "An online community is a network of people who communicate with one another and an organization through interactive tools." Briefly explain this statement further. (25marks)
6.2 State the importance of network in schools, offices, and hospitals. (25 marks)
6.3 Briefly explain three types of computer networks LAN, WAN, and MAN along with example. (25 marks)
6.4 Name four common Internet services (like email or video calls) along with their function. (25 marks)

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences
BSc(Hons)Biomedical Sciences/ BSc(Hons)Industrial Pharmaceutical Sciences/ BSc(Hons)Cosmetic Sciences
BSM 1113 Information Technology
Batch – 10
1st Year 1st Semester
End Semester Assignment Examination

Date : **30th of October 2024.**
Time : **1.30PM-2.30PM (1 Hour)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 "Computers have become an essential tool in every professional field." State how computers are used in education with suitable examples. (25 marks)

1.2 Briefly explain the difference between data and information and discuss how data is processed into meaningful information with examples and diagrams. (25 marks)

1.3 Briefly describe the relationship between input devices, processing units, and output devices in a computer system. (give real-world examples to show how they depend on each other.) (50 marks)

QUESTION 02 **(100 marks)**

2.1 "A network topology defines how devices and cables are arranged in a network." Briefly explain the following four topologies with neat sketches:

2.1.1 Bus topology (05marks)
2.1.2 Star topology (05marks)
2.1.3 Ring topology (05marks)
2.1.4 Mesh topology (05marks)

2.2 "Database management systems (DBMS) are essential for handling large volumes of data." Briefly explain with diagrams and examples how databases are used in your field of study. (25 marks)

2.3 List down devices used in building a computer network. (25 marks)

2.4 You are planning a network at home with a smart TV, two laptops, and mobile phones. Briefly explain how you would connect them using a router and modem, describing the role of each device in ensuring internet access and data security. (30 marks)

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Faculty of Health Sciences

BSc (Hons)Biomedical Sciences/ BSc (Hons)Industrial Pharmaceutical Sciences/ BSc (Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management
General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester – Batch 10
End Semester SEQ Examination

Date : **07th of October 2025**
Time : **9. 00A.M – 12.00P.M (3 hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

Question 1 **(100 marks)**

Factorize the given expressions.

1.1 $x^2 + 6x + 8$ (20 marks)

1.2 $2x^2 - 5x + 2$ (30 marks)

1.3 $4t^2 - 25$ (20 marks)

1.4 $x^2 - 3x + 2x - 6$ (30 marks)

Question 2 **(100 marks)**

Solve

2.1 $2x + 5 = 4x - 15$ (20 marks)

2.2 $x^2 = y^2 + 5$ and $x + y + 5 = 0$ (50 marks)

2.3 $9x^2 - 12x + 4 = 0$ (30 marks)

Question 3 **(100 marks)**

The 6th term of a arithmetic progression is twice the 3rd term and the first term is 3. The sequence has 10 terms. [$T_n = a + (n-1)d$, $S_n = \frac{n}{2}\{2a + (n-1)d)\}$]

3.1 Build the equations. (40 marks)

3.2 State the common difference. (10 marks)

3.3 Identify the 8th term. (20 marks)

3.4 Mention the sum of the given arithmetic progression? (30 marks)

Question 4 **(100 marks)**

Prove these identities

4.1 $cos^2x - sin^2x = 2\,cos^2x - 1$ (20 marks)

4.2 $\frac{\sin\theta}{1-\cos\theta} = \frac{1+\cos\theta}{\sin\theta}$ (30 marks)

4.3 $\frac{\cos x}{1-\sin x} - \frac{1}{\cos x} = \tan x$ (50 marks)

Question 5 **(100 marks)**

5.1 Differentiate with respect to x ,

5.1.1 $y = (-2x + 5)(3x - 7)$ (30 marks)

5.1.2 $y = \frac{3}{2}x^2 - 6x^{-\frac{1}{2}} + e^x$ (20 marks)

5.2 Given that $y = \sqrt{x} - \frac{8}{x^2}$, find,

5.2.1 $\frac{dy}{dx}$ (30 marks)

5.2.2 The gradient of the curve at the point, $\left(4, 1\frac{1}{2}\right)$ (20 marks)

Question 6 **(100 marks)**

6.1 Find $\int (8x^{-5} - 5x^7 + 4x)\ dx$ (20 marks)

6.2 Find $\int \left(\frac{7}{x^2} + \frac{6}{x^{-3}} + 4\right)\ dx$ (20 marks)

6.3 Evaluate $\int_0^2 \frac{1}{5x+3}\ dx$ (30 marks)

6.4 Evaluate $\int_5^7 \frac{1}{4-x}\ dx$ (30 marks)

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Beyond A Graduate

Faculty of Health Sciences
B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/ B.Sc. (Hons) Cosmetic Science
End Semester Examination-SEQ
Batch 10
BSM1133 – Biology
1st Year 1st Semester

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Endocrine gland	**One (01)** hormone secreted	**One (01)** function
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences/ BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 10
1st Year 1st Semester
End Semester SEQ Examination

Date : **30th of October 2025**
Time : **9.00am-12.00pm (Three Hours)**

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Beyond A Graduate

Faculty of Health Sciences

BSc (Hons)Biomedical Sciences/ BSc (Hons)Industrial Pharmaceutical Sciences/ BSc (Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management
General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester – Batch 10
End Semester SEQ Examination

Date	**: 07th of October 2025**
Time	**: 9. 00A.M – 12.00P.M (3 hours)**

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3.1 Build the equations. (40 marks)

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Question 6 **(100 marks)**

6.1 Find $\int (8x^{-5} - 5x^7 + 4x)\ dx$ (20 marks)

6.2 Find $\int \left(\frac{7}{x^2} + \frac{6}{x^{-3}} + 4\right)\ dx$ (20 marks)

6.3 Evaluate $\int_0^2 \frac{1}{5x+3}\ dx$ (30 marks)

6.4 Evaluate $\int_5^7 \frac{1}{4-x}\ dx$ (30 marks)

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Faculty of Health Sciences

Bachelor of Science Honors in Industrial Pharmaceutical Science/ Bachelor of Science Honors in Medical and Health Product Management

BSM 1153 General Pharmaceutics/ BSM 1144 General Pharmaceutics

Batch 09

1st Year 1st Semester

End Semester Examination - SEQ

Date : 06th of August 2025

Time : 9.00 a.m. - 12.00 noon (Three hours)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** structured essay type questions.
- Answer **ALL** the questions.
- Final answers should be given legibly in black or blue ink.

Question 01 **(100 marks)**

1.1 State **two (02)** differences between a "medicine" and a "drug". (20 marks)

1.2 What is 'pre-clinical development phase' of a medicine? (20 marks)

1.3 Outline the functions and services of the World Health Organization (WHO) in supporting the pharmaceutical and healthcare systems globally. (30 marks)

1.4 List **five (05)** types of tablet dosage forms. (30 marks)

Question 02 **(100 marks)**

2.1 List **four (04)** types of semisolid dosage forms. (20 marks)

2.2 Write an account on sterile dosage forms. (30 marks)

2.3 Mention **four (04)** types of excipients used in liquid dosage forms. (20 marks)

2.4 Outline the function of following types of excipient, giving **one (01)** example for each.

2.4.1 Lubricants (15 marks)

2.4.2 Binders (15 marks)

Question 03 **(100 marks)**

3.1 What are 'specific monographs' in British Pharmacopoeia? (20 marks)

3.2 Mention the difference between "pharmacopoeia" and "formulary". (20 marks)

3.3 State **four (04)** advantages of plastics, as a packaging material. (20 marks)

3.4 Outline the characteristics of following types of pharmaceutical packaging materials.

3.4.1 Fibrous matter (20 marks)

3.4.2 Soda-lime glass (Type III) (20 marks)

Question 04 **(100 marks)**

4.1 List **five (05)** basic characteristics of a good pharmaceutical label. (25 marks)

4.2 Why is it required to mention manufacturer's contact details on a drug label? (25 marks)

4.3 Mention the main types of contamination, giving **one (01)** example for each type. (20 marks)

4.4 Outline the importance of controlling humididty inside a manufacturing plant. (30 marks)

Question 05 **(100 marks)**

5.1 What is the main importance of following Good Manufacturing Practices (GMP)? (20 marks)

5.2 State **three (03)** major risks that may occur when GMP are not followed in the pharmaceutical industry. (30 marks)

5.3 Mention **three (03)** differences between analytical reference standard and a working standard. (30 marks)

5.4 Why most of the pharmaceutical companies prepare analytical reference standards from working standards? (20 marks)

Question 06 **(100 marks)**

6.1 What is the importance of having a good pharmaceutical plant layout? (20 marks)

6.2 State **three (03)** features of a good pharmaceutical plant layout. (30 marks)

6.3 Write **four (04)** methods to minimize the particulate matters within a clean room. (20 marks)

6.4 Comment on the material movement and the personnel movement within a pharmaceutical plant. (30 marks)

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Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences / BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 09
1st Year 1st Semester
End Semester SEQ Examination

Date	**: 01st of August 2025**
Time	**: 9.00 p.m. – 12.00 pm. (Three Hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX Structured Essay Type Questions**.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Define ICT along with five examples of ICT tools or systems. **(20 marks)**

1.2 Information can be presented and used in different ways. List the main types or formats **(25 marks)**

1.3 1.3.1. The time **(10 marks)**
1.3.2. The main technology used **(10 marks)**
1.3.3. One or two key features or improvements **(10 marks)**

1.4 Briefly explain how ICT helps improve the quality of a hospital management syste with examples of how it can be used in different areas of the hospital. **(25 marks)**

QUESTION 02 **(100 marks)**

2.1 Define the term computer network and list the main benefits of a network **(25 marks)**

2.2 List the different types of network structures and provide brief descriptions for each **(25 marks)**

2.3 Define the term network topology and draw Bus, Ring, Star, and Mesh topologies. **(25 marks)**

2.4 Name **three (03)** network devices and **two (02)** internet service providers in Sri Lanka **(25 marks)**

QUESTION 03 **(100 marks)**

3.1 Differentiate the **Three (03)** device types that you can see in the IT field with examples. **(25 marks)**

3.2 Briefly describe two (2) primary storage technologies. **(25 marks)**

3.3 Briefly explain the main function of a storage device and give one example of a secondary storage device. **(25 marks)**

3.4 Identify whether the following devices are input, output, or storage devices **(25 marks)**

Device

3.4.1 Mouse
3.4.2 Projector
3.4.3 DVD
3.4.4 Keyboard
3.4.5 Monitor
3.4.6 USB Flash Drive
3.4.7 Scanner

3.4.8 Printer

3.4.9 Hard Disk

Type

QUESTION 04 **(100 marks)**

4.1 Define and differentiate the terms "data" and "information" with an appropriate example. **(25 marks)**

4.2 Define the term "internet" and briefly describe **five (05)** advantages of internet **(25 marks)**

4.3 Define the term web browser and state the names of web browsers commonly used to access the Internet **(25 marks)**

4.4 Briefly explain the use of the Internet in the Health Science field. **(25 marks)**

QUESTION 05 **(100 marks)**

5.1 Mention the main purpose of cybersecurity. **(25 marks)**

5.2 Briefly explain why it is important to use a strong password **(25 marks)**

5.3 Define the term computer virus, and state how it can affect your device **(25 marks)**

5.4 Outline the role of antivirus software on a computer. **(25 marks)**

QUESTION 06 **(100 marks)**

6.1 State the function of Microsoft Word. **(25 marks)**

6.2 Write down the shortcut keys for the following actions. **(25 marks)**

Action	Shortcut Key
a) Copy	
b) Cut	
c) Paste	
d) Undo	
e) Redo	
f) Select All	
g) Save	
h) Open a document	
i) Bold	
j) Italic	
k) Underline	
l) Print	

6.3 Identify the font, and how can you change it in MS Word. **(25 marks)**

6.4 Briefly explain how to insert a picture into a Word document. **(25 marks)**

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Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences/ BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 09
1st Year 1st Semester
End Semester Assignment Examination

Date : **01st of August 2024**
Time : **1.30 p.m. – 2.30 pm. (One Hour)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 State the use of Microsoft PowerPoint and briefly describe its main features and common uses. (25 marks)

1.2 Outline the steps to create a new slide and add text and images in Microsoft PowerPoint. (25 marks)

1.3 Define the term animations and slide transitions in PowerPoint and outline how do they improve their presentation. (25 marks)

1.4 Briefly explain how Microsoft PowerPoint is used in the Health Science field by undergraduate students. (25 marks)

QUESTION 02 **(100 marks)**

2.1 List the main advantages and disadvantages of using the Internet and provide a brief explanation for each point. (30 marks)

2.2 Mention two examples of primary and secondary data collection methods and write a short description for each method you list. (20 marks)

2.3 Briefly explain how Information and Communication Technology (ICT) has helped improve the health industry along with few examples to support your answer. (50 marks)

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Faculty of Health Sciences
B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/ B.Sc. (Hons) Cosmetic Science
End Semester Examination-SEQ
Batch 09
BSM1133 – Biology
1st Year 1st Semester

Date: 04th of August 2025
Time: 09.00 am – 12.00 pm – Three Hours

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX Structured Essay Type Questions**.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

Question 01 **(100 Marks)**

1.1 What are the **three (03)** main principles of 'cell theory'? **(20 Marks)**
1.2 List **three (03) differences** between prokaryotic and eukaryotic cells. **(30 Marks)**
1.3 List **four (04)** characteristics of life. **(20 marks)**
1.4 Identify the level of organization starting from the "cell". **(15 Marks)**
1.5 What is the total magnification if the objective lens is twenty-five times and eye piece lens five times? **(15 Marks)**

Question 02 **(100 Marks)**

2.1 List the main valves present in the human heart. **(20 Marks)**
2.2 List **two (02)** differences between closed and open circulatory system. **(20 Marks)**
2.3 List the main components in conductive system in the heart. **(10 marks)**
2.4 What is the difference between arteries and veins in terms of structure. **(30 Marks)**
2.5 List **three (03)** functions of Lymphatic system **(30 Marks)**

Question 03 **(100 Marks)**

3.1 What are the **three (03)** main salivary glands? **(20 Marks)**
3.2 List **three (03)** function of stomach. **(20 Marks)**
3.3 Differentiate between external respiration vs internal respiration. **(30 Marks)**
3.4 List **three (03)** functions of the respiratory system. **(30 Marks)**

Question 04 **(100 Marks)**

4.1 Draw and label the structure of a neurone. **(20 Marks)**
4.2 Name **two (02)** main divisions of the nervous system. **(20 Marks)**
4.3 Below are the steps in neural signal transmission. Arrange them in the correct sequence (1–6), starting from the stimulus to the final response. **(20 Marks)**

The brain or spinal cord processes the signal. (.....)
The sensory receptor detects a stimulus (e.g., heat or pain). (.....)

The signal travels through a motor neuron. (.....)
An interneuron relays the signal within the spinal cord. (.....)
The effector (e.g., muscle) performs the response. (.....)
The sensory neuron sends the signal toward the central nervous system (CNS) (.....)

4.4 Mention the effects of sympathetic and parasympathetic nervous systems on each organ mentioned in the table below. **(40 Marks)**

Organ	Sympathetic nervous system	Para sympathetic nervous system
Heart	A.	a. .....
Lungs	B.	b. .....
Digestive system	C.	c. .....
Blood vessels	D.	d. .....
Eye	E.	e. .....

Question 05 **(100 Marks)**

5.1 List the main components found in normal human urine. **(20 Marks)**

5.2 List **three (03)** phases of urine production. **(20 Marks)**

5.3 Write **one (01)** main function of each of the following organs in male reproductive system **(30 Marks)**

i. Testes ii. Prostate gland iii. Epididymis iv. Vas deferens (sperm duct)

5.4 Write **one (01)** main function of each of the following organs in the female reproductive system. **(30 Marks)**

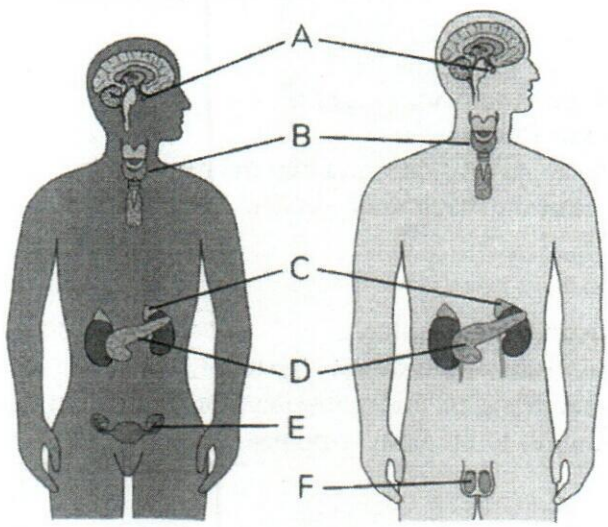
i. Ovaries ii. Fallopian tubes (uterine tubes) iii. Uterus iv. Vagina

Question 06 **(100 Marks)**

6.1 Name **four (04)** organs of the excretory system. **(20 Marks)**

6.2 Compare the **three (03)** types of muscles in the human body. **(30 Marks)**

6.3 List **four (04)** functions of Skeletal system. **(20 Marks)**



6.4 Identify the endocrine glands labeled as A to F. **(30 Marks)**

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Faculty of Health Sciences
Bachelor of Science Honours in Biomedic Science/ Bachelor of Science Honours in Cosmetic Sciences
BSM 1122 Medical Terminology (Non-GPA Course)
1st Year 1st Semester
End Semester Assignment Based Examination

Date	**: 30th July 2025**
Time	**: 09.00 a.m. – 11.00 a.m. (Two hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write the answers in black or blue ink.

Question 1 **(100 marks)**

1.1 Discuss the important of anatomical position of human body. (50 marks)

1.2. Illustrate directional terms of human body using a label diagram. (25 marks)

1.3 Make two sentences including each directional terms you mentioned in 1.2. (25 marks)

Question 2 **(100 marks)**

2.1 Write five medical terms related to each of following systems and write the meaning of those after analyzing the main components of those i.e. Prefix, Root, Combining vowel, Suffix.

2.2.1 Digestive system (25 marks)

2.2.2 Musculoskeletal system (25 marks)

2.2.3 Cardiovascular system (25 marks)

2.2.4 Female reproductive system (25 marks)

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Faculty of Health Sciences
Bachelor of Science Honours in Industrial Pharmaceutical Science/ Bachelor of Science Honours in Medical Health Product Management
BSM 1122 Medical Terminology (GPA-Course)
1st Year 1st Semester
End Semester Assignment Based Examination

Date	**: 30th July 2025**
Time	**: 09.00 a.m. – 11.00 a.m. (Two hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **FOUR** questions.
- Answer **ALL** questions.
- You should write the answers in black or blue ink.

Question 1 **(100 marks)**

1.1 Define the following terms.

1.1.1 Prefix (15 marks)
1.1.2 Word root (15 marks)
1.1.3 Suffix (15 marks)

1.2 Define following cell types.

1.2.1 Osteoblasts (15 marks)
1.2.2 Osteocytes (15 marks)
1.2.3 Osteoclasts (15 marks)

1.3 What is the difference between dysmenorrhea and amenorrhea? (10 marks)

Question 2 **(100 marks)**

2.1 Write meanings of the following prefixes. (5 marks X 10 = 50 marks)

2.1.1 a-
2.1.2 peri-
2.1.3 endo-
2.1.4 intra-
2.1.5 inter-
2.1.6 hypo-
2.1.7 hyper-
2.1.8 anti-
2.1.9 brady-
2.1.10 tachy-

2.2 Write meanings of the following suffixes. (5 marks X 5= 25 marks)

2.2.1.-algesia
2.2.2.-logy
2.2.3 .-phil
2.2.4 -ologist

2.2.5 -ia

2.3 Define following terms.

2.3.1Leukocytosis (5 marks)
2.3.2 Nephromegaly (5 marks)
2.3.3 Thrombocytopenia (5 marks)
2.3.4 Hepatitis (5 marks)
2.4.5 Bradycardia (5 marks)

Question 3 **(100 marks)**

3.1 Complete the sentence with the correct term(s) selecting from following given terms. carcinoma, tolerance, lysis, skin, incision, inflammation, pharmacology, stethoscope, acute, subcutaneous (5 marks X 10 = 50 marks)

3.1.1 Heat, pain, redness, and swelling are signs of .....
3.1.2 A disease that is sudden and severe is described as.....
3.1.3 A word, sometimes used as a suffix, that means "separation," "dissolving," or "destruction" is .....
3.1.4 The study of drugs and drug actions is called .....
3.1.5 A transdermal drug is absorbed through the .....
3.1.6 Chronic use of a drug can result in a decrease in its efficacy. This is called .....
3.1.7 ..... means beneath the skin.
3.1.8 A cut, as for surgery, or the act of cutting is .....
3.1.9 A simple instrument used to listen to body sounds is a(n) .....
3.1.10 A malignant neoplasm composed of epithelial cells is a(n) .....

3.2 Compare and contrast the following.

3.2.1 Para sagittal plane and Frontal plane (25 marks)
3.2.2 Dorsal body cavity and Ventral body cavity (25 marks)

Question 4 **(100 marks)**

4.1 Define following terms. (5 X 5 marks = 25 marks)

4.1.1 Inferolateral –
4.1.2 Laterosuperior –
4.1.3 Mediosuperior –
4.1.4 Posteromedial –
4.1.5 Anterolateral –

4.2 Write the difference between an embolus and thrombus. (25 marks)

4.3 Fill in the blanks in following table with suitable terms. (5 marks X 4= 20 marks)

	Female	Male
3.3.1 Germ cells	(a)	(b)
3.3.2 Reproductive organ	(a)	(b)

4.4 Write the meaning of the following word roots. (5 X 6 marks = 30 marks)

4.4.1 neph –

4.4.2 cost -

4.4.3 lingu –

4.4.4 angi-

4.4.5 ped-

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Faculty of Health Sciences

BSc (Hons)Biomedical Sciences/ BSc (Hons)Industrial Pharmaceutical Sciences/ BSc (Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management

General Mathematics – BSM1143/BSM 1123 1st Year 1st Semester – Batch 09
End Semester SEQ Examination

Date : 28th of July 2025
Tim : 9. 00A.M – 12.00P.M (3 hours)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX Structured Essay Type** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

Question 1 **(100 marks)**

Prove these identities

1.1 $cos^2x + 1 = 2\,cos^2x + sin^2x$ (20 marks)

1.2 $1.2\,(1 - sin^2\theta)\tan\theta \equiv \cos\theta \sin\theta$ (30 marks)

1.3 $\frac{1+\sin x}{\cos x} + \frac{\cos x}{1+\sin x} = \frac{2}{\cos x}$ (50 marks)

Question 2 **(100 marks)**

The 5th term of a arithmetic progression is 28 and the 10th term is 58.
$[\,T_n = a + (n-1)d,\ S_n = \frac{n}{2}\{2a + (n-1)d\}\,]$

Build and solve the equations. (40 marks)

2.1 What is the first term. (10 marks)

2.2 State the common difference (10 marks)

2.3 The sum of all the terms in this progression is 444. How many terms are there. (40 marks)

Question 3 **(100 marks)**

Solve,

3.1 $8x - 3y = 21$
$5x + y = 16$ (30 marks)

3.2 $x^2 + y^2 = 10$ and $x + y = 4$ (40 marks)

3.2 $3x^2 - 5x + 2 = 0$ (30 marks)

Question4 **(100 marks)**

A. Differentiate with respect to x,

4.1 $y = (8 - 7x)(-5x + 2)$ (30 marks)

4.2 $y = -\frac{1}{5}x^2 + 7x^{-\frac{1}{3}} + e^x$ (30 marks)

4.3 Given that $y = \sqrt{x}$, find

4.3.1 $\frac{dy}{dx}$ (30 marks)

4.3.2 The Gradient of the curve at the point $(3, 2\frac{1}{2})$ (20 marks)

Question 5 **(100 marks)**

Simplify

5.1 $-7x + 6y - 3z + 4x - 2y + 8z - 50x - 11y + 30z$ (20 marks)

5.2 $\frac{x}{8} + \frac{4x}{3} = \frac{x}{10}$ (50 marks)

5.3 $(-2x - 3y)(-7x + 8y)$ (30 marks)

Question 6 **(100 marks)**

6.1 Find $\int (7x^5 + 4x - 6)dx$ (30 marks)

6.2 Evaluate $\int_1^2 \frac{1}{4x+1} dx$ (30 marks)

6.3 Evaluate $\int_5^7 \frac{1}{4-x} dx$ (40 marks)

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Faculty of Health Sciences

BSc (Hons)Biomedical Sciences/ BSc (Hons)Industrial Pharmaceutical Sciences/ BSc (Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management
General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester -Batch 09
End Semester Practical Examination

Date : 28th of July 2025
Time : 1.30 P.M – 3.30P.M (2 HOURS)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink
-

Question 1 **(100 marks)**

Standard equations of the geometric progression $T_n = ar^{n-1}$, $S_n = \frac{a(r^n-1)}{(r-1)}$

The 5th term of a geometric progression is 48 and the 9th term is 768.

1.1 Build the equations and solve. (40 marks)

1.2 Find the common ratio. (10 marks)

1.3 What is the first term. (10 marks)

1.4 Find the sum of the first 10 terms. (40 marks)

Question 2 **(100 marks)**

2.1 Sketch the curve $y = x^2 - 6x$ (30 marks)

2.2 Write down the co-ordinates of the points where the curve crosses the x axis (10 marks)

2.3 Differentiate $y = x^2 - 6x$ (20 marks)

2.4 Show that the point (3, -9) lies on the curve $y = x^2 - 6x$ (20 marks)

2.5 Find the gradient of the curve at this point. (20 marks)

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Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences/ BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 08B
1st Year 1st Semester
End Semester SEQ Examination

Date : **24th of October 2024.**
Time : **9.00 a.m – 12.00 noon (3 Hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

QUESTION 01 **(100 marks)**

1.1 What is Information Communication Technology (ICT), and how does it use technology to manage and process different types of information? (25 marks)

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1.2 State the evolution of computers from the first generation using vacuum tubes to the fifth generation using Artificial Intelligence (AI). (25 marks)

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1.3 What are the different types of computers and how do they differ in their uses and processing power? (25marks)

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1.4 "All types of computers follow the same basic logical structure with five basic operations to convert raw data to meaningful data" What are the five operations? (25 marks)

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QUESTION 02 **(100 marks)**

2.1 "Operating Systems (OS) make it easy to use your computer and for applications to carry out their tasks"

State the role of an Operating System with examples. (25 marks)

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2.2 What are the main user interfaces? (25 marks)

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2.3 Name the four basic operating system settings. (25marks)

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2.4 Name five key aspects related to file management in a computer system. (25 marks)

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QUESTION 03 **(100 marks)**

3.1 "A memory is just like a human brain."

State how computer memory is similar to the human brain and the role of memory in a computer system. (25 marks)

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3.2 List the types of memory, and the advantages and disadvantages of each. (25 marks)

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3.3 What are the main differences between ROM and RAM? (25marks)

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3.4 Explain what secondary storage is and list down the different types. (25 marks)

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QUESTION 04 **(100 marks)**

4.1 What is a database and why do we use them in the health sector (explain with examples).

(25marks)

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4.2 State the typical database architecture given by Figure 1 with an example.

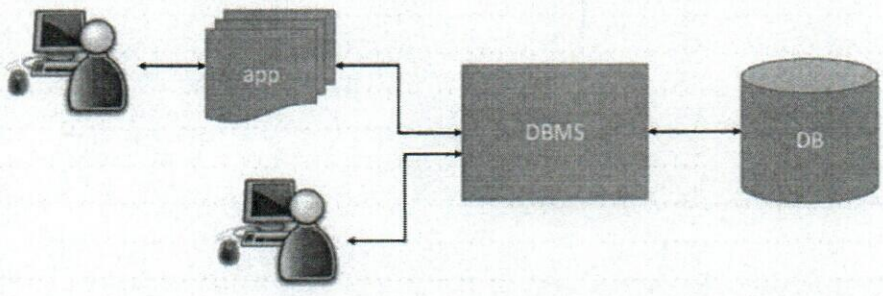


Figure 1

(25 marks)

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4.3 State the two types of data collection (25marks)

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4.4 What are the steps to collect data? (25 marks)

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QUESTION 05 **(100 marks)**

5.1 What are the uses of the Internet? List its advantages and disadvantages. (25marks)

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5.2 What is mail service? Write an email to your course coordinator, requesting to be excused from an IT lecture. Ensure to use the correct structure. (25 marks)

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5.3 "**Internet** and **Web** is not the same thing". Explain the term "web" and what we do from it. (25marks)

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5.4 Name the vendors of each. (25 marks)

Browser
Internet Explorer
Google Chrome
Mozilla Firefox
Netscape Navigator
Opera
Safari

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QUESTION 06 **(100 marks)**

6.1 "An online community is a network of people who communicate with one another and an organization through interactive tools." Explain this statement further. (25marks)

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6.2 What are phishing techniques used by attackers? (25marks)

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6.3 State the term hacking by listing four different types. (25marks)

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6.4 Convert the following numbers to the given formats.

1. 348_{10} to Binary
2. 534_{8} to Decimal
3. $15C_{16}$ to Binary
4. $1A3_{16}$ to decimal.
5. 756_{8} to Binary

(25 marks)

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library

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Beyond A Graduate

Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences/ BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 08B
1st Year 1st Semester
End Semester SEQ Examination

Date : **24th of October 2024.**
Time : **9.00 a.m – 12.00 noon (3 Hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

QUESTION 01 **(100 marks)**

1.1 What is Information Communication Technology (ICT), and how does it use technology to manage and process different types of information? (25 marks)

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1.2 State the evolution of computers from the first generation using vacuum tubes to the fifth generation using Artificial Intelligence (AI). (25 marks)

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1.3 What are the different types of computers and how do they differ in their uses and processing power? (25marks)

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1.4 "All types of computers follow the same basic logical structure with five basic operations to convert raw data to meaningful data" What are the five operations? (25 marks)

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QUESTION 02 **(100 marks)**

2.1 "Operating Systems (OS) make it easy to use your computer and for applications to carry out their tasks"

State the role of an Operating System with examples. (25 marks)

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2.2 What are the main user interfaces? (25 marks)

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2.3 Name the four basic operating system settings. (25marks)

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2.4 Name five key aspects related to file management in a computer system. (25 marks)

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QUESTION 03 **(100 marks)**

3.1 "A memory is just like a human brain."

State how computer memory is similar to the human brain and the role of memory in a computer system. (25 marks)

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3.2 List the types of memory, and the advantages and disadvantages of each. (25 marks)

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3.3 What are the main differences between ROM and RAM? (25marks)

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3.4 Explain what secondary storage is and list down the different types. (25 marks)

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QUESTION 04 **(100 marks)**

4.1 What is a database and why do we use them in the health sector (explain with examples).

(25marks)

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4.2 State the typical database architecture given by Figure 1 with an example.

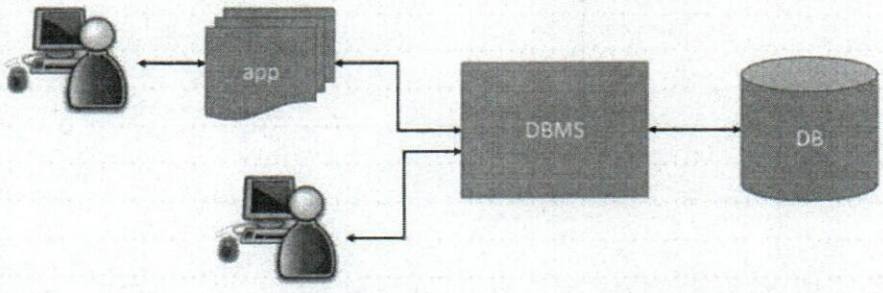


Figure 1

(25 marks)

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4.3 State the two types of data collection (25marks)

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4.4 What are the steps to collect data? (25 marks)

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QUESTION 05 **(100 marks)**

5.1 What are the uses of the Internet? List its advantages and disadvantages. (25marks)

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5.2 What is mail service? Write an email to your course coordinator, requesting to be excused from an IT lecture. Ensure to use the correct structure. (25 marks)

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5.3 "**Internet** and **Web** is not the same thing". Explain the term "web" and what we do from it. (25marks)

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5.4 Name the vendors of each. (25 marks)

Browser
Internet Explorer
Google Chrome
Mozilla Firefox
Netscape Navigator
Opera
Safari

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QUESTION 06 **(100 marks)**

6.1 "An online community is a network of people who communicate with one another and an organization through interactive tools." Explain this statement further. (25marks)

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6.2 What are phishing techniques used by attackers? (25marks)

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6.3 State the term hacking by listing four different types. (25marks)

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6.4 Convert the following numbers to the given formats.

1. 348_{10} to Binary
2. 534_{8} to Decimal
3. $15C_{16}$ to Binary
4. $1A3_{16}$ to decimal.
5. 756_{8} to Binary

(25 marks)

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Faculty of Health Sciences
BSc(Hons)Biomedical Sciences/ BSc(Hons)Industrial Pharmaceutical Sciences/ BSc(Hons)Cosmetic Sciences
BSM 1113 Information Technology
Batch – 08B
1st Year 1st Semester
End Semester Assignment Examination

Date : **24th of October 2024.**
Time : **1.30 noon- 2.30 noon (1 Hour)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

QUESTION 01

1.1 "Computers are generally applied or used in various fields." Explain with examples how it is used in your field.

(25 marks)

1.2 Fill out the table below

Generations & Year	Description	Advantages	Disadvantages

(25 marks)

1.3 Outline the dependability between hardware and software with examples

(50 marks)

QUESTION 02

2.1 "A network's topology is the layout of the cables and devices that connect the nodes." Name the four most common network topologies and explain them.

(25 marks)

2.2 What are the main aspects to consider when choosing a topology?

(25 marks)

2.3

A. List network devices.
B. You are setting up a new home network for your family. You have a modem, a router, and a couple of laptops. Describe how you would connect these devices to create a reliable and secure home network. What roles do each of the devices play in this setup?

(50 marks)

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BSM 1122 Medical Terminology
1st Year 1st Semester
End Semester Assignment Based Examination

Date	**: 18th October 2024**
Time	**: 09.00 a.m. – 11.00 a.m. (Two hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write the answers in black or blue ink.

Question 1 **(100 marks)**

1.1 Following case study describe a case on thyroid cancer surgery and fill in the blanks based on that. (10X 5 marks= 50 marks)

Case Study: Thyroid Cancer Surgery

DISCHARGE DIAGNOSIS: Follicular thyroid cancer.

HOSPITAL COURSE: The patient came into the surgery department on Friday, 4 days prior to this dictation. She underwent an uneventful left thyroid lobectomy, and intraoperatively, her frozen section diagnosis was follicular adenoma. She did well postoperatively and was subsequently prepared for discharge. However, the pathology demonstrated that she had a moderately well differentiated follicular cancer. A completion thyroidectomy was then planned, and she was returned to the operating room. The contralateral lobe was then removed.

Parathyroid glands were well identified, as were the recurrent laryngeal nerves bilaterally, and the procedure was well tolerated.

Postoperatively, her calcium level was 7.9, with a preoperative calcium of 8.5. She had no Chvostek or Trousseau sign on postoperative examination and felt no irritability. She had some very mild hoarseness after the second operation but good phonation and was able to cough well. She was instructed on postoperative wound care, and it was discussed with her that she should have radioiodine ablation in several weeks when she becomes hypothyroid.

PLAN: Discharge her home on oral Vicodin for pain and have her return to the office later in the week. Additional plans for outpatient ablation will be forthcoming

1.1.1 The prefix and its meaning in uneventful are ..... and .....

1.1.2 The patient's preoperative calcium level would be measured, ...

1.1.3 The prefix and its meaning in discharge are ..... and .....

1.1.4 The word contralateral means .....

1.1.5 The prefix in the word postoperative means .....

1.1.6 During a surgery, the recurrent laryngeal nerves are visualized bilaterally. This means that they are seen on .....

1.1.7 The prefix and its meaning in the word ablation are ..... and .....

1.1.8 The word hypothyroid refers to .....

1.1.9 The patient's discharge notes predict a good outcome for the patient. This prediction is a(n) .....

1.1.10 The patient's thyroid is surgically removed. Another word that means "to cut out" is .....

1.2 Suppose that you need to explain above case in Question 1.1 to family members of the patient. Write above description in lay language explaining the meninges of all medical terms at there. (50 marks)

Question 2 **(100 marks)**

2.1 Make 1 sentence for each of the following anatomical directional term. (50 marks)

2.1.1 Cranial (Superior)
2.1.2 Inferior (Caudal)
2.1.3 Posterior (Dorsal)
2.1.4 Anterior (Ventral)
2.1.5 Medial
2.1.6 Lateral
2.1.7 Proximal
2.1.8 Distal
2.1.9 Central
2.1.10 Perpheral

2.2 Write five medical terms related to each of following systems and write the meaning of those after analyzing the main components of those i.e. Prefix, Root, Combining vowel, Suffix.

2.2.1 Female and male reproductive systems (25 marks)

2.2.2 Endocrine system (25 marks)

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Faculty of Health Sciences
B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/ B.Sc. (Hons) Cosmetic Science
Examination – 8th B Batch
BSM1133 – Biology
1st Year 1st Semester

Date: 22nd of October 2024
Time: 09.00 am – 12.00 pm – Three Hours

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

Question 01 **(100 Marks)**

1.1 State the three main principles of cell theory. **(20 Marks)**

1.2 State the **differences** between active transport and passive transport across cell membrane. **(30 Marks)**

1.3 Draw and label the main organelles present in a typical prokaryotic cell. **(50 Marks)**

Question 02 **(100 Marks)**

2.1 Compare the characteristics of the open circulatory system and the closed circulatory system. **(20 Marks)**

2.2 What are the main valves present in the human heart? **(20 Marks)**

2.3 Briefly state the process of blood flow through the human hear. **(30 Marks)**

2.4 What are the main components and functions of the lymphatic system? **(30 Marks**

Question 03 **(100 Marks)**

3.1 What are the main functions of the gastrointestinal system? **(20 Marks)**

3.2 Briefly explain the three main parts of the pharynx? **(30 Marks)**

3.3 Draw and label the structure of the large intestine. **(20 Marks)**

3.4 Briefly state the process of inhalation and exhalation. **(30 Marks)**

Question 04 **(100 Marks)**

4.1 Draw and Label the structure of a neurone. **(20 Marks)**

4.2 Outline the organization of the nervous system **(20 Marks)**

4.3 Mention **three (03)** factors affecting for the speed of nerve conduction. **(30 Marks)**

4.4 What is the differences among the three muscle types? **(30 Marks)**

Question 05 **(100 Marks)**

5.1 List the organs of the urinary system and state the function of each. **(20 Marks)**

5.2 Briefly state the role of nephrons in the kidney? **(30 Marks)**

5.3 List the internal and external parts of the female reproductive system. **(20 Marks)**

5.4 Draw and label the main structures of the male reproductive system. **(30 Marks)**

Question 06 **(100 Marks)**

6.1 Define the term **''neurotransmitter"** with two examples. **(10 Marks)**

6.2 List the hormones secreted by the anterior pituitary gland. **(20 Marks)**

6.3 State the functions of the hormones listed in **6.2** **(30 Marks)**

6.4 Briefly state the **"Appendicular Skeletal system"** and the **''Axial skeletal system''.** **(40 Marks)**

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Faculty of Health Sciences

BSc (Hons)Biomedical Sciences/ BSc (Hons)Industrial Pharmaceutical Sciences/ BSc (Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management
General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester – Batch 08B
End Semester Practical Examination

Date	**: 14th of October 2024**
Time	**: 1.30 noon – 3.30 noon (2 hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

Question 1 **(100 marks)**

Given that $\frac{dy}{dx} = 3x^2 + 4x + 3$

1.1 Find the general solution of this differential equation. (50 marks)

1.2 Find the equation of the curve with this gradient function which passes through (1, 10).

(50 marks)

Question 2 **(100 marks)**

2.1 Differentiate $f(x) = \frac{(x^3+1)(x-5)}{x}$. (50 marks)

2.2 Given that $y = 12\sqrt{x} + \frac{4}{x^{-3}}$, find

2.2.1 $\frac{dy}{dx}$. (25 marks)

2.2.2 The gradient of the curve at the point $\left(6, -8\frac{4}{5}\right)$. (25 marks)

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General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester – Batch 08B
End Semester SEQ Examination

Date	**: 14th of October 2024**
Time	**: 9. 00a.m – 12.00 noon (3 hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

Question 1 **(100 marks)**

Prove these identities

1.1 $\text{Cos}^2x + 1 = 2\,\text{Cos}^2x + \text{Sin}^2x$ (25 marks)

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1.2 $-\frac{\text{Sin}\theta}{1-\text{Cos}\theta} + \frac{1+\text{Cos}\theta}{\text{Sin}\theta} = 0$ (25 marks)

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1.3 $\frac{1+2\text{Sin}x}{\text{Cos}\,x} = \text{Tan}\,x + \frac{\text{Cos}\,x}{1-\text{Sin}\,x}$ (25 marks)

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1.4 $\text{Tanx} + \frac{1}{\text{Tanx}} = \frac{1}{\text{Sinx.Cosx}}$ (25 marks)

Question 2 **(100 marks)**

2.1 Solve: $\frac{1}{5}(10x + 25) = 2x - \frac{1}{2}(2x - 8)$ (20 marks)

2.2 Solve: $x^2 - 2y^2 = 8$ and $x + 2y = 8$ (30 marks)

2.3 Solve $x^2 - 40x - 6000 = 0$ (20 marks)

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2.4 Use the quadratic formula to solve $3x^2 - 6x + 2 = 0$ (30 marks)

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Question 3 **(100 marks)**

Factorize the given expressions.

3.1 $-2x + 6xy - 12x^2$ (20 marks)

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3.2 $xp - 2xq + yp - 2yq$ (20 marks)

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3.3 $16x^4 - 121$ (30 marks)

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3.4 $6x^2 + x - 12$ (30 marks)

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Question 4 **(100 marks)**

4.1 Sketch the curve $y = x^2 - 64$. (30marks)

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4.2 Write down the co-ordinates of the points where the curve crosses the x axis. (20 marks)

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4.3 Differentiate $y = x^2 - 64$ with respect to x. (20marks)

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4.4 Find the Gradients of the curve where the points it crosses the x axis. (30 marks)

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Question 5 **(100 marks)**

5.1 Find $\int(8x^6 + 5x - 9)\ dx$ (20 marks)

5.2 Find $\int\left(-\frac{4}{x^3} + \frac{7}{x^5} - 10x\right)\ dx$ (20 marks)

5.3 Evaluate $\int_1^3 \frac{1}{x}\ dx$ (30 marks)

5.4 Evaluate $\int_2^{10} \frac{1}{5x}\ dx$ (30 marks)

Question 6 **(100 marks)**

6.1. Rationalize the denominator

6.1.1 . $\frac{4}{\sqrt{5}-1}$ (20 marks)

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6.1.2 . $\frac{5}{2\sqrt{3}-3\sqrt{2}}$ (30 marks)

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6.2 Simplify

6.1.1 $\log_2 128$ (20 marks)

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6.2.2 $\log_3(27 \times 243)$ (30 marks)

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CINEC CAMPUS
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PAST PAPERS

Faculty	Department / Section/Division
Not Applicable	Learning Resource Centre

Past Papers

Faculty of Health Sciences

General Papers

(Year 1 – Semester I)

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1st Issue Date: 2017.011.30	Revision No.00	Revision Date: 18.09.2024	Validated by: Librarian

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Faculty of Health Sciences
Bachelor of Science Honours in Biomedic Science/ Bachelor of Science Honours in Cosmetic Sciences/ Bachelor of Science Honours in Medical Health Product Management
BSM 1122 Medical Terminology
1st Year 1st Semester
End Semester Assignment Examination

Date	**: 13th August 2024**
Time	**: 09.00 a.m. – 11.00 a.m. (Two hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write the answers in black or blue ink.

Question 1 **(100 marks)**

1.1 Discuss the important of anatomical position of human body. (50 marks)

1.2 Describe anatomical direction terms of human body giving examples for each of them. (50 marks)

Question 2 **(100 marks)**

2.1 Describe the differences of following two conditions defining them based on major components of each medical terms. Clearly separate each component in medical terms and write meaning of them when you define the terms. (40 marks)

Hypochromic, Microcytic Anemia and Normocytic, Normochromic Anemia

2.2 Write five medical terms related to each of following systems and write the meaning of those.

2.2.1 Respiratory system (20 marks)

2.2.2 Urinary system (20 marks)

2.2.3 Nervous system (20 marks)

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Faculty of Health Sciences
B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/
B.Sc. (Hons) Cosmetic Science
Examination – 8th Batch
BSM1133 – Biology
1st Year 1st Semester

Date: 08th of August 2024
Time: 09.00 am – 12.00 pm – Three Hours

Question 01 **(100 Marks)**

1.1 What are the three main principles of 'cell theory'? **(20 Marks)**

1.2 State the **differences** between prokaryotic and eukaryotic cells. **(30 Marks)**

1.3 Draw and label the main organelles present in a typical eukaryotic cell. **(50 Marks)**

Question 02 **(100 Marks)**

2.1 List the main valves present in the human heart. **(20 Marks)**

2.2 State the structural differences between different types of blood vessels. **(20 Marks)**

2.3 What is the process of blood flow through the human heart? **(30 Marks)**

2.4 State the components of Lymphatic system **(30 Marks)**

Question 03 **(100 Marks)**

3.1 List the main organs and accessory organs of GI system respectively. **(20 Marks)**

3.2 Write the main salivary glands with their respective locations. **(20 Marks)**

3.3 State the structure of large intestine. **(30 Marks)**

3.4 State the gas exchange mechanism in alveoli **(30 Marks)**

Question 04 **(100 Marks)**

4.1 Draw and Label the structure of a neurone. **(20 Marks)**

4.2 Name two neurotransmitters with their potential effect on behaviour. **(20 Marks)**

4.3 List the major subdivisions of nervous system. **(30 Marks)**

4.4 Mention the effects of sympathetic and parasympathetic nervous systems on each organ mentioned in the table below **(30 Marks)**

Organ	Sympathetic nervous system	Para sympathetic nervous system
Heart		
Lungs		
Digestive system		
Blood vessels		
Urinary bladder		
Eye		
Salivary glands		
Sweat glands		
Sex organs		
Metabolism		

Question 05 **(100 Marks)**

5.1 List the main organs and accessory organs of the excretory system respectively. **(20 Marks)**

5.2 State the process of urine formation. **(30 Marks)**

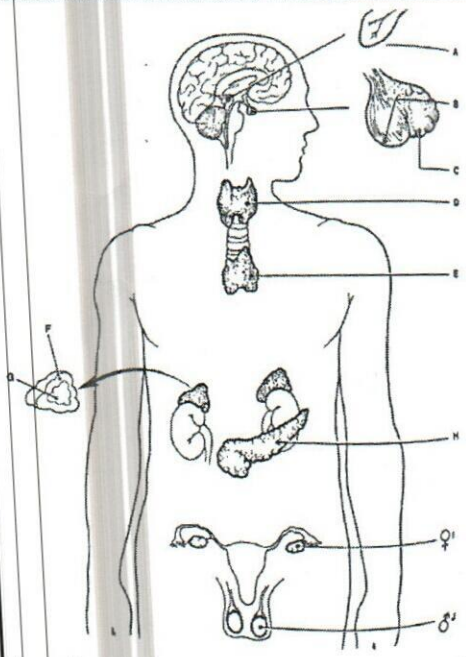
5.3 List the internal and external parts of the male reproductive system. **(20 Marks)**

5.4 Draw and label the main structures of the female reproductive system. **(30 Marks)**

Question 06 **(100 Marks)**

6.1 What is the difference between endocrine and exocrine glands? **(20 Marks)**

6.2 Write the name of the labeled gland (A to J) and mention its functions respectively **(40 Marks)**



6.3 Compare the three types of muscles in the human body. **(20 Marks)**

6.4 What is the "**Appendicular Skeletal system**"? **(20 Marks)**

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Faculty of Health Sciences

BSc (Hons)Biomedical Sciences/ BSc (Hons)Industrial Pharmaceutical Sciences/ BSc (Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management
General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester – Batch 08
End Semester SEQ Examination

Date : **2024.08.07**
Time : **9. 00A.M – 12.00P.M (3 hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

Question 1 **(100 marks)**

Prove these identities

1.1 $cos^2x - sin^2x = 2\,cos^2x - 1$ (20 marks)

1.2 $\frac{\sin\theta}{1-\cos\theta} = \frac{1+\cos\theta}{\sin\theta}$ (40 marks)

1.3 $\frac{\cos x}{1-\sin x} - \frac{1}{\cos x} = \tan x$ (40 marks)

Question 2 **(100 marks)**

The 6th term of a arithmetic progression is twice the 3rd term and the first term is 3. The sequence has 10 terms. [$T_n = a + (n-1)d$, $S_n = \frac{n}{2}\{2a + (n-1)d)\}$]

2.1 Build the equations. (40 marks)

2.2 State the common difference. (10 marks)

2.3 State the 8th term. (20 marks)

2.4 State the sum of the given arithmetic progression. (30 marks)

Question 3 **(100 marks)**

Solve

3.1 $2x + 5 = 4x - 15$ (20 marks)

3.2 $x^2 - 2y^2 = 8$ and $x + 2y = 8$ (50 marks)

3.3 $x^2 - 40x - 6000 = 0$ (30 marks)

Question 4 **(100 marks)**

A. Differentiate with respect to x,

4.1 $y = (5x + 7)(3x - 2)$ (30 marks)

4.2 $y = -\frac{1}{3}x^2 + 4x^{-\frac{1}{2}} + e^x$ (20 marks)

4.3 Given that $y = \sqrt{x} - \frac{8}{x^2}$, find

4.3.1 $\frac{dy}{dx}$ (30 marks)

4.3.2 The gradient of the curve at the point $\left(4, 1\frac{1}{2}\right)$ (20 marks)

Question 5 **(100 marks)**

Simplify

5.1 $8x - 3y + 6z - 3x + 12y - 6z + 5x + 9y - 20z$ (20 marks)

5.2 $\frac{3x}{4} + \frac{3y}{2} - \frac{3z}{10}$ (30 marks)

5.3 $\frac{15x+6}{4(5x+2)}$ (20 marks)

5.4 $(8x - 3y)(4x - 5y)$ (30 marks)

Question 6 **(100 marks)**

6.1 Find $\int (2x^3 - 3x + 4) \quad dx$ (20 marks)

6.2 Find $\int \left(\frac{3}{x^4} - \frac{1}{x^2} + 4\right) \quad dx$ (20 marks)

6.3 Evaluate $\int_0^2 \frac{1}{5x+3}\, dx$ (30 marks)

6.4 Evaluate $\int_5^7 \frac{1}{4-x}\, dx$ (30 marks)

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Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences / BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 08
1st Year 1st Semester
End Semester SEQ Examination

Date : **2024.08.05**
Time : **9.00 p.m. – 12.00 pm. (Three Hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Computer is a machine which can take instructions and perform computations based on those instructions. Computer system is a collection of four(4) specific parts. List and give short descriptions to them. (25 marks)

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1.2 Define the information processing cycle. (25 marks)

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1.3 Briefly describe the five (5) generations of computers. (25 marks)

1.4 Briefly describe how ICT can be used to increase quality in a hospital management system. (25 marks)

QUESTION 02 **(100 marks)**

2.1 Define the term computer network is and list main benefits of a network. (25 marks)

2.2 State the types of network structures and give short descriptions about them. (25 marks)

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2.3 Define the term network topology iand draw Bus, Ring, Star and Mesh topologies.
(25 marks)

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2.4 Name three (3) network devises and two (2) network protocols. (25 marks)

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QUESTION 03 **(100 marks)**

3.1 Differentiate storage medium and storage devices. (25 marks)

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3.2 Describe two (2) primary storage technologies. (25 marks)

3.3 Name the four areas created on a magnetic disk during formatting. (25 marks)

3.4 How data is stored on the surface of magnetic and optical disks ? (25 marks)

QUESTION 04 **(100 marks)**

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4.1 Define and differentiate the terms "data" and "information" with an appropriate example.

(25 marks)

4.2 Convert the following valid numbers into decimal numbers. If the number is not valid state the validity and give the reason.

4.2.1 1101.1110_2
4.2.2 $F56_8$
4.2.3 $789B_{16}$
4.2.4 17.745_8
4.2.5 7482_8

(25 marks)

4.3 Convert following numbers into binary numbers. Show your work clearly.

4.3.1 45_{10}
4.3.2 789.25_{10}
4.3.3 13_8
4.3.4 $A10_{16}$
4.3.5 $BB.C_{16}$

(25 marks)

4.4 Carry out the following calculations using 4-bit two's complement. Show all your work clearly.

a. (-8) + 2.

b. (-6) - 2

(25 marks)

QUESTION 05 **(100 marks)**

5.1 State five (5) advantages of internet. (25 marks)

5.2 Differentiate active attacks and passive attacks. (25 marks)

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5.3 Name the symptoms of a computer virus. (25 marks)

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5.4 Define the following terms related to hacking.

5.4.1 Trojan Horse
5.4.2 Phishing
5.4.3 Distributed Denial-of-Service (DDoS) (25 marks)

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QUESTION 06 **(100 marks)**

6.1 Describe transient and persistent data. (25 marks)

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6.2 Represent the typical database application architecture with aid of a diagram.

(25 marks)

6.3 A local garage wants to modernize its operations by creating a database to manage its business more effectively. The garage needs to store detailed information about the cars they service, including CarID, LicensePlate, Make, Model, Year, and the OwnerID, which references the customer who owns the car. Customer details, such as CustomerID, FirstName, LastName, and ContactNumber, also need to be stored in a separate table. To track the various services offered by the garage, a Service table is required, containing ServiceID, ServiceDescription, and Cost. Additionally, the garage wants to keep a record of all transactions, which involves tracking each service performed on a car, linking to both the CarID and CustomerID to indicate which car received the service and who the owner is. This setup will allow the garage to maintain comprehensive records of all cars, customers, services, and transactions, facilitating efficient management and better customer service.

Identify relations (tables) and primary keys that need to create a database from given scenario.

(25 marks)

6.4 Create a relational schema for the given scenario (25 marks)

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/ B.Sc. (Hons) Cosmetic Science
BSM 1243 – Foundation of Chemistry
End-Semester Examination – 1st Year 2nd Semester – Assignment (Repeat)
1st YEAR 2nd SEMESTER

Date: 22nd of July 2024
Time: 11.00 am – 12.00 pm – ONE HOUR

INSTRUCTIONS TO CANDIDATES Page
- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

Question 01 **(100 marks)**

1 .Consider the following molecules: H_2O, CO_2, NH_3, and CH_4.

1.1. Draw the Lewis structures for each molecule, indicating the placement of all valence electrons. (30 marks)

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1.2. Determine the type of chemical bonding (ionic, covalent, or metallic) in each molecule. (20 marks)

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1.3. Identify the polarity (polar or nonpolar) of each molecule and explain your reasoning. (20 marks)

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1.4. Based on the Lewis structures and bonding types, predict and explain the relative melting and boiling points of the molecules. (30 marks)

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Question 02 **(100 marks)**

2. Consider the molecules H_2 and O_2,

2.1 Draw the molecular orbital diagrams for each molecule, indicating the placement of all electrons in the molecular orbitals. (40 marks)

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2.2 Identify the bond order for each molecule and explain its significance in terms of stability and bond strength. (20 marks)

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2.3 Determine whether each molecule is paramagnetic or diamagnetic and explain your reasoning. (20 marks)

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2.4 Compare the bond lengths in each molecule and explain any variations observed. (20 marks)

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CINEC Campus, Sri Lanka

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/ B.Sc (Hons) Cosmetic Science/ B.Sc (Hons) Medical & Health Product Management
7th Batch
BCS 1243 – Foundation of Chemistry
End-Semester Examination – 1st Year 2nd Semester – SEQ

1st YEAR 2nd SEMESTER

Date: 22nd of July 2024
Time: 09.00 am – 12.00 pm - Three Hours

INSTRUCTIONS TO CANDIDATES Page
- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

Question 01 **(100 marks)**

1.1 When the initial rate of this reaction was measured at various starting concentrations of the three reactants, the following results were obtained.

experiment number	$[CH_3CHO]$ / mol dm^{-3}	$[CH_3OH]$ / mol dm^{-3}	$[H^+]$ / mol dm^{-3}	relative rate
1	0.20	0.10	0.05	1.00
2	0.25	0.10	0.05	1.25
3	0.25	0.16	0.05	2.00
4	0.20	0.16	0.10	3.20

1.1.1 Use the data from the table and write the rate equation for the reaction. (30 marks)

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1.1.2 State the units of the rate constant in the rate equation. (20 marks)

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1.1.3 Calculate the relative rate of reaction for a mixture in which the starting concentrations of all three reactants are 0.20 mol dm^{-3} (20 marks)

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1.1.4 Find the half-life of [CH_3CHO]. (30 marks)

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Question 02 **(100 marks)**

2.1 An impure sample of ammonium vanadate (V), NH_4VO_3, with mass 0.150 g, is dissolved in an excess of dilute acid. In this solution all vanadium is present as VO_2^+ ions. An excess of zinc powder is added to the solution and all the VO_2^+ ions are reduced to V_2^+ ions. The mixture is filtered to remove any remaining zinc powder.

$VO_2^+ + 4H^+ + 3e^- \rightarrow V_2^+ + 2H_2O$

When the resulting solution is titrated, 20.10 cm^3 of 0.0250 $moldm^{-3}$ acidified MnO_4^- oxidizes all V_2^+ ions back to VO_2^+ ions.

$MnO_4^- + 8H^+ + 5e \rightarrow Mn^{2+} + 4H_2O$

Calculate the percentage by mass of NH_4VO_3 in the 0.150 g impure sample of NH_4VO_3. Give your answer to three significant figures. [MW: NH_4VO_3, 116.9 $gmol^{-1}$] (50 marks)

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2.2

2.2.1 The table below shows the elements in the third period of the Periodic Table, the number of electrons in their outer energy level, their oxidation state in their common compo and their melting points.

element	Na	Mg	Al	Si	P	S	Cl	Ar
number of outer electrons	1	2						
oxidation state	+1	+2	+3	+4/–4	–3	–2	–1	0
melting point/°C	98	650	660	1414	317	115	–101	–189

2.2.1.1 Explain why Na, Mg and Al are good conductors of electricity. (20 marks)

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2.2.1.2 Which element exists as diatomic molecules of the type X_2? (10 marks)

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2.2.1.3 Silicon has a similar structure to diamond. Explain why silicon has the highest melting point in the period. (20 marks)

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Question 03 **(100 marks)**

3.1 Draw the molecular orbital diagram of He^+ and figure out the bond order of the molecule (30 marks)

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3.2 Draw a dot-and-cross diagram showing the bonding in magnesium oxide. Show outer electrons only. (20 marks)

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3.3 Sodium chloride is a crystalline solid with a high melting point. It dissolves in water to give a neutral solution. Phosphorus trichloride is a liquid at room temperature. It reacts with water to form an acidic solution. Suggest an explanation for these differences in properties. (30 marks)

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3.4 This question is about equilibrium systems. An equilibrium exists in aqueous solution between the chromate (VI) ions and the dichromate (VI) ions.
Explain any change in the position of equilibrium if a few drops of sodium hydroxide solution are added to this equilibrium system. (20 marks)

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Question 04 **(100 marks)**

4.1 Draw the structures for the following IUPAC names. (25 marks)

4.1.1 Propan -2-ol

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4.1.2 1,3 - hexanediol

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4.1.3 2- propylcyclohexanol

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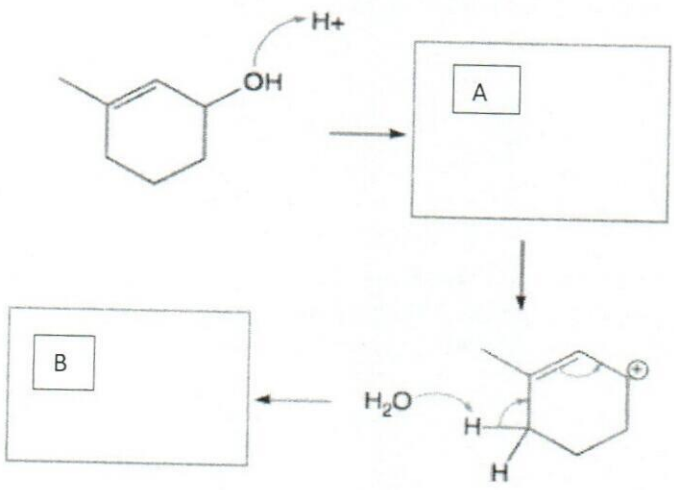
4.1.4 2-pentanone

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4.1.5 2,4,6-tribromophenol

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4.2 Complete the given A and B boxes based on the arrow- pushing mechanism given below. (30 marks)



4.3 Briefly explain the homolytic and heterolytic cleavage in bond breaking. (30 marks)

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4.4 Write **three** intermolecular forces between organic molecules. (15 marks)

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Question 05 **(100 marks)**

5.1 Calcium (Ca) is a S-block element and its physical and chemical properties are closely related to its electronic structure and size.

5.1.1 Write the electron configuration of Ca^{+2} according to the Hund's rule. (10 marks)
(Mass number of Ca is 40 $gmol^{-1}$ and the atomic number is 20)

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5.1.2 Briefly explain why 3rd ionization energy is large compare to the 1st and 2nd ionization energy of Calcium (Ca). (20 marks)

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5.1.3 Given that melting point of Ca is larger than the melting point of Ba. Explain the reason for the difference in the melting points. (20 marks)

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5.2 Metal (X) shows oxidation states such as +2, +3, +4, +5, +6 and +7. When reacts with oxygen gas it forms its oxide which is black to brown in color. Metal Y is paramagnetic in nature. Find the metal (X) and write the compounds which is responsible to +2, +4 and +7 oxidation state. (50 marks)

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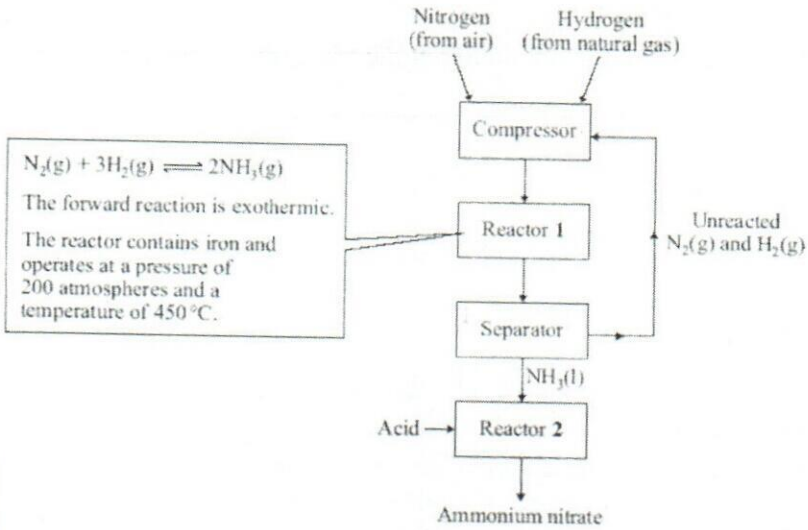
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Question 06 **(100 marks)**

6.1 The following questions are based on the Haber-Bosh process method.



6.1.1 What is the purpose of the iron in reactor 1? (10 marks)

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6.1.2 Write the balance reaction for hydrogen gas obtained from natural gas. Consider methane (CH_4) as the main component of natural gas. (20 marks)

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6.1.3 In the separator, it consists of a mixture of ammonia, hydrogen and nitrogen. Briefly explain how to separate the ammonia from the other gases? (30 marks)

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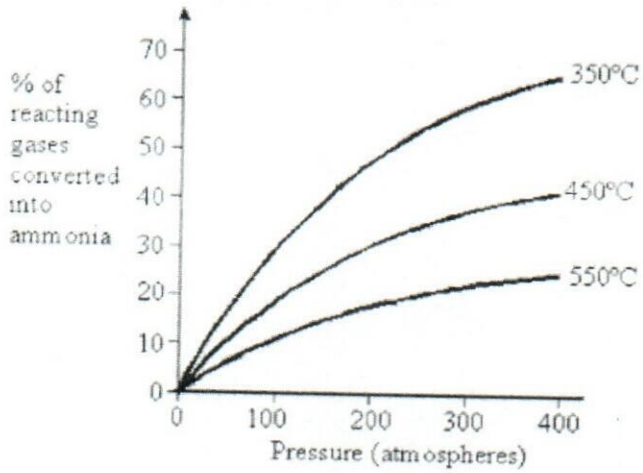
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6.2 The optimum industrial conditions employed for the process are a temperature in the range of 450-500 °C, and a pressure of 250-300 atm.

$N_2+3H_2 \rightleftharpoons 2NH_3$ + Heat

6.2.1 Following graph is for the yield of ammonia produced with changes made to temperature and pressure. Briefly describe the low yield of ammonia at 550°C (40 marks)



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-THE END-

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Faculty of Health Sciences
B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/ B.Sc. (Hons) Cosmetic Science
7th Batch
BSM 1233 – General Psychology
End-Semester Examination – 1st Year 2nd Semester – Assignment

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Date: 19th July 2024
Time: 13.30 – 14.30 One Hour

Question 01 **(100 Marks**

"The core of the intelligence resides not in one single factor but in 07 such factors"
Justify the above statement by "Gardner's Theory of Multiple Intelligence".

Question 02 **(100 Marks**

"Effective communication contributes to success in the workplace."
Evaluate the above sentence with the transferable skills you have learnt in the psychology module.

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/

B.Sc. (Hons) Cosmetic Science

7th Batch

BSM 1213 – Personality Development

End-Semester Examination – 1st Year 2nd Semester – Assignment

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Date: 15th July 2024
Time: 1.30 pm – 2.30 – One Hour

Question 01 **(100 Marks)**

Discuss the importance of body language in delivering an effective presentation. Provide examples to illustrate how positive and negative body language can impact the overall effectiveness of a presentation.

Question 02 **(100 Marks)**

Explain **ten (10)** soft skills that you will need to understand a client.

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CINEC CAMPUS
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Faculty of Health Sciences

Bachelor of Science Honours in Biomedical Science/ Bachelor of Science Honours in Cosmetic Science/ Bachelor of Science Honours in Medical Health Product Management

7th Batch
BSM 1122 Medical Terminology
1st Year 1st Semester

End Semester Assignment Examination

Date	**: 15th March 2024**
Time	**: 09.00 a.m. – 11.00 a.m. (Two hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write the answers in black or blue ink.

Question 1 **(20 marks X 5= 100 marks)**

Critically analyze the following medical terms related to the cardiovascular system by considering the prefix, root, suffix and meaning of entire term.

1.1 Atherosclerosis
1.2 Thrombocytopenia
1.3 Tachycardia
1.4 Arrhythmias
1.5 Anemia

Question 2 **(20 marks X 5= 100 marks)**

Critically analyze the following medical conditions, giving reasons for your explanations.

2.1 Pneumothorax
2.2 Gastritis
2.3 Diabetic neuropathy
2.4 Endometriosis
2.5 Muscle dystrophy

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Faculty of Health Sciences

Bachelor of Science Honours in Biomedical Science/ Bachelor of Science Honours in Industrial Pharmaceutical Science/ Bachelor of Science Honours in Cosmetic Science

BSM 1122 Medical Terminology

1st Year 1st Semester

End Semester SEQ Repeat Examination

Date	**: 15th March 2024**
Time	**: 09.00 a.m. – 12.00 p.m. (Three hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write the answers in black or blue ink.

Question 1 **(100 marks)**

1.1 What is anatomical position of human body? (25 marks)

1.2 Write short notes on following terms.

1.2.1 Median plane (25 marks)

1.2.2 Transverse plane (25 marks)

1.3 Define following terms. (5 X 5 marks = 25 marks)

1.3.1 Inferolateral

1.3.2 Laterosuperior

1.3.3 Mediosuperior

1.3.4 Posteromedial

1.3.5 Anterolateral

Question 2 **(100 marks)**

2.1 Define following terminologies related to human body position.

2.1.1 Reclining position (15 marks)

2.1.2 Prone position (15 marks)

2.1.3 Supine position (15 marks)

2.2 Define following terms. (6 X 5 marks = 30 marks)

2.2.1 Cystalgia

2.2.2 Cystectomy

2.2.3 Cystolith

2.2.4 Micturition

2.2.5 Nephroma

2.2.6 Hematuria

2.3 Write the difference between an embolus and thrombus. (25 marks)

Question 3 **(100 marks)**

3.1 What is the difference between dysmenorrhea and amenorrhea? (20 marks)

3.2 Define ectopic pregnancy. (20 marks)

3.3 Fill in the blanks in following table with suitable terms. (4 x 5 marks= 20 marks)

	Female	Male
3.3.1 Germ cells	(a)	(b)
3.3.2 Reproductive organ	(a)	(b)

3.4 Define following terms. (2 X 10 marks = 20 marks)

3.4.1 Hypothermia

3.4.2 Peritonsillitis

3.5 Define following cell types.

3.5.1 Osteoblasts (10 marks)

3.5.2 Osteoclasts (10 marks)

Question 4 **(100 marks)**

4.1 Write the appropriate medical term for followings. (6 X 5 marks = 30 marks)

4.1.1 Promotes sleep

4.1.2 Diseases of the muscle

4.1.3 One sided facial paralysis due to inflammation of facial nerve

4.1.4 Group of inherited genetic conditions that gradually cause the muscles to weaken

4.1.5 Accumulation of cerebrospinal fluid within brain ventricles

4.1.6 Paralysis of lower portion of body

4.2 Write the meaning of the following terms. (5 X 6 marks = 30 marks)

4.2.1 Nephrectomy

4.2.2 Calculus

4.2.3 Micturition

4.2.4 Cystalgia

4.2.5 Nephroma

4.3 What is homeostasis? (10 marks)

4.4 Write the meaning of the following word roots. (5 X 6 marks = 30 marks)

4.4.1 neph

4.4.2 cost

4.4.3 lingu

4.4.4 angi

4.4.5 ped

Question 5 **(100 marks)**

5.1 Define following terms.

5.1.1 Word root (15 marks)
5.1.2 Prefix (15 marks)
5.1.3 Suffix (15 marks)

5.2 Fill in the blanks in following table. (6 X 5 marks = 30 marks)

	Prefix	Root	Suffix
5.2.1 Hypothermia	(a)	(b)	(c)
5.2.2 Peritonsillitis	(a)	(b)	(c)

5.3 Write a most appropriate medical term for following descriptions.
(5 X 5 marks = 25 marks)

5.3.1 Pus in the urine
5.3.2 Kidney enlargements
5.3.3 Difficult or painful urination
5.3.4 Inflammation of the kidney
5.3.5 Physical, chemical and microscopic examination of urine

Question 6 **(100 marks)**

6.1 Match following terms with the correct definition in the table. (8 X 5 marks = 40 marks)

6.1.1 cyanosis
6.1.2 angina pectoris
6.1.3 syncope
6.1.4 cardiogenic
6.1.5 cardiodynia
6.1.6 arrythmia
6.1.7 tachycardia
61.8 palpitation

a. sign or symptom that originates from a condition of the heart
b. pounding, racing, or skipping of the heartbeat
c. opposite of bradycardia; fast heartbeat
d. pain associated with the heart
e. chest pain or pressure
f. blue tinge in the skin and mucous membranes
g. fainting
h. term that literally means "condition of without rhythm"

6.2 Describe following terms. (8 X 5 marks = 40 marks)
6.2.1 Benign prostatic hypertrophy
6.2.2 Epispadias
6.2.3 Hydrocele
6.2.4 Androgen
6.2.5 Prostatectomy

6.3 Define following terms.

6.3.1. Thrombocytopenia (10 marks)
6.3.2 Leukocytosis (10 marks)

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Beyond A Graduate

Faculty of Health Sciences

BSc (Hons)Biomedical Sciences/ BSc (Hons)Industrial Pharmaceutical Sciences/ BSc (Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management
General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester – Batch 07
End Semester SEQ Examination

Date : **2024.03.11**
Time : **9. 00A.M – 12.00P.M (3 HOURS)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

QUESTION 01 **(100 marks)**

1.1 Evaluate $(3\frac{1}{16})^{\frac{9}{2}}$. (20 marks)

1.2 Find the set of values for which; $4(x-2)-5x \leq 2(x-3)$ (20 marks)

1.3 Find the sum of first 10 terms of the geometric series 4+12+36…. (20 marks)

1.4 Arithmetic series has first term 5 and common difference 3. Find the 15th term. (20 marks)

1.5 Differentiate y $=-4x^3+5x$. (20 marks)

QUESTION 02 **(100 marks)**

2.1 Simplify following exponential functions. (25 marks)
a) $Y = e^{(-3x+1)}.(e^{3x+2})/\ e^{(3x-1)}$

2.2 Solve following equations for X in terms of Y. (25 marks)
a) $Y = 3ab\ e^{(3x+2b)}$ (a, b are constants.)

2.3 Solve the following System. (25 marks)
a) $\log_y(x) = 7$
b) $x\ y = 256$

2.4 Solve the simultaneous equations. (25 marks)
a) $2x + 3y = 26$
b) $x + 5y = 24$

QUESTION 03 **(100 marks)**

The first three terms of a geometric series are 5, 5(0.2), and $5(0.2)^2$ respectively.

3.1 Calculate the sum of first 20 terms of the geometric series. (25 marks)
3.2 Find the common ratio of the geometric series. (25 marks)
3.3 Find the sum to infinity of the geometric series. (25 marks)
3.4 Is this series is a convergent series? Justify your answer. (25 marks)

QUESTION 04 **(100 marks)**

Consider $f(Y) \equiv Y^3 - Y^2 - 16Y - 14$

4.1 Find the remainder when $f(Y)$ is divided by (Y + 1) is a factor of f(Y). (25 marks)
4.2 Hence factorize $f(Y)$ completely. (25 marks
4.3 Sketch the curve $Z = Y^2 - 3Y + 2$. (25 marks)
4.4 Find the coordinates of the turning points of the curve $Z = Y^2 + 2Y + 4$. (25 marks)

QUESTION 05 **(100 marks)**

5.1 Simplify $\sqrt{1024} + \sqrt{324} - \sqrt{128}$. (25 marks)
5.2 Find the set of values of x for which $-2x^2 + 9x + 5 > 0$. (25 marks)
5.3 Divide $(-x^5 + x^4 - 4x^3 - 6x^2 + 12x - 9)$ by $(x^2 + x - 1)$. (25 marks)
5.4 Rationalize the denominator of $\frac{12}{(\sqrt{5}-\sqrt{2})}$. (25 marks)

QUESTION 06 **(100 marks)**

6.1 Differentiate the following functions. (50 marks)
a) $Y = X^4 (X^3+5)$
b) $Y = 3\text{Sin}(2x) + 7\text{ Sin}(2x - 3)$
c) $Y = x^3 e^{4x}$

6.2 Find the definite Integral for the following function (50 marks)

$$\int_{-2}^{4} x^2 e^{2x} dx$$

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Beyond A Graduate

Faculty of Health Sciences

BSc(Hons)Biomedical Sciences/ BSc(Hons)Industrial Pharmaceutical Sciences/ BSc(Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management
General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester -Batch 07
End Semester Practical Examination

Date	:	**2024.03.11**
Time	:	**1.30 P.M – 3.30P.M (2 HOURS)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

QUESTION 01 **(100 marks)**

1.1 Use Sin (A+B) formulae to obtain Sin 105. (20 marks)
1.2 Use Cos (A-B) formulae to obtain Cos 15. (20 marks)
1.3 Convert 300 Degree value into radians. (20 marks)
1.4 Show that Cot B - Tan B = 2Cot2B. (20 marks)
1.5 Convert $3\pi/2$ Radian value into Degree. (20 marks)

QUESTION 02 **(100 marks)**

2.1 Differentiate the following functions. (50 marks)

a) $Y = 3(1 + x^2)\, e^{3\sin x}$
b) $Y = 3\text{Sin}(x^2) + \text{Sin}(5x - 3)$

2.2 Find the definite Integral for the following function. (50 marks)

a) $\int_{\pi}^{2\pi} (\sin x)(2x^2)dx$

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences/ BSc (Hons) Cosmetic Sciences/BSc (Hons) Medical Health Product Management

BSM 1113 Information Technology

Batch – 07
1st Year 1st Semester
End Semester SEQ Examination

Date : **07th March 2024**
Time : **9.00 am. – 12.00 pm. (Three Hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QUESTION 01 **(100 marks)**

All types of computers follow the same basic logical structure and perform the following five basic operations for converting raw input data into information useful to their users.

1.1 State five basic operations of a computer. (25 marks)
1.2 Define the terms hardware and software and differentiate in between them. (25 marks)
1.3 Briefly describe four categories of software. (25 marks)
1.4 Explain how ICT can be used to increase quality in a hospital management system. (25 marks)

QUESTION 02 **(100 marks)**

2.1 Define what a computer network is and briefly describe different types of networks. (25 marks)
2.2 State five advantages and disadvantages of computer networking. (25 marks)
2.3 Define what a network topology is and draw Bus, Ring, Star and Mesh topologies. (25 marks)
2.4 Write a short note on topic network devices. (25 marks)

QUESTION 03 **(100 marks)**

3.1 Briefly describe three types of memory. (25 marks)
3.2 Define the secondary memory and state two advantages and two disadvantages of secondary memory. (25 marks)
3.3 Differentiate in between Read-only-memory (ROM) and Random-access-memory (RAM). (25 marks)
3.4 State and explain four major storage levels. (25 marks)

QUESTION 04 (100 marks)

00090

4.1 Define and differentiate the terms "data" and "information" with an appropriate example. (25 marks)

Age group	Real limits	Frequency	'Less than' CF	'More than' CF
21 – 25	20.5 – 25.5	5		
26 – 30	25.5 – 30.5	12		
31 – 35	30.5 – 35.5	23		
36 – 40	35.5 – 40.5	39		
41 – 45	40.5 – 45.5	32		
46 – 50	45.5 – 50.5	21		
51 – 55	50.5 – 55.5	9		
56 – 60	55.5 – 60.5	2		
Total		**143**		

4.2 Calculate the less than cumulative frequency for above data. (25 marks)

4.3 Calculate the more than cumulative frequency for above data. (25 marks)

4.4 Convert the following numbers to the given formats. State the necessary steps. (25 marks)

- 4.4.1 $BB.C_{16}$ to binary.
- 4.4.2 1001010.10_2 to decimal.
- 4.4.3 457_{10} to octal
- 4.4.4 10111_2 to hexadecimal
- 4.4.5 -99 to 8 bit two's complement

QUESTION 05 (100 marks)

5.1 State and describe five (5) advantages of internet. (25marks)

5.2 Briefly define the following terms related to web.

- 5.2.1 Web (05 marks)
- 5.2.2 Web browser (05 marks)
- 5.2.3 Web server (05 marks)
- 5.2.4 Web page (05 marks)
- 5.2.5 Search engine (05 marks)

5.3 Describe the difference between attack and threat. (25 Marks)

5.3 Briefly define the following terms related to hacking.

- 5.4.1 Passive attack (05 marks)
- 5.4.2 Active attack (05 marks)
- 5.4.3 Trojan Horse (05 marks)
- 5.4.4 Phishing (05 marks)
- 5.4.5 Distributed Denial-of-Service (DDoS) (05 marks)

QUESTION 06 (100 marks)

6.1 Give examples for primary and secondary data collection methods with short descriptions. (25 Marks)

6.2 Represent the typical database application architecture with aid of a diagram. (25 Marks)

Suppose you are working at a library and you need to create a database to store some sort of data. The librarian state that they need to store details of Books such as BookID, Title, Author, ISBN, and PublicationYear. The details of book Authors also needed to be stored separately and authors are identified by AuthorID. Additionally, the 'Genre' table categorizes books based on genres, connected to the Book table via GenreID. The information about library members, including MemberID, FirstName, LastName, and ContactNumber also needed to be stored. Transactions and book loans are tracked, relating to both books and members through their respective IDs. Create a relational schema for above scenario.

6.3 Identify relations (tables) and primary keys that need to create a database from given scenario. (25 Marks)

6.4 Create a relational schema for the given scenario (25 Marks)

Library

00085

CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences /BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 07
1st Year 1st Semester
End Semester Assignment Examination

Date	**: 07.03.2024**
Time	**: 1.30 am. – 2.30 pm. (One Hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Generate a table that contains technologies that used in computer generations (25 marks)
1.2 Discuss the characteristics, advantages and disadvantages of types of memory along with the examples. (25 marks)
1.3 Differentiate passive attacks and active attacks in terms of cyber security. (25 marks)
1.4 Carry out the following calculations using 4-bit two's complement. Show all your work clearly.
1.4.1 5-3 (05 marks)
1.4.2 (-8) + 2 (05 marks)
1.4.3 (-6) - 2 (05 marks)
1.4.4 (-1) + 7 (05 marks)

QUESTION 02 **(100 marks)**

Network traffic of some websites are as follows.

Website Traffic

Websites / Traffic Source	Organic	Direct	Referral
Amazon	60	50	10
Dzone	30	20	10
Gizmodo	20	5	5
StackOverFlow	40	30	10
CNET	25	5	20

2.1 If the class intervals are as follows draw a histogram to represent this data.
0-5, 5-10, 10-15,15-20,… (25 marks)
2.2 If the class intervals are as follows draw a histogram to represent this data. (25 marks)
0-5, 5-10, 10-20,20-30,30-50,50-60
2.3 Give examples for primary and secondary data collection methods with short descriptions. (50 marks)

Library

00068

CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

Bachelor of Science Honours in Biomedical Sciences/ Bachelor of Science Honours in Industrial Pharmaceutical Sciences/ Bachelor of Science Honours in Cosmetic Sciences

Biology BSM 1133

1st Year 1st Semester-End Semester SEQ Examination- 7th Batch

Date : **08th March 2024**

Time :**09.00 am – 12.00 pm (Three Hours)**

Instructions to candidates

- This question paper consists of Six SEQ questions.
- Answer ALL questions.
- You should mark the answer legibly in black or blue ink.

Question 1 **(100 marks)**

Briefly describe,

1.1. a typical eukaryotic cell with a labeled diagram. (50 marks)

1.2. mechanisms for transport across cell membranes (50 marks)

Question 2 **(100 marks)**

Describe the,

2.1. process of blood flow through the heart (50 marks)

2.2. structural differences between different types of blood vessels. (25 marks)

2.3. different valves which present in the heart (25 marks)

Question 3 **(100 marks)**

Briefly describe the,

3.1. components of lymphatic system (20 marks)

3.2. structures of Respiratory system. (30 marks)

3.3. gas exchange mechanism. (50 marks)

Question 4 **(100 marks)**

Describe the,

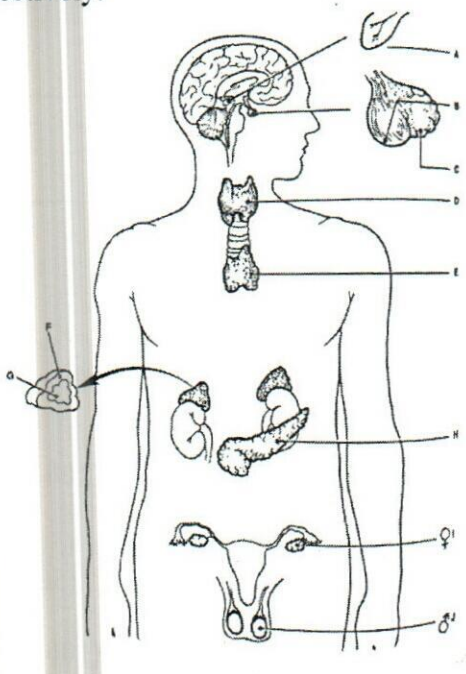
4.1. process of urine formation. (50 marks)

4.2. main organs and accessory organs of GI system. (50 marks)

Question 5 **100 marks)**

5.1. Draw and label the main structures of the reproductive system of females. (50 marks)

5.2. Write the name of the labeled gland and mention its functions respectively. (50 marks)



Question 6 **(100 marks)**

6.1. Draw the diagram of a neuron and label the structures. (20 marks)

6.2. Compare and contrast the three types of muscle tissue (30 marks)

6.3. List down two main neurotransmitters with their functions respectively (20 marks)

6.4. Briefly describe the main external reproductive organs of the male reproductive system. (30 marks)

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

BSc (Hons)Biomedical Sciences/ BSc (Hons)Industrial Pharmaceutical Sciences/ BSc (Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management
General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester -Batch 08
End Semester Practical Examination

Date : 2024.08.07
Time : 1.30 P.M – 3.30P.M (2 HOURS)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

Question 1 **(100 marks)**

Standard equations of the geometric progression $T_n = ar^{n-1}$, $S_n = \frac{a(r^n-1)}{(r-1)}$

1.1 Find the 7th term in the geometric sequence 8, 24, 72, 216, ….. (50 marks)

1.2 The first 3 terms of an infinite geometric progression are 16, 12 and 9

1.2.1 Write down the common ratio. (25 marks)

1.2.2 Find the sum of the terms of the progression. (25 marks)

Question 2 **(100 marks)**

The gradient function of a curve is $\frac{dy}{dx} = 4x - 12$

2.1 The minimum y value is 16. By considering the gradient function, find the corresponding x value. (50 marks)

2.2 Use the gradient function and your answer from part (i) to find the equation of the curve. (50 marks)

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences/ BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 08
1st Year 1st Semester
End Semester Assignment Examination

Date : **2024.08.05**
Time : **1.30 p.m. – 2.30 pm. (One Hour)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Generate a table that contains technologies that used in computer generations. (50 marks)

1.2 Carry out the following calculations using 4-bit two's complement. Show all your work clearly.

1.2.1. 5-3
1.2.2. (-8) + 2
1.2.3. (-6) - 2
1.2.4. (-1) + 7

(50 marks)

QUESTION 02 **(100 marks)**

2.1 State the advantages and disadvantages of internet. (50 marks)
2.2 Briefly describe the impact of ICT in health industry. (50 marks)

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FACULTY OF HEALTH SCIENCES

BSc(Hons)Biomedical Sciences/BSc(Hons)Industrial Pharmaceutical Sciences/BSc(Hons)Cosmetic Sciences

GENERAL ENGLISH – BSM1163
1ST YEAR 1ST SEMESTER – END EXAMINATION SEQ- BATCH 06

Date : 01.03.2022
Time : 09.00 am – 12.00 pm

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- The paper will be for **Three** hour (9.00 am – 12.00 am).
- You should write **answers in lined papers** legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Examine the following paragraph, and answer the questions based on it. (20 marks)

Biodiversity, also called biological diversity, is the variety of life found in a place on Earth or, the total variety of life on Earth. A common measure of this variety, called species richness, is the count of species in an area. Colombia and Kenya, for example, each have more than 1,000 species of birds, whereas the forests of Great Britain and of eastern North America are home to less than 200 species. Scientists conduct various types of studies based on these varied species. These studies are much valuable for the generation of new knowledge in the field of biology. Many aspiring researchers go on field studies to observe how biodiversity is spread across various areas. They dedicate their time and energy to conduct research every day at any given time. Biodiversity is important as it provides humans a stabilized environment.

a) What is the tense used in this paragraph? _____

b) What is the voice in the 4th sentence (Active/Passive)? _____

1.2 Identify the following elements from the passage. (80 marks)

c) A subject _____
d) A ditransitive verb _____
e) An intransitive verb _____
f) A direct object _____
g) An indirect object _____
h) An adverbial _____
i) A noun phrase _____
j) A verb _____

QUESTION 02 **(100 marks)**

2.1 Identify the voice (Active or Passive) of the following sentences and transform them into the opposite voice.

1) The professor will discuss the important areas for the exam tomorrow. (20 marks)
(Voice: _____) _____

2) The accident has caused a severe damage to his skull. (20 marks)
(Voice: _____) _____

3) He greets everyone with a slight smile. (20 marks)
(Voice: _____) _____

4) The vote of thanks will be delivered by the president of the association. (20 marks)
(Voice: _____) _____

5) The lecturer taught them how to observe photosynthesis under lab conditions. (20 marks)
(Voice: _____) _____

QUESTION 03 **(100 marks)**

3.1 Convert the following sentences into indirect speech.

1) "You delivered the welcome speech very well", my friend told me. (20 marks)
_____

2) She asked the coordinator, "Where to submit the assignment?" (20 marks)
_____

3) The policeman asked the motorist, "Are you drunk?" (20 marks)
_____

4) "Take two pills everyday at night", the doctor said to me. (20 marks)
_____

5) "Have you prepared the slide?", the lecturer asked the student. (20 marks)
_____

QUESTION 04 **(100 marks)**

4.1 Fill in each blank with the correct form of the verb given in brackets. (100 marks)

An old man who lived in Bandarawela (1) ..... (want) to dig up his potato garden last year, but it was a lot of hard work. His only son, who (2).....(help) him, was in prison and he couldn't afford an attorney to get him out. The old man wrote the following letter to his son and told about his situation:

Dear son,

I am feeling pretty bad because it (3) ..... (look) like I won't be able to plant my potato garden this year. I hate to miss (4) ..... (cultivate) the garden because your mother always loves planting time. I'm just getting too old to be digging up a garden plot. I know you (5)..... (help) me, if you weren't in prison.

Love,
Dad.

Shortly, the old man received this telegram:

"For heaven's sake, Dad, never (6) ..... (dig) the garden!! That's where I buried the GUNS!! Once I return home, I (7) ..... (hide) them somewhere else."

At about 4 a.m. the next morning, a dozen of police officers showed up and dug up the entire garden. However, no gun (8) ..... (find).

Confused, the old man wrote another note telling his son what (9) ..... just ..... (happen) and asked him what to do next.

His son's reply was: 'Go ahead and plant your potatoes, Dad. It's the best I could do for you, from here. At the moment, I (10) ..... (have) a hard time here and everything will be fine soon."

QUESTION 05 **(100 marks)**

5.1 Write the correct word ending selecting from those given in brackets. (100 marks)

A: Excuse me, can you help me? I promised my friend I would meet him half an hour ago, but I don't know where I am now.

B: Yes, I can help you. You're in a hot air balloon, hovering (1) approxima.....(tion,tely, te) 30 feet above a vacant field. There is a 5 knot southwest wind and the air temperature is 75 Degrees Fahrenheit.

A: You must be an engineer.

B: Yes, I am. How did you know?

A: Well, everything you have told me is (2) techni..... (cal, c, cally) correct, but I have no idea what to make of your information.

B: You must be a (3) manage..... (ment, r, rial).

A: Yes, I am. But how did you know?

B: You don't know where you are or how to achieve your (4) objec..... (ts, tions, tives). You made a promise to someone with no idea of how to keep it and now that you are in a (5) despera.....(te, tion, tely) position, you expect me to solve your problem.

QUESTION 06 **(100 marks)**

6.1 "Global warming has become a massive problem across the globe. It is mainly caused by human activities rather than natural phenomena" Do you agree? Write an essay on this topic highlighting your opinion on this statement. You may **use 150-200 words**.

(100 marks)

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00060

CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

BSc (Hons) Biomedical Sciences/ BSc(Hons)Industrial Pharmaceutical Sciences/BSc(Hons)Cosmetic Sciences

GENERAL ENGLISH -BSM1163

1ST YEAR 1ST SEMESTER -END EXAMINATION ASSIGNMENT -BATCH 06

Date : 01.03.2022
Time : 01.30 pm – 03.30 pm (2 HOURS)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write **answers in lined papers** legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Read the following text and answer the questions based on it:



It was very hot in the small court-room and everybody was tired and sleepy. It had been a tiring morning for there had been several cases that came up for hearing and the clerks and lawyers were anxious to get off for lunch. Even the judge was **relieved** when the last case came up before the court. A tall, old man with grey hair wearing shabby clothes was now standing before *him*. The man had a foolish expression on his face and kept looking around the court-room stupidly trying hard to understand what was going on.

The man was accused of breaking into a house and stealing a cheap watch. The witness who was called was not able to give a clear account of what had happened. He **claimed** to have seen this old man outside the house one night but on being questioned further by the lawyer he **confessed** *he* was not sure whether this was the man. After considering the matter for a while, the judge dismissed the case declaring that as there was no real proof, the man could not be found guilty of any crime. Meanwhile the **accused**, the old man looked very puzzled. It was very **obvious** that he had not understood a thing. The judge who rose to leave the courtroom noticed this and he paused near the old man for a moment and then *he* said suddenly, 'Excuse me, sir, but do I have to give the watch back or not?'

A. Say whether the following Statements are **TRUE** or **FALSE.** (50 marks)

1. All except the judge were relieved when the last case came up.
2. The last case was one of larceny.
3. The man who gave evidence against the old man made a fool of himself.
4. The old man is a very intelligent person.
5. The old man had really stolen the watch.

B. Answer the following questions. Use your own words. (50 marks)

1. Do you think the writer was justified in considering the old man stupid? Give your reasons.

2. a) Explain the meaning of the words in bold print as they appear in the text.
   b) Use each of those words in a sentence.

3. Who do the pronouns in italics refer to?

QUESTION 02 **(100 marks)**

2.1 "Students should be given limited access to the internet" Do you agree with this statement? Comment on your opinion about this statement using not more than 200 words.

CINEC CAMPUS
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Faculty of Health Sciences

BSc(Hons)Biomedical Sciences/BSc(Hons)Industrial Pharmaceutical Sciences/BSc(Hons)Cosmetic Science/BSc(Hons)Medical Health Product Management

MEDICAL TERMINOLOGY – BSM 1122

1ST YEAR 1ST SEMESTER - END EXAMINATION SEQ -BATCH 06

Learning Recourse Centre - (Library)
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Date : 22nd February 2023
Time : 09.00 a.m. – 12.00 p.m. (Three hours)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write the answers in black or blue ink.

01. **(100 marks)**

1.1 Define following terms.

1.1.1 Word root (10 marks)
1.1.2 Prefix (10 marks)
1.1.3 Suffix (10 marks)

1.2 Fill in the blanks in following table. (6 X 5 marks = 30 marks)

	Prefix	Root	Suffix
1.2.1 Hypothermia	(a)	(b)	(c)
1.2.2 Peritonsillitis	(a)	(b)	(c)

1.3 Define following terms. (2 X 5marks = 10 marks)

1.3.1 Hypothermia
1.3.2 Peritonsillitis

1.4 Write the meaning of the following word roots. (5 X 6 marks = 30 marks)

1.4.1 neph
1.4.2 cost
1.4.3 lingu
1.4.4 angi
1.4.5 ped

02. **(100 marks)**

2.1 What is anatomical position of human body? (25 marks)

2.2 Define following terms.

2.2.1 Median plane (15 marks)
2.2.2 Coronal plane (15 marks)
2.2.3 Transverse plane (15 marks)

2.3 Define following terms. (5 X 6 marks = 30 marks)

2.3.1 Laterosuperior
2.3.2 Posteromedial

b. pounding, racing, or skipping of the heartbeat
c. opposite of bradycardia; fast heartbeat
d. pain associated with the heart
e. chest pain or pressure
f. blue tinge in the skin and mucous membranes
g. fainting
h. term that literally means "condition of without rhythm"

3.2 Write the difference between an embolus and thrombus. (15 marks)

3.3 Define following terms.

3.3.1. Thrombocytopenia (15 marks)

3.3.2 Leukocytosis (15marks)

3.3.3 Lymphocytosis (15 marks)

04. **(100 marks)**

4.1 Write the meaning of the following terms. (5 X 6 marks = 30 marks)

4.1.1 rhino

4.1.2 pneumo

4.1.3 -pnea

4.1.4 epistaxis

4.1.5 mucolytic

4.2 Write a most appropriate medical term for following descriptions. (5 X 6 marks = 30 marks)

4.2.1 Pus in the urine

4.2.2 Kidney enlargements

4.2.3 Difficult or painful urination

4.2.4 Inflammation of the kidney

4.2.5 Physical, chemical and microscopic examination of urine

4.3 Write the meaning of the following terms. (5 X 6 marks = 30 marks)

4.3.1 phagia

4.3.2 cys

4.3.3 cholecysto
4.3.4 adeno
4.3.5 crino

4.4 What is homeostasis? (10 marks)

05. **(100 marks)**

5.1 Write the meaning of the following terms. (5 X 6 marks = 30 marks)
5.1.1 nephrectomy
5.1.2 calculus
5.1.3 micturition.
5.1.4 Cystalgia
5.1.5 nephroma

5.2 Define following cell types.
5.2.1 Osteoblasts (15 marks)
5.2.2 Osteocytes (15 marks)
5.2.3 Osteoclasts (15 marks)

5. What is the difference between dysmenorrhea and amenorrhea? (25 marks)

6. **(100 marks)**

6.1 Define following terms. (5 X 6 marks = 30 marks)
6.1.1 palsy
6.1.2 paraplegia
6.1.3 dementia
6.1.4 hypnotic
6.1.5 analgesic

6.2 Write a most appropriate medical term for following descriptions.
(5 X 6 marks = 30 marks)
6.2.1 Record of breast
6.2.2 Inflammation of breast
6.2.3 Study of female reproductive system
6.2.4 Use of artificial kidney machine to filter the blood
6.2.5 Withdrawing fluid using suction

6.3 Define following terms. (2 X 15 marks = 30 marks)
6.3.1 Goiter
6.3.2 Diabetic neuropathy

6.4 What is ectopic pregnancy? (10 marks)

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Beyond A Graduate

00061

FACULTY OF HEALTH SCIENCES

BSc(Hon)Biomedical Sciences/ BSc(Hons)Industrial Pharmaceutical Sciences/BSc(Hons)Cosmetic Sciences
INFORMATION TECHNOLOGY – BSM1113
1ST YEAR 1ST SEMESTER- END EXAMINATION SEQ- BATCH 06

Date : 20.02.2022
Time : 09.00 am – 12.00 pm

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write **answers in lined papers** legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Information and communication technologies (ICT) is defined as a diverse set of technological tools and resources used to transmit, store, create, share or exchange information.
Briefly explain five (05) uses of ICT for day-to-day life with examples. (25 Marks)

1.2 State the best suitable type of computer for each requirement out of the following computer types. (25 Marks)

(Personal computer, Supercomputer, Mainframe computer, Minicomputer, Workstation)

A. Need to support hundreds of users simultaneously, should have a larger memory storage and processing speed should range from 3-4 MIPS to 100 MIPS (more powerful).
B. Should be able to process very complex programs very fast by executing hundreds of millions of instructions per second.
C. Need to use as a single user computer. Yet should have a more powerful microprocessor.
D. Should support multiple users but okay to have a moderately powerful processor specification.
E. A device with a moderately powerful processor to be used by a single user for daily activities.

1.3 Define the terms hardware and software and differentiate in between them. (25 Marks)
1.4 Explain how ICT can be used to increase quality in the patient assistance. (25 Marks)

QUESTION 02 **(100 marks)**

2.1 Define what a computer network is and state five (05) components of a computer network. (25 Marks)
2.2 Briefly explain the four (04) types of computer networks. (You may use diagrams if needed.) (25 Marks)
2.3 Define what a network topology is and state two (02) advantages and two (02) disadvantages of Bus, Ring, Star and Mesh topologies. (25 Marks)
2.4 Briefly explain differences and similarities of a network switch and a network hub. (25 Marks)

QUESTION 03 **(100 marks)**

3.1 Define what computer memory is and state the purpose of memory in a computer system. (25 Marks)
3.2 What is cache memory? State two (02) advantages and two (02) disadvantages of cache memory. (25 Marks)
3.3 Differentiate in between Read-only-memory (ROM) and Random-access-memory (RAM). (25 Marks)
3.4 Draw the memory hierarchy diagram containing up to quaternary memory. (25 Marks)

QUESTION 04 **(100 marks)**

4.1 Define and differentiate the terms "data" and "information" with an appropriate example.

(25 marks)

4.2 State all the units from bits up to petabyte with the notations in the correct order and state the conversion pattern from one unit to another.

(25 marks)

4.3 Convert the following decimal to binary. State the necessary steps. (25 marks)

a) 147_{10}
b) 420_{10}

4.4 Convert the following binary to decimal. State the necessary steps. (25 marks)

a) 11010_2
b) 1001010.10_2

QUESTION 05 **(100 marks)**

5.1 Briefly define what is internet (Define, discuss about components, advantages and disadvantages). (25 marks)

5.2 Briefly define the following terms related to web.

a) Web
b) Web browser
c) Web server
d) Web page
e) Search (25 marks)

5.3 Describe the difference between CC and BCC fields in an email. Provide a suitable example to describe the difference.

(25 marks)

5.4 Write a proper email body with a subject line addressing your lecturer for the purpose of requesting an excuse for a missed IT class on a particular day.

(25 marks)

QUESTION 06 **(100 marks)**

6.1 Briefly explain the terms "database" and "Database Management System" (DBMS).

(25 marks)

6.2 Considering a pet as an example, write five (05) "qualitative data" and five (05) "quantitative data".

(25 marks)

6.3 State three (03) techniques each for primary and secondary data gathering.

(25 marks)

6.4 State five (05) types of databases. (25 marks)

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

Bachelor of Science Honours in Biomedical Sciences/ Bachelor of Science Honours in Industrial Pharmaceutical Sciences / Bachelor of Science Honours in Cosmetic Science

BSM 1163 – General English

1st Year 1st Semester

Batch 05

End Semester SEQ Examination

INDEX NUMBER: .....

Date : 28th of September 2021
Time : 09.00 am – 12.00 pm (Three Hours) - To answer the questions
12.00 pm – 12.30 pm (30 minutes) - To upload & email the compiled answer script

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INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- The paper will be for three hours (9.00 am – 12.00 pm). You will be given an extra 30 minutes for submission.
- You should write **answers in lined papers** legibly in black or blue ink.
- You MUST write **your index number in the top right corner** of each answer script.
- **Answer script should be numbered** (right bottom) clearly.
- Photograph of your answer scripts must be taken by keeping them on a clear platform (e.g. table).
- Arrange the photographs of your answer script in a word document in an orderly manner, then convert the word document to a **PDF**.
- **Label the PDF: Your Index No – General English SEQ**
- **Upload** the labelled **PDF to LMS AND** also **email** the PDF to Fohs.exams@cinec.edu

Question 01 **(100 Marks)**

Read the passage and answer the questions given below.

1. The Coronavirus pandemic is the defining global health crisis of our time. Since its emergence late last year, the virus has spread to every continent except Antarctica. The World Health Organization has made the assessment that COVID-19 can be characterized as a pandemic, but it is a pandemic that can be controlled. COVID-19 is the infectious disease caused by the most recently discovered coronavirus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019. Countries are racing to slow the spread of the disease by testing and treating patients, carrying out contact tracing, limiting travel, quarantining citizens, and cancelling large gatherings such as sporting events, concerts, and schools.
2. The pandemic is moving like a wave—one that may yet crash on those least able to cope. But COVID-19 is much more than a health crisis. By stressing every one of the countries it touches, it has the potential to create devastating social, economic and political crises that will leave deep scars. Every country needs to act immediately to prepare, respond, and recover. The UN system will support countries through each stage, with a focus on the most vulnerable. Drawing on our experience with other outbreaks such as Ebola, HIV, SARS, TB and malaria, as well as our long history of working with the private and public sector, UNDP will help countries to urgently and effectively respond to COVID-19 as part of its mission to eradicate poverty, reduce inequalities and build resilience to crises and shocks.
3. During the COVID-19 outbreak, like all hospitals around the world, hospitals in Sri Lanka are also facing shortages of medical supplies, specifically Personal Protective Equipment (PPE) kits. At a critical time such as this where community effort was needed the most, UNDP was able to support the need of the hour through its ongoing Climate Change Adaptation Project (CCAP II) by teaming up with Green Coop. Through this initiative, garment factories established through the project in Polonnaruwa area were approached, seeking a solution to address the shortage of Personal Protective Equipment (PPE) by exploring methods of local production.
4. From their hardwork, 500 Personal Protective Equipment for healthcare workers, 250 patient safety kits and 1,400 masks were donated to healthcare workers in the frontlines in Colombo and Polonnaruwa. Recently, these safety kits were handed over to the Governor of the Western Province Mr. Roshan Goonatileke and Provincial Director of Health Western Province Dr. Damayanthi Jayathilaka.
5. While we do this, we must also consider ways to prevent a similar pandemic recurring. In the longer term, UNDP will look at ways to help countries to better prevent and manage such crises and ensure that the world makes full use of what we will learn from this one. Ending the COVID-19 pandemic is our duty. Extraordinary times demand extraordinary measures. We face a colossal test, which demands decisive, coordinated and innovative action from all, for all.

Question 02 **(100 marks)**

Part A **(50 marks)**

Fill in the blanks with the words given below in the box. (The first one has been done for you).

Showered	biggest	dinosaurs	injured	relatively	people
coincidence	atmosphere				
colliding	comets	Earth	millions	equivalent	
Complex	damage	gravitational	Expecting	dangerous	small
lucky	diameter				

It weighed about 10,000 tons, entered the atmosphere at a speed of 64,000 km/h and exploded over a city with a **blast** of 500 kilotons. But on 15 February 2013, we were 1..... . The meteorite that 2..... pieces of rock over Chelyabinsk, Russia, was relatively small, at only about 17 metres wide. Although many people were 3..... by falling glass, the damage was nothing compared to what had happened in Siberia nearly one hundred years ago. Another 4..... small object (approximately 50 metres in diameter) exploded in mid-air over a forest region, flattening about 80 million trees. If it had exploded over a city such as Moscow or London, 5..... of people would have been killed. By a strange 6....., the same day that the meteorite terrified the 7..... of Chelyabinsk, another 50m-wide asteroid passed relatively close to Earth. Scientists were 8.....that visit and know that the asteroid will return to fly close by us in 2046, but the Russian meteorite earlier in the day had been too 9..... for anyone to spot. Most scientists agree that 10.....and asteroids pose the 11..... natural threat to human existence. It was probably a large asteroid or comet 12..... with Earth which wiped out the 13.....about 65 million years ago. An enormous object, 10 to 16 km in diameter, struck the Yucatan region of Mexico with the force of 100 megatons. That is the 14..... of one Hiroshima bomb for every person alive on 15..... today. Many scientists, including the late Stephen Hawking, say that any comet or asteroid greater than 20 km in 16..... that hits Earth will result in the complete destruction of 17..... life, including all animals and most plants. As we have seen, even a much smaller asteroid can cause great 18..... The Earth has been kept fairly safe for the last 65 million years by good fortune and the massive 19..... field of the planet Jupiter. Our cosmic guardian, with its stable circular orbit far from the sun, sweeps up and scatters away most of the 20..... comets and asteroids which might cross Earth's orbit. After the Chelyabinsk meteorite, scientists are now monitoring potential hazards even more carefully but, as far as they know, there is no danger in the foreseeable future.

1. In what continent we can't find the corona virus? (05 mark)

.....

2. When and where did the first outbreak of corona virus take place? (05 mark)

.....

3. Mention 4 steps taken by the countries to slow the spread of corona virus. (10 marks)

.....

.....

4. What is the author's main purpose of writing this article? (10 marks)

.....

.....

5. Why has the author mentioned that, 'corona virus is much more than a health crisis'? Support your answer referring to the text. (10 marks)

.....

.....

6. What is the mission of UNDP mentioned in the passage? (05 mark)

.....

.....

7. According to your point of view, as a developing country is Sri Lanka trying to minimize the spread of corona virus. Support your answer by giving reasons you have experienced. (Word count 100) (15 marks)

.....

.....

.....

.....

.....

8. What is the main idea of the following paragraphs? (20 marks)

1-.....

2-.....

3-.....

4-.....

9. Do you agree with the author's statement that everyone should cooperate to eradicate the virus? (15 marks)

.....

.....

.....

.....

.....

10. Provide a suitable title for the passage. (05 marks)

.....

Part B **(50 marks)**

suggested	if	careful	managed	flying	getting
must		accident	whether	sips	
in case	operating	forward	complicated	recover	hole

A surgeon flying from Hong Kong to London on a jumbo jet 1 ..... a fellow passenger's life by 2..... on her with a pair of scissors, a coat hanger, and a bottle of brandy. Pauline Dixon was involved in a motorcycle 3..... on the way to Hong Kong airport, but she didn't want to see a doctor 4..... she complained about a pain in her arm. The pilot asked 5..... or not there were any doctors on board, and Professor Wallace and Dr. Tom Wong came 6..... At first, they thought her arm was broken, but within minutes they saw that her condition was 7..... worse. They realized that one of her lungs 8..... have collapsed and was filling up with liquid. Professor Wallace said; " I felt we had 9..... operate as soon as we could, but of course we didn't have 10..... right equipment, so we had to see what was there. I cut a 11..... in her chest with a pair of scissors and then we had to find something to push a tube into the lung. One of the cabin crew 12..... using a coat hanger, which worked well, and we 13..... to get the tube in quite easily. Normally, it is not a 14..... operation 15..... you have the right equipment, but we had to be very 16..... . We sterilized everything with five star brandy. When the operation was over I had a few 17..... myself. I can tell you, I needed it."

After the plane landed safely in London, Miss Dixon went to hospital to 18..... Although, the operation had been very 19....., she was very grateful to the doctors for saving her life, and was full of 20.....for what they had done.

Question 03 **(100 marks)**

Part A **(50 marks)**

Put the verbs in the brackets into the correct tense.

Sue Thomas is a fashion designer. She 1..... (to make) clothes ever since she 2..... (to be) a young girl. She 3..... (to get) her first job in a clothes factory when she was sixteen. She 4..... (to sew) buttons on to a shirt one day when she 5..... (to have) a brilliant idea for a design. After she spoke to her bank manager, she got a loan and she 6..... (to open) her own little workshop. Now she 7..... (to make) lots of money. Next year she 8..... (to open) a shop which will sell her own designs. She 9..... (to sell) clothes to a lot of famous people including film stars and singers and she 10..... (to think) she will be very rich soon.

Part B **(50 marks)**

One day a little Indian boy 1..... (to sit) outside his wigwam. He 2..... (to wonder) how the Indians 3..... (to choose) their children's names. He 4..... (to decide) to go and ask the Indian chief. "Well," the chief 5..... (to explain), "we love nature and when a new baby 6..... (to be) born, we 7..... (to look) around and 8..... (to choose) a name like Flowing Waterfall, Bright Star, Running Bull. And so on. 9..... (you/to understand)? "Yes, chief", the Indian boy said. Why 10..... (you/to be) so interested in this, Two Dogs Fighting?", the chief asked.

Question 04 **(100 marks)**

Re-write the sentences in reported speech.

1. Don't do it!" (10 marks)
   She.....
2. "I'm leaving tomorrow" (10 marks)
   She.....
3. "Please get me a cup of tea" (10 marks)
   She.....
4. "She got married last year" (10 marks)
   She.....
5. "Be quick!" (10 marks)
   She.....
6. "Could you explain number four, please?" (10 marks)
   She.....
7. "Where do you live?" (10 marks)
   She.....
8. "We went to the cinema and then to a Chinese restaurant" (10 marks)
   She.....
9. "I'll come and help you at twelve" (10 marks)
   She.....
10. "What are you doing tomorrow?" (10 marks)
    She.....

Question 05 **(100 marks)**

Part A **(50 marks)**

Change the following sentences into passive voice.

1. The government is planning a new road near my house. (5 marks)
   .....
2. My grandfather built this house in 1943. (5 marks)
   .....
3. Picasso was painting Guernica at that time. (5 marks)
   .....
4. The cleaner has cleaned the office. (5 marks)
   .....
5. He had written three books before 1897. (5 marks)
   .....
6. John will tell you later. (5 marks)
   .....
7. By this time tomorrow we will have signed the deal. (5 marks)
   .....
8. Somebody should do the work. (5 marks)
   .....
9. People speak Portuguese in Brazil. (5 marks)
   .....
10. The traffic might have delayed Jimmy. (5 marks)
    .....

Part B **(50 marks)**

Fill the gaps with the correct tenses suitably. (active or passive voice)

1. The robbers ..... by the police yesterday. (arrest) (5 marks)
2. We ..... preparing for the examination now. (prepare) (5 marks)
3. It ..... since yesterday. (rain) (5 marks)
4. I ..... for five hours. (working) (5 marks)
5. The students ..... to submit the reports by Wednesday. (submit) (5 marks)
6. She ..... for a while. (lie) (5 marks)
7. The teacher ..... the students for lying. (punish) (5 marks)
8. The inmates of the juvenile home ..... well by the caretakers. (not/ treat) (5 marks)
9. As the patient could not walk, he ..... home in a wheelchair. (carry) (5 marks)

10. The injured …….. to the hospital in an ambulance. (take) (5 marks)

Question 06 **(100 marks)**

Write an essay on:

Do you think Reading books can help people with personal development? Why or why not?
Give your reasons and provide examples.

Word limit 175 – 200

Important! – You will be penalized if you exceed the word limit.

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CINEC CAMPUS
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Faculty of Health Sciences

Bachelor of Science Honours in Biomedical Sciences/ Bachelor of Science Honours in Industrial Pharmaceutical Sciences/ Bachelor of Science Honours in Cosmetic Science

BSM 1143 – General Mathematics

1st Year 1st Semester

Batch 05

End Semester SEQ Examination

INDEX NUMBER: .....

Date : 24th of September 2021
Time : 09.00 am – 12.00 pm (Three Hours) - To answer the questions
12.00 pm – 12.30 pm (30 minutes) - To upload & email the compiled answer script

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INSTRUCTIONS TO CANDIDATES

- This question paper consists of **EIGHT** questions.
- Answer **SIX** questions.
- The paper will be for three hours (9.00 am – 12.00 pm). You will be given an extra 30 minutes for submission.
- You should write **answers in lined papers** legibly in black or blue ink.
- You MUST write **your index number in the top right corner** of each answer script.
- **Answer script should be numbered** (right bottom) clearly.
- Photograph of your answer scripts must be taken by keeping them on a clear platform (e.g. table).
- Arrange the photographs of your answer script in a word document in an orderly manner, then convert the word document to a **PDF**.
- **Label the PDF: Your Index No – General Mathematics SEQ**
- **Upload** the labelled **PDF to LMS AND** also **email** the PDF to Fohs.exams@cinec.edu

Question 1 **(100 marks)**

1. Factorize the given expressions.

i. $x^2 + 7x + 12$ (25 marks)
ii. $x^2 - 20x + 100$ (25 marks)
iii. $x^2 - 49$ (25 marks)
iv. $6x^2 + x - 12$ (25 marks)

Question 2 **(100 marks)**

2.1. Solve $x^2 - 40x - 6000 = 0$ (50 marks)
2.2. Use the quadratic formula to solve $3x^2 - 6x + 2 = 0$ (50 marks)

Question 3 **(100 marks)**

3.1. How many terms are there in the sequence (50 marks)
11, 15, 19,....., 643 ?
3.2. Find the sum of the first 100 terms of the progression $1,\ 1\frac{1}{4},\ 1\frac{1}{2},\ 1\frac{3}{4},\ldots\ldots$ (50 marks)

Question 4 **(100 marks)**

4.1. Standard equations of the geometric progression $T_n = ar^{n-1}$, $S_n = \frac{a(r^n-1)}{(r-1)}$
4.11. Find the 7th term in the geometric sequence 8, 24, 72, 216, ... (50 marks)
4.12. The first 3 terms of an infinite geometric progression are 16, 12 and 9
(a) Write down the common ratio. (25 marks)
(b) Find the sum of the terms of the progression. (25 marks)

Question 5 **(100 marks)**

5.1. Differentiate $f(x) = \frac{(x^2+1)(x-5)}{x}$ (50 marks)
5.2. Given that $y = \sqrt{x} - \frac{8}{x^2}$, find
(a) $\frac{dy}{dx}$ (25 marks)
(b) The gradient of the curve at the point $\left(4, 1\frac{1}{2}\right)$ (25 marks)

Question 6 **(100 marks)**

6.1. Prove the identity $cos^2x - sin^2x = 2\,cos^2x - 1$ (50 marks)

6.2. Prove the identity $\frac{\cos x}{1-\sin x} - \frac{1}{\cos x} = \tan x$ (50 marks)

Question 7 **(100 marks)**

7.1. Find $\int (2x^3 - 3x + 4)\ \ dx$ (50 marks)

7.2. Find $\int \left(\frac{3}{x^4} - \frac{1}{x^2} + 4\right)\ \ dx$ (50 marks)

Question 8 **(100 marks)**

8.1. Evaluate $\int_0^2 \frac{1}{5x+3}\ dx$ (50 marks)

8.2. Evaluate $\int_5^7 \frac{1}{4-x}\ dx$ (50 marks)

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Faculty of Health Sciences

Bachelor of Science Honours in Biomedical Sciences/ Bachelor of Science Honours in Industrial Pharmaceutical Sciences/ Bachelor of Science Honours in Cosmetic Science

BSM 1113 – Information Technology

1st Year 1st Semester

Batch 05

End Semester SEQ Examination

INDEX NUMBER: .....

Date : 21st of September 2021
Time : 09.00 am – 12.00 pm (Three Hours) - To answer the questions
12.00 pm – 12.30 pm (30 minutes) - To upload & email the compiled answer script

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INSTRUCTIONS TO CANDIDATES

- This question paper consists of **EIGHT** questions.
- Answer **SIX** questions including the **Compulsory question.** (Compulsory question and FIVE other questions)
- The paper will be for three hours (9.00 am – 12.00 pm). You will be given an extra 30 minutes for submission.
- You should write **answers in lined papers** legibly in black or blue ink.
- You MUST write **your index number in the top right corner** of each answer script.
- **Answer script should be numbered** (right bottom) clearly.
- Photograph of your answer scripts must be taken by keeping them on a clear platform (e.g. table).
- Arrange the photographs of your answer script in a word document in an orderly manner, then convert the word document to a **PDF** or use CAMScanner to directly convert it to PDF.
- **Label the PDF: Your Index No – Information Technology SEQ**
- **Upload** the labelled **PDF to LMS AND** also **email** the PDF to Fohs.exams@cinec.edu

QUESTION 01 (Compulsory) **(100 marks)**

(a) List four (04) sectors that use ICT and explain them briefly. (80 marks)
(b) Describe the difference between Intranet and Extranet. (20 marks)

QUESTION 02 **(100 marks)**

(a) Write four (04) uses of internet and explain two (02) of them. (25 marks)
(b) Write five (05) features in email. (25 marks)
(c) Explain the difference between "cc" and "bcc". (25 marks)
(d) What are the types of worms and write four (04) ways of protecting your computer from viruses? (25 marks)

QUESTION 03 **(100 marks)**

(a) Define the terms "Hardware and Software" with examples? (20 marks)
(b) What is EULA? Explain briefly? (20 marks)
(c) What is the file compression? Briefly explain the importance of the file compression. (20 marks)
(d) Write four (04) major functions of an OS. (20 marks)
(e) Write two (02) types of user interfaces and explain one. (20 marks)

QUESTION 04 **(100 marks)**

Following figure shows the income and expenditure of the sports meet of ABC College,

F11 590000

	A	B	C	D	E	F
1	Sport Meet Income and Expenditure					
2	Income			Expenditure		
3	Date	Discription	Amount	Date	Discription	Amount
4	1/2/2016	Claude House	55000	1/20/2016	For Food	50000
5	1/2/2016	Mark House	45000	1/21/2016	drinks	50000
6	1/4/2016	Luke House	52000	1/23/2016	Medals and Cups	20000
7	1/6/2016	Cammilus House	48000	1/26/2016	Certificates	15000
8	1/7/2016	Well wissers	100000	1/27/2016	Transport	10000
9	1/8/2016	Students from abroad	290000	1/28/2016	Main Stage	15000
10				1/31/2016	Balance B/F	430000
11	Total		590000			590000
12	Old students living in abroad		$2,000.00			
13	Doller exchange rate		145			
14						
15						

(a) What is the formula that should be in cell C9 to convert the amount in dollar in C12 to rupee?
(Dollar exchange rate is mentioned in cell C13) (10 marks)

(b) Write the formula in cell C11 to calculate total income. (20 marks)

(c) Total income in C11 should be equal to the amount in F11. What is the formula should be in F11 to fulfill this requirement? (10 marks)

(d) Total expenditure and the total balance Brought forward (B/F) should be equal to the amount in F11. Write the formula that should be in cell F10 to calculate the balance. (20 marks)

(e) You can see the column letter F and row number are shaded. Why is that? (10 marks)

(f) Amount given from Mark house needs to be change to 50000. What are the cells would be change accordingly? (10 marks)

(g) Sports committee want to show how do they expend money for each task in graphically.

I. Name two types of graph that can be used to do this. (10 marks)

II. State the cell range should be used for above graph. (10 marks)

QUESTION 05 **(100 marks)**

(a) List three (03) difficulties of handling large volume of data in an organization.(20 marks)

(b) What is a database? Briefly explain how you would overcome the difficulties mentioned above by using databases. (30 marks)

(c) What do you mean by a "Field" & a "Record" in a database system? (10 marks)

(d) Define the terms "Primary Key" & "Foreign Key" in database environment. (20 marks)

(e) List three (03) types of relationships exist between database tables. (20 marks)

QUESTION 06 **(100 marks)**

(a) What is the difference between a "Printer" and a "Plotter"? (25 marks)

(b) How is a "Network Computer" different from a "Laptop"? (45 marks)

(c) "Shared Folder" is a useful element towards students in an Information Technology Lab Environment. Explain how it is useful (30 marks)

QUESTION 07 **(100 marks)**

(a) Define the term "Computer Virus". (25 Marks)

(b) List down how you can identify that your computer has been attacked by a virus? (25 Marks)

(c) Explain why the viruses are dangerous. (25 Marks)

(d) Name three different types of computer viruses and explain one from them. (25 Marks)

QUESTION 08 **(100 marks)**

Write short notes on the following (5 X 20 Marks)

(a) WWW
(b) CPU
(c) Database
(d) Input devices
(e) ICT

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Faculty of Health Sciences

Bachelor of Science Hons. Biomedical Science / BSc (Hons) Cosmetic Sciences / BSc (Hons) Industrial Pharmaceutical Sciences / BSc (Hons) Medical Health Product Management.

General Mathematics – BSM 1143

1st year 1st semester –Batch 06

End Examination- Practical Examination

INDEX NUMBER: .....

Date	**: 27.02.2022**
Time	**: 01.30 pm – 3.30 pm**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **FOUR** questions.
- Answer **ALL** questions.
- You should write **answers in lined papers** legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Use Sin (A+B) formulae to obtain Sin 75. (20 marks)
1.2 Use Cos (A-B) formulae to obtain Cos 15. (20 marks)
1.3 Convert 315 Degree value into radians. (20 marks)
1.4 Show that tan A + Cot A = 2 / Sin (2A). (20 marks)
1.5 Convert $3\pi/4$ Radian value into Degree. (20 marks)
1.6

QUESTION 02 **(100 marks)**

2.1 Differentiate the following functions. (50 marks)

a) $Y = 3x^2e^{2\sin x}$
b) $Y = 3\text{Sin}(2x^2) + \text{Sin}(4x - 3)$

2.2 Find the definite Integral for the following function. (50 marks)

a) $\int_{\pi}^{2\pi} (\sin x)\,(x^2)dx$

QUESTION 03 **(100 marks)**

3.1 Factorize the followings. (25 marks)

a) $2x^2 - x - 1$

b) $x^4 - 16$

c) $A^3 - 8B^3$

3.2 Solve the following system. (25 marks)

a) $\text{Log}_3 X + \text{Log}_3 Y = 3$

b) $\text{Log}_Y X = 2$

3.2 Solve the following equation. (25 marks)

a) $3^{2X+1} - 3^{X+4} + 3^3 = 3^X$

3.4 Find the range of X values which satisfying below inequality (X€R). (25 marks)

a) $X^2 \geq 0$

QUESTION 04 **(100 marks)**

4.1 Determine the following indefinite integral. (a is a constant). (25 marks)

a) $\int (3e^t + 5\cos at)\,dt$

4.2 Determine the following definite integral. (25 marks)

a) $\int_{-3}^{3} (2x + 5)\,dx$

4.3 Write the following expressions as a single term. (25 marks)

a) $\log_2(80) + \log_2(\frac{8}{5})$

b) $\frac{e^{(3x+5)}}{e^{-x}} e^{5x}$

4.4 Solve following equations for x in terms of y. (where t is constant). (25 marks)

a) $y = te^{\sqrt{2x^2+1}}$

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Faculty of Health Sciences

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General Mathematics – BSM 1143

1st year 1st semester –Batch 06

End Examination- SEQ

INDEX NUMBER: .....

Date : **27.02.2022**

Time : **09.00 am – 12.00 pm**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write **answers in lined papers** legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Evaluate $(3\frac{1}{16})^{\frac{5}{2}}$. (20 marks)

1.2 Find the set of values for which; $4(x-6)-3x \leq 2(x-1)$ (20 marks)

1.3 Find the sum of first 20 terms of the geometric series 2+6+18…. (20 marks)

1.4 Aarithmetic series has first term 5 and common difference -6. Find the 25th term. (20 marks)

1.5 Differentiate y $=-2x^3+3x$. (20 marks)

QUESTION 02 **(100 marks)**

2.1 Simplify following exponential functions. (25 marks)

a) $Y = e^{(-3x+1)}.(e^{3x})/e^{(3x+1)}$

2.2 Solve following equations for X in terms of Y. (25 marks)

a) $Y = 2ab\ e^{(2x+b)}$ (a, b are constants.)

2.3 Solve the following System. (25 marks)

a) $\log_y(x) = 3$

b) $x\ y = 256$

2.4 Solve the simultaneous equations. (25 marks)

a) $2x + y = 26$

b) $x + 3y = 24$

QUESTION 03 **(100 marks)**

The first three terms of a geometric series are 15, 15(0.2), and $15(0.2)^2$ respectively.

3.1 Calculate the sum of first 10 terms of the geometric series. (25 marks)

3.2 Find the common ratio of the geometric series. (25 marks)

3.3 Find the sum to infinity of the geometric series. (25 marks)

3.4 Is this series is a convergent series? Justify your answer. (25 marks)

QUESTION 04 **(100 marks)**

Consider $f(Y) \equiv Y^3 - Y^2 - 16Y - 14$

4.1 Find the remainder when $f(Y)$ is divided by (Y + 1) is a factor of f(Y). (25 marks)

4.2 Hence factorize $f(Y)$ completely. (25 marks

4.3 Sketch the curve $Z = Y^2 - 3Y + 2$. (25 marks)

4.4 Find the coordinates of the turning points of the curve $Z = Y^2 + 2Y + 3$. (25 marks)

QUESTION 05 **(100 marks)**

5.1 Simplify $\sqrt{256} + \sqrt{324} - \sqrt{128}$. (25 marks)

5.2 Find the set of values of x for which $-2x^2 + 9x + 5 > 0$. (25 marks)

5.3 Divide $(-3x^5 + 3x^4 - 4x^3 - 6x^2 + 12x - 9)$ by $(x^2 + x - 3)$. (25 marks)

5.4 Rationalize the denominator of $\frac{24}{(\sqrt{6}-\sqrt{2})}$. (25 marks)

QUESTION 06 **(100 marks)**

6.1 Differentiate the following functions. (50 marks)

a) $Y = 2X^4(2X^3+5)$

b) $Y = 3\text{Sin}(2x) + 5\text{ Sin}(2x - 3)$

c) $Y = x^3 e^{4x}$

6.2 Find the definite Integral for the following function (50 marks)

$$\int_{-2}^{4} x^2 e^{2x} dx$$

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PAST PAPERS

Faculty	Department / Section/Division
Not Applicable	Learning Resource Centre

Past Papers

Faculty of Health Sciences

Bachelor of Science Honors in Medical and Health Product Management

(Year 1 – Semester I) /II

1st Issue Date: 2017.011.30	Revision No.00	Revision Date: 27.2.2024	Validated by: Librarian

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Faculty of Health Sciences
Bachelor of Science Honours in Medical and Health Product Management
BSM 1133 - Pharmaceutical Management

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Batch – 02

01st Year 01st Semester

End Semester SEQ Examination

Date : **14th of March 2024**
Time : **09.00 a.m. – 11.00 a.m. (Two hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of FOUR questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

Question 01

1.1 List **three (03)** levels of managers. (10 Marks)

1.2 Define the term "management". (20 Marks)

1.3 Identify the level of skills that need to be acquired by different levels of managers within an organization. (30 Marks)

1.4 Differentiate "efficiency" and "effectiveness". (40 Marks)

Question 02

2.1 Name **four (04)** factors affecting the shape of the organizational structure. (10 Marks)

2.2 List **four (04)** different types of organizational structures. (20 Marks)

2.3 Identify different types of plans based on **four (04)** different bases. (30 Marks)

2.4 Describe why managers need to focus on social responsibility. (40 Marks)

Question 03

3.1 List **four (04)** steps of controlling process. (10 Marks)

3.2 Identify **four (04)** motivational theories. (20 Marks)

3.3 Differentiate "extrinsic motivation" and "intrinsic motivation". (30 Marks)

3.4 Describe following concepts. (40 Marks)

3.4.1. Employee oriented leadership vs Product oriented leadership (20 Marks)

3.4.2. Transactional leadership vs Transformational leadership (20 Marks)

Question 04

4.1 List **four (04)** Human Resource Management functions. (10 Marks)

4.2 Briefly describe the cruciality of human resources for the success of an organization. (20 Marks)

4.3 Differentiate job description and job specification. (30 Marks)

4.4 Describe following concepts. (40 Marks)

4.4.1. Recruitment and selection (20 Marks)

4.4.2. Training and development (20 Marks)

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Faculty of Health Sciences
Bachelor of Science Honours in Medical and Health Product Management
BSM 1143 - General Pharmaceutics
Batch - 02
1st year 1st semester
End Semester SEQ Examination

Date : **12th March 2024**
Time : **09.00 am – 12.00 pm (Three Hours)**

INSTRUCTIONS TO CANDIDATES

This question paper consists of **SIX** questions.
Answer **all** questions.
You should write legibly in black or blue ink.

01 **(100 marks)**

1.1. What is the importance of having standards for drugs? (10 marks)
1.2. State the **05** criteria to be accomplished by a newly invented drug. (15 marks)
1.3. Differentiate pharmacopeia and drug formulary. (20 marks)
1.4. Describe general monographs and specific monographs. (25 marks)
1.5. Describe **02** unique facility designs and operations to be available in a clean room at an injectable biological drug manufacturing facility. (30 marks)

02 **(100 marks)**

2.1. Draw the schematic representation of the cumulative amount of drug released from immediate and extended released dosage forms. (10 marks)
2.2. Differentiate two-phased system from single-phase gels. (20 marks)
2.3. Classify the sterile dosage forms and drug delivery systems. (30 marks)
2.4. Write short notes on the following. (40 marks)
2.4.1. Buccal and sublingual tablets
2.4.2. Plasters
2.4.3. Effervescent tablets
2.4.4. Suppositories

03 **(100 marks)**

3.1. What is the importance of maintaining GMP in the pharmaceutical industry? (20 marks)
3.2. Briefly describe the material and personnel flow in a pharmaceutical manufacturing plant by drawing a simple layout. (30 marks)
3.3. State **05** uses of reference standards in the pharmaceutical industry. (20 marks)
3.4. Describe how an analytical reference standard is prepared from a working standard. (30 marks)

04 **(100 marks)**

4.1. State **03** unique characteristic features of borosilicate glass. (20 marks)

4.2. Comment on the importance of quality assurance aspects of packaging. (30 marks)

4.4. State the main **03** types of hazards encountered by packaging with an example for each. (15 marks)

4.5. Write a descriptive account of types of packaging. (35 marks)

05 **(100 marks)**

5.1. State **05** ideal characteristics of the excipients. (20 marks)

5.2. Briefly describe the function of anti-oxidants as an excipient. (20 marks)

5.3. Differentiate between glidant and lubricant. (30 marks)

5.4. Outline the information that should be available on a dispensing label. (30 marks)

06 **(100 marks)**

6.1. What is a pharmaceutical plant layout? (20 marks)

6.2. State **05** factors that must be considered when developing a pharmaceutical layout. (20 marks)

6.3. Briefly describe how you are going to minimize the external particles and microorganisms within a good manufacturing plant by giving examples. (30 marks)

6.4. A pharmaceutical manufacturing plant has the same place to receive the materials and load the finished products.

6.4.1. Comment on the suitability of receiving materials and loading of finished products from the same place. (30 marks)

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Faculty of Health Sciences

Bachelor of Science Honours in Medical and Health Product Management

Pharmaceutical Management - BSM1133

Batch 01

1st Year 1st Semester

End Semester Examination Assignment

INDEX NUMBER: .....

Date: 07/03/2023 (Tuesday)

Time: 13.30 pm – 14.30 pm

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **All** questions.
- The paper will be for three hours (13.30 pm – 14.30 pm).
- You should write the answers in the given answer sheets legibly in black or blue ink.

Question 01

Using the recruitment procedure and the selection process, explain how the Human Resource Management Department would recruit a client for a position using an example. (50 Marks)

Question 02

Explain how motivational techniques are important for managers in increasing the productivity of an overall organization. (50 Marks)

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Faculty of Health Sciences

Bachelor of Science Honours in Medical and Health Product Management

Pharmaceutical Management - BSM1133

Batch 01

1st Year 1st Semester

End Semester Examination SEQ

INDEX NUMBER: .....

Date: 07/03/2023 (Tuesday)

Time: 9.00 am – 11.00 am

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **FOUR** questions.
- Answer **All** questions.
- The paper will be for three hours (9.00 am -11.00 am).
- You should write the answers in the given answer sheets legibly in black or blue ink.

Question 01

1.1 Define 'management' in an organizational context. (20 Marks)
1.2 Briefly describe the three (3) characteristics of professionalism. (20 Marks)
1.3 "Manager's social responsibility is not free from some criticisms".
Prove the statement with three (3) examples. (30 Marks)
1.4 Are all managers leaders? Prove your answer using the functions of management. (30 Marks)

Question 02

2.1 Briefly describe what is 'decision-making process' is in management. (10 Marks)
2.2 Briefly Describe what is 'the span of control' in an organization. (20 Marks)
2.3 Describe three (3) types of leadership. (30 Marks)
2.4 Imagine you are a line manager of a Production Executive employee, and she/he has been complaining to you about her/his workload. However, when considering the company's budget, you cannot recruit a new staff member.
Explain to the employee how she /he could manage her workload using the Time Management Matrix. (40 Marks)

Question 03

3.1 Define 'performance appraisal' in an organization. (10 Marks)
3.2 Mention six (6) objectives of performance appraisal. (20 Marks)
3.3 What elements of direction are responsible for excellent management? (30 Marks)
3.4 Supervision in an organization is important for both organization and the employees. Prove this statement with evidence. (40 Marks)

Question 04

4.1 Write two (2) advantages and two (2) disadvantages of internal recruitment. (10 Marks)
4.2 Design a Job Description and a Job Specification for the "Human Resource Junior Executive" at Star Garments, Galle factory. (25 Marks)
4.3 Explain the difference between non-financial rewards and financial rewards. (25 Marks)
4.4 Imagine you have been appointed as the new Human Resources Manager in an apparel company with a high turnover and high union influence. Using the HRM functions you have learned make a brief plan to solve the problems in the company. (40 Marks)

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Faculty of Health Sciences

BSc(Hons)Industrial Pharmaceutical Sciences/ BSc(Hons)Medical and Health Product Management

GENERAL PHARMACEUTICS -BSM1153

1ST YEAR 1ST SEMESTER -END EXAMINATION SEQ -BATCH 06

Date	:	**2023-03-03**
Time	:	**9. 00A.M – 12.00P.M (3 HOURS)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of SIX questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

01 **(100 marks)**

1.1. Define standards. (10 marks)

1.2. State the **05** criteria to be accomplished by a newly invented drug. (15 marks)

1.3. Differentiate pharmacopoeia and drug formulary. (20 marks)

1.4. Describe general monographs and specific monographs. (25 marks)

1.5. Describe **02** unique facility designs and operations to be available in a clean room at an injectable biological drug manufacturing facility. (30 marks)

02 **(100 marks)**

2.1. Draw the schematic representation of the cumulative amount of drug released from immediate, delayed and extended released dosage forms. (15 marks)

2.2. Outline the composition of pharmaceutical suspension and emulsion. (20 marks)

2.3. Classify uses of pharmaceutical powders. (25 marks)

2.4. Write short notes on following. (40 marks)

2.4.1. Liniments
2.4.2. Tinctures
2.4.3. Effervescent tablets
2.4.4. Suppositories

03 **(100 marks)**

3.1. State the importance of maintaining GMP in the pharmaceutical industry. (10 marks)

3.2. What is the difference between cGMP and GMP? (20 marks)

3.3. "Reference standards are drugs". Comment on this statement. (30 marks)

3.4. Describe how an analytical reference standard is prepared from a working standard. (40 marks)

04 **(100 marks)**

4.1. Write **05** functions of pharmaceutical packaging. (20 marks)

4.2. Differentiate primary and secondary packaging. (20 marks)

4.3. State **03** advantages of having proper closure system in pharmaceutical packaging. (15 marks)

4.4. State main **03** types of hazards encountered by packaging with an example for each. (15 marks)

4.5. Write a descriptive account on strip packaging. (30 marks)

05 **(100 marks)**

5.1. Classify the excipients according to their origin. Provide **02** examples for each. (20 marks)

5.2. Briefly describe the function of binders as an excipient in tablet preparation by providing an example. (20 marks)

5.3. Describe **02** functional roles of a pharmaceutical excipient. (30 marks)

5.4. Outline the information should be available in a manufacture label. (30 marks)

06 **(100 marks)**

6.1. What is a pharmaceutical plant layout? (10 marks)

6.2. State **05** factors that need to be considered when developing a pharmaceutical layout. (20 marks)

6.3. Briefly describe **05** advantages of a good pharmaceutical plant layout. (30 marks)

6.4. Draw a sample pharmaceutical plant layout by labeling relevant areas. (40 marks)

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Faculty of Health Sciences

BMS 1113- Information Technology

1st year 1st semester

Batch 04

End semester SEQ Examination

INDEX NUMBER: .....

Date : 08/01/2021
Time : 9.00 am- 12.00 pm (3 hours)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of 8 questions.
- Including the compulsory question answer for 6 questions (Compulsory Question+ Another 5 questions)
- You should **write answers in foolscap sheets** legibly in black or blue ink.
- You MUST write your **index number in the top right corner** of each answer script.
- **Answer script** should be numbered (right bottom) clearly.
- Photograph of your answer scripts must be taken by keeping them on a clear platform (e.g. table).
- Arrange the photographs of your answer script in a word document in an orderly manner, then convert the word document to a PDF.
- **Label the PDF: Your Index No – Information Technology SEQ.**
- **Upload** the labelled **PDF to LMS AND** also **email** the PDF to Fohs.exams@cinec.edu

Question 01 (Compulsory)

(a) List and briefly describe four (04) sectors in which ICT is used. (80 Marks)
(b) Describe the difference between intranet and extranet. (20 Marks)

Question 02

(a) Write four (04) uses of internet and explain two (02) of them. (25 Marks)
(b) Write five (05) features in email. (25 Marks)
(c) Explain the difference between "cc" and "bcc" in an email. (25 Marks)
(d) What are the types of worms and write four (04) ways of protecting your computer from viruses (25 Marks)

Question 03

(a) Define the terms "Hardware and Software" with examples. (20 Marks)
(b) What is EULA? Explain briefly. (20 Marks)
(c) What is the file compression? Briefly describe the importance of the file compression. (20 Marks)
(d) Write four (04) major functions of an OS. (20 Marks)
(e) Write two (02) types of user interfaces and explain one. (20 Marks)

Question 04

Following figure shows the income and expenditure of the sports meet of ABC College,

F11 590000

	A	B	C	D	E	F
1	Sport Meet Income and Expenditure					
2	Income			Expenditure		
3	Date	Discription	Amount	Date	Discription	Amount
4	1/2/2016	Claude House	55000	1/20/2016	For Food	50000
5	1/2/2016	Mark House	45000	1/21/2016	drinks	50000
6	1/4/2016	Luke House	52000	1/23/2016	Medals and Cups	20000
7	1/6/2016	Cammilus House	48000	1/26/2016	Certificates	15000
8	1/7/2016	Well wissers	100000	1/27/2016	Transport	10000
9	1/8/2016	Students from abroad	290000	1/28/2016	Main Stage	15000
10				1/31/2016	Balance B/F	430000
11	Total		590000			590000
12	Old students living in abroad		$2,000.00			
13	Doller exchange rate		145			
14						
15						

(a) What is the formula that should be in cell C9 to convert the amount in dollar in C12 to rupee? (Dollar exchange rate is mentioned in cell C13) (10 Marks)
(b) Write the formula in cell C11 to calculate total income. (20 Marks)

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Faculty of Health Sciences

BSM 1143 – General Mathematics

Batch - 04

1st year 1st semester

End semester SEQ Examination

INDEX NUMBER: .....

Date : **07/01/2021**

Time : **9.00 a.m. – 12.00 noon (3 hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **8** questions.
- Answer **6** questions.
- You should **write answers in foolscap sheets** legibly in black or blue ink.
- You MUST write your **index number in the top right corner** of each answer script.
- **Answer script** should be numbered (right bottom) clearly.
- Photograph of your answer scripts must be taken by keeping them on a clear platform (e.g. table).
- Arrange the photographs of your answer script in a word document in an orderly manner, then convert the word document to a PDF.
- **Label the PDF: Your Index No – General Mathematics SEQ.**
- **Upload** the labelled **PDF to LMS AND** also **email** the PDF to Fohs.exams@cinec.edu

Question 01 **(50 marks × 2 = 100 marks)**

(a) Given that $y = \frac{1+\sin x}{\cos x}$ find $\frac{dy}{dx}$ using the quotient rule.

(b) Differentiate $y = 3e^{x+1}$

Question 02 **(50 marks × 2 = 100 marks)**

(a) Find $\int(2x^3 - 3x + 4)\ dx$

(b) Find $\int\left(\frac{3}{x^4} - \frac{1}{x^2} + 4\right)\ dx$

Question 03 **(50 marks × 2 = 100 marks)**

(a) Find the points on the curve with equation $y = x^3 + 6x^2 + 5$ where the value of the gradient is -9.

(b) Find the equation of the tangent to the curve $y = x^2 + 3x + 2$ at the point (2, 12)

Question 04 **(50 marks × 2 = 100 marks)**

(a) Prove the identity $cos^2x - sin^2x = 2\,cos^2x - 1$

(b) Prove the identity $\frac{\cos x}{1-\sin x} - \frac{1}{\cos x} = \tan x$

Question 05 **(50 marks × 2 = 100 marks)**

Standard equations of the geometric progression $T_n = ar^{n-1}$, $S_n = \frac{a(r^n-1)}{(r-1)}$

The first term of a geometric sequence is 5 and the fifth term is 1280.

(a) Find the common ratio of the geometric sequence.

(b) Find the 8th term of the sequence.

Question 06 **(50 marks × 2 = 100 marks)**

(a) Evaluate $\int_0^2 \frac{1}{5x+3}\ dx$ (b) Evaluate $\int_5^7 \frac{1}{4-x}\ dx$

Question 07 **(50 marks × 2 = 100 marks)**

(a) Solve $x^2 + 30x - 1000 = 0$

(b) Use the quadratic formula to solve $5x^2 + 4x - 3 = 0$

Question 08 **(25marks × 4 = 100 marks)**

Factorize the given expressions

(a) $x^2 + 7x + 12$ (b) $x^2 - 20x + 100$

(c) $x^2 - 49$ (d) $6x^2 + x - 12$

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Faculty of Health Sciences

BSM 1163 – General English

Batch - 04

1st year 1st semester

End Semester SEQ Examination

INDEX NUMBER: .....

Date : **06/01/2021**

Time : **01.30 pm – 04.30 pm (3 hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **06** questions.
- Answer **all** questions.
- You should **write answers in foolscap sheets** legibly in black or blue ink.
- You MUST write your **index number in the top right corner** of each answer script.
- **Answer script** should be numbered (right bottom) clearly.
- Photograph of your answer scripts must be taken by keeping them on a clear platform (e.g. table).
- Arrange the photographs of your answer script in a word document in an orderly manner, then convert the word document to a PDF.
- **Label the PDF: Your Index No – General English SEQ.**
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Question 01 **(20 Marks)**

Read the passage and answer the questions given below.

Use the space given: do not answer the questions in a separate paper.

1. Pollution is an environmental concern for people throughout the world. One university study suggests that pollutants in the water, air, and soil cause up to 40% of the premature deaths in the world's population. The majority of these deaths occur in developing countries.
2. Water in many developing countries is contaminated with toxic chemicals, also known as toxins. The World Health Organization (WHO) estimates that 1.1 billion people have little or no access to clean water. In many of these regions the water that is used for drinking, cooking, and washing is the same water that is used for dumping sewage and hazardous waste. Most developing countries cannot afford water treatment facilities. Approximately 80% of infectious diseases in the world are caused by contaminated water.
3. Air pollution is a growing problem throughout the world. Indoor air pollution is one of the leading causes of lung cancer. Families in developing countries use open stoves for cooking and heating their homes. These homes do not have proper ventilation. The smoke, which is full of chemicals and carcinogens, gets trapped inside where families eat and sleep. Outdoor pollution also causes disease and illness, especially in industrial cities such as Beijing, China, where cancer is the leading cause of death. China relies heavily on coal, which is considered the dirtiest source of energy. According to the European Union, only 1% of urban dwellers in China breathe clean air on an average day. Neighbouring countries including Japan and Korea receive much of China's pollution in the form of acid rain. This pollution results mainly from the coal powered factories, which produce inexpensive goods for North American and European consumers. Outdoor air pollution is also a concern in many wealthy countries. Those who live and work in urban centres such as Los Angeles or Toronto experience many warm days beneath a layer of smog.
4. Soil pollution is also a major concern, both in industrial and developing countries. Pollutants such as metals and pesticides seep into the earth's soil and contaminate the food supply. Soil pollution causes major health risks to entire ecosystems. This type of pollution reduces the amount of land suitable for agricultural production and contributes to global food shortages. Dumping of industrial and domestic waste products produces much of the world's soil pollution, though natural disasters can also add to the problem. In wealthy countries such as the US, protection agencies monitor the food supply. The public is generally warned before major disease outbreaks occur. Developing countries do not have this luxury. Farmers in poor nations grow food in contaminated soil both to earn a living and to avoid starvation.
5. As more people move to urban centres, premature deaths caused by pollution are expected to increase worldwide. Today, the developed nations who achieved their wealth at the

expense of the environment will be held accountable for protecting the earth's resources for future generations.

1. What are the three types of environmental pollution discussed in the passage? **(1 mark)**
   I. .....
   II. .....
   III. .....

2. Why has the author mentioned that pollution is an environmental concern? Support your answer referring to the passage. **(2 marks)**
   .....
   .....
   .....
   .....
   .....
   .....

3. What is the author's main purpose of writing this article? **(2 marks)**
   .....
   .....
   .....
   .....

4. What are the two types of air pollution mentioned in the text? **(1 mark)**
   I. .....
   II. .....

5. How does air pollution take place in Sri Lanka? Support your answer with examples. **(2 marks)**
   .....
   .....
   .....
   .....
   .....
   .....
   .....

6. Does soil pollution lead to starving? Support your answer referring to the text. **(2 marks)**
   .....
   .....
   .....

.....

.....

7. According to your point of view, as a developing country is Sri Lanka trying to minimize environmental pollution? Support your answer by giving reasons you have experienced. (Word count 100) **(4 marks)**

.....

.....

.....

.....

.....

.....

.....

.....

8. What is the main idea of the following paragraphs? **(1 marks)**

.....

.....

.....

9. Do you agree with the author's statement that, developed nations will be held accountable for protecting the earth's resources for future generations? If yes, why? **(3 marks)**

.....

.....

.....

.....

.....

.....

.....

10. Provide a suitable title for this passage. **(2 marks)**

.....

Question 02

Part A **(10 marks)**

Fill in the blanks with the words given below in the box. (The first one has been done for you).

regard	**political**	**confinement**	**critic**	**poetry**					
writing	**oppressive**	**awarded**	**existence**	**dramatist**					
acceptance	**literary**	**distinguished**	**Literature**						
imprisonment	**released**	**government**	**won**	**experiences**	**South**				
cultural									

Wole Soyinka, who was born in 1934, is a Nigerian writer, poet and playwright. Many **1)** **regard** him as Africa's most 2)..... playwright. He 3)..... the Nobel Prize for Literature in 1986, the first African writer to win this honour.

Soyinka has played an active role in Nigeria's 4)..... history. In 1967, during the Civil War in Nigeria, he was arrested by the Federal Government and put in solitary 5)..... for attempting to broker a peace between the warring parties. While in prison he wrote 6)..... which was published in a collection. He was 7)..... two years later after international attention was drawn to his 8)..... His 9).....in prison are recounted in a book. He is an outspoken 10)..... of many Nigerian administrations, and of political tyrannies worldwide, including the Mugabe regime in Zimbabwe. Much of his 11)..... has been concerned with "the 12)..... boot and the irrelevance of the colour of the foot that wears it".

1986 was his most glorious year and occurred during the reigns of several violent and repressive African regimes. The Swedish Academy 13)..... him the Nobel Prize for 14).....as a writer "who in a wide 15)..... perspective and with poetic overtones fashions the drama of 16) .....". The foremost Nigerian 17)..... became the first African Nobel laureate, enshrined forever in the history of world literature. His Nobel Lecture was devoted to South African freedom-fighter Nelson Mandela. Soyinka's 18)..... speech criticised apartheid and the politics of racial segregation imposed on the population by the Nationalist 19)..... African 20)..... That year brought him another 21)..... award - the Agip Prize for Literature - and he was awarded a Nigerian national decoration: Commander of the Federal Republic.

Part B **(10 marks)**

buy	**moment**	**with**	**enough**	**off**	**nail**
noticeably	**able**	**else**	**disabled**	**myself**	
awkward	**looking**	**the**	**doghouse**	**and**	
fence	**trouser**	**reached**	**down**	**advertising**	

A farmer had some puppies to sell. He painted a sign 1)..... the four pups and set about nailing it to the post on the edge of his yard. As he was driving the last 2)..... into the post, he felt a tug on his overalls. He looked down into the eyes of a little boy. "Mister," he said, " I want to 3)..... one of your puppies."

"Well," said the farmer, as he rubbed his sweat 4)..... to the back of his neck. "These puppies come from fine parents and cost a good deal of money."

The boy dropped his head for a 5)..... . Then reaching deep into his pocket, he pulled out a handful of change and held it up to 6)..... farmer.

"I've got thirty-nine cents. Is that 7)..... to take a look?" "Sure", said the farmer. And with that he led out a whistle. "Here, Dolly!" he called. Out from the 8)..... and down the ramp ran Dolly forward by four little pups. The little boy's eyes danced 9) ..... delight. As the dogs made their way upto the 10)....., the little boy noticed something 11)..... stirring inside the doghouse. Slowly another little pup appeared, this one 12)..... smaller. Down the ramp it slid. Then in a somewhat 13)..... manner, the little pup began hobbing toward the others, doing its best to catch up.

"I want that one.", the little boy said, pointing to the 14)..... pup. The farmer knell 15)..... at the boy's side and said, "Son, he will never be 16)..... to run and play with you like the other pups."

With that the little boy stepped back from the fence, reached down, and began rolling up one leg of his 17)..... and revealed a steel brace running down both sides of his leg attached to a specially made shoe, 18)..... back up at the farmer, he said, "You see sir, I too don't run well 19)..... and he will need someone who understands."

With tears in his eyes, the farmer 20)..... down and picked up the little pup. Holding it carefully, he handed it to the little boy. "How much?" asked the little boy. "No charge," answered the farmer. "There's no charge for love."

Question 03

Part A **(10 marks)**

Put the verbs in the brackets into the correct tense.

The school fair 1)..... (to be) right around the corner, and tickets have just gone on sale. We 2)..... (to sell) a limited number of tickets at a discount, so move fast and 3)..... (to get) yours while they are still available. This is going to be an event you 4)..... (not /to want) to miss! First off, the school fair is a great value when compared with other forms of entertainment. Also, your ticket purchase 5)..... (to help) our school, and when you help the school, it 6)..... (to help) the entire community. But that's not all! Every ticket you purchase 7)..... (to enter) you in a drawing to win fabulous prizes. And 8)..... (not/ to forget), you will have mountains of fun because there 9)..... (to be) acres and acres of great rides, fun games, and entertaining attractions! 10)..... (to spend) time with your family and friends at our school fair. Buy your tickets now!

Part B **(10 marks)**

I 1)..... (to do) well in school, and people think I 2)..... (to be) smart because of it. But it's not true. In fact, three years ago I 3)..... (to struggle) in school. However, two years ago I decided to get serious about school and made a few changes. First, I 4)..... (to decide) I would become interested in whatever was being taught, regardless of what other people 5)..... (to think). I also decided I would work hard every day and never 6)..... (to give up) on any assignment. I decided to never, never fall behind. Finally, I decided to make school a priority over friends and fun. After implementing these changes, I 7)..... (to become) an active participant in classroom discussions. Then my test scores began to rise. I still 8)..... (to remember) the first time that someone made fun of me because "I was smart." How exciting! It 9)..... (to seem) to me that being smart is simply a matter of working hard and being interested. After all, learning a new video game is hard work even when you are interested. Unfortunately, learning a new video game 10)..... (not/to help) you get into college or get a good job.

Question 04 **(10 marks)**

Re-write the sentences in reported speech.

1. He said, "I like this song."
   .....
2. "Where is your sister?" she asked me.
   .....
3. "I don't speak Italian," she said.
   .....
4. "Say hello to Jim," they said.
   .....
5. "The film began at seven o'clock," he said.
   .....
6. "Don't play on the grass, boys," she said.
   .....
7. "Where have you spent your money?" she asked him.
   .....
8. "I never make mistakes," he said.
   .....
9. "Does she know Robert?" he wanted to know.
   .....
10. "Don't try this at home," the stuntman told the audience.
    .....

Question 05

Part A **(10 marks)**

Change the following sentences into passive voice.

1. John collects money.
   .....
2. Anna opened the window.
   .....
3. We have done our homework.
   .....

4. I will ask a question.

.....

5. He can cut out the picture.

.....

6. The sheep ate a lot.

.....

7. We do not clean our rooms.

.....

8. William will not repair the car.

.....

9. Did Sue draw this circle?

.....

10. Could you feed the dog?

.....

Part B **(10 marks)**

Fill the gaps with the correct tenses suitably. (active or passive voice)

1. The words ..... by the teacher today. ***(explain)***
2. We ..... a letter the day before yesterday. ***(send)***
3. This car ..... It's too old. ***(not/ steal - will-future)***
4. This street ..... because of snow. ***(already/ close - Present Perfect)***
5. A new restaurant ..... next week. ***(open)***
6. He ..... to the party yesterday. ***(invite)***
7. The blue box ..... ***(can/not/ see)***
8. I..... the book by my friend last Sunday. ***(give)***
9. The dishes ..... by my little brother. ***(not/ wash - Present Perfect)***
10. I ..... by Robert. ***(not/ ask - will-future)***

Question 06 **(10 marks)**

Write an essay on:

Do you think our society is too dependent on technology like smartphones? Why or why not?
Give your reasons and provide examples.

Word limit 175 – 200

Important! – You will be penalized if you exceed the word limit.

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences
B.Sc. (Hons) in Medical and Health Product Management
2nd Batch
MHPM 1253 – Fundamentals of Medical Product Development
End-Semester Examination – 1st Year 2nd Semester – Assignment

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Date: 24th July 2024
Time: 13.30 – 14.30 – One Hour

Question 01 **(100 Marks)**

Write a brief description of post-market surveillance and risk analysis of medical devices in the NMRA Act.

Question 02 **(100 Marks)**

2.1 Draw the flowchart including the five steps of the medical product development process. **(30 Marks)**

2.2 State the activities that we could follow in each step in the medical product development process. **(70 Marks)**

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24 JUL 2024
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Faculty of Health Sciences
B.Sc. (Hons) in Medical and Health Product Management
2nd Batch
MHPM 1253 – Fundamentals of Medical Product Development
End-Semester Examination – 1st Year 2nd Semester

Date: 24th July 2024
Time: 09.00 am – 11.00 – Two Hours

Question 01 **(100 Marks)**

1.1 Name the medical device regulatory authority in Sri Lanka. **(20 Marks)**

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1.2 Briefly indicate the medical device regulatory procedure in Sri Lanka. **(30 Marks)**

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1.3 What is the role of the National Medicine Quality Assurance Laboratory in medical devices? **(25 Marks)**

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1.4 List two functions of the Medical device regulatory division. **(25 Marks)**

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Question 02 **(100 Marks)**

2.1 What is the FDA definition of a medical device? **(20 marks)**

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2.2 Briefly mention the NMRA definition of a medical device. **(25 Marks)**

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2.3 State the NMRA classification of medical devices. **(25 Marks)**

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2.4 Give an example for the individual class of medical device you mentioned in 2.3. **(30 Marks)**

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Question 03 **(100 Marks)**

3.1 How do you do the usability testing of a medical device? **(25 Marks)**

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3.2 List the content of the usability report of a medical device. **(25 Marks)**

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3.3 Briefly mention about verification process of medical devices. **(25 marks)**

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3.4 What is the process of validation of medical devices? **(25 marks)**

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Question 04 **(100 Marks)**

4.1 Define the term "Medical Device". **(20 Marks)**

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4.2 List the categories of the Medical Device classification system. **(20 Marks)**

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4.3 Order the classes of In Vitro Diagnostic Medical Devices according to increasing risk. **(30 Marks)**

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4.4 Provide one example for each category of medical device classification system. **(30 Marks)**

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EXAMINATION
17 JUL 2024
CINEC

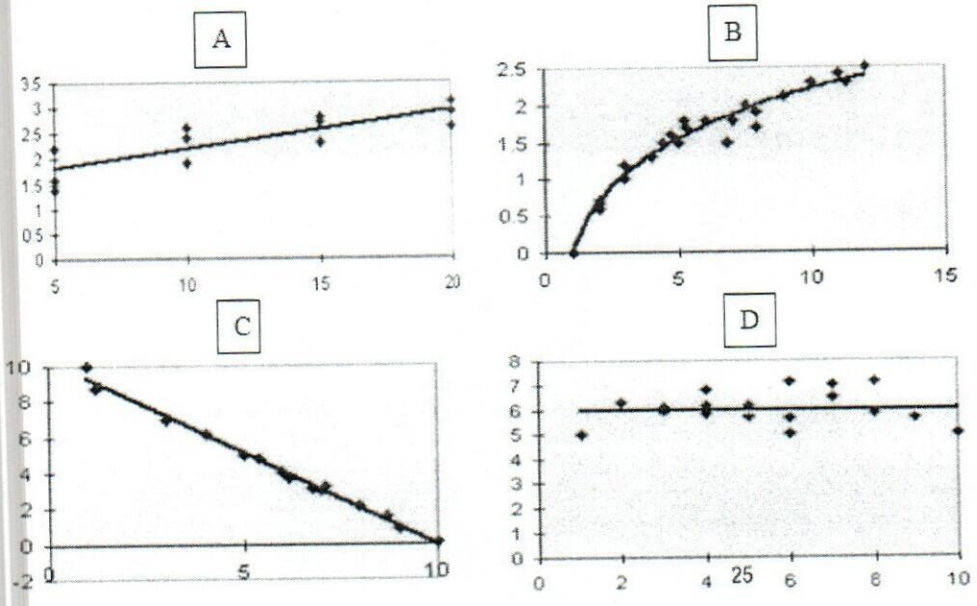
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Faculty of Health Sciences
B.Sc. (Hons) in Medical and Health Product Management
2nd Batch
BSM 1242– Basic Statistics
End-Semester Examination – 1st Year 2nd Semester – Assignment

Date: 17th July 2024
Time: 01.30 pm – 03.00 pm

Question 01 **(100 Marks)**

1.1 Identify the following regression models mentioned in letters A, B, C and D. **(40 marks)**



1.2. Research has been conducted to check whether there is a relationship between the height and the weight of the undergraduate student. The scatter plot between the variables of weight and height is shown in the graph below.

1.2.1. If the slope of the plot is 0.5975, identify the intercept of the plot. **(20 Marks)**

1.2.2. write the regression equation of the plot. **(20 Marks)**

1.2.3. R^2 value for the above plot is 0.8809. Comment on the linear relationship. **(20 Marks)**

Question 02 **(100 marks)**

2.1. Explain the concepts of descriptive statistics and inferential statistics. **(20 marks)**

2.2. How would you define a frequency table? **(10 marks)**

2.3. Suppose we have the following ages of students in a class. **(50 marks)**

14, 15, 14, 16, 15, 14, 17, 16, 15, 14, 16, 17, 15, 14, 16, 18, 15, 14, 15

Create a simple frequency table showing how often each age appears in the dataset.

2.4. How does a histogram differ from a simple bar graph? **(20 marks)**

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Faculty of Health Sciences
B.Sc. (Hons) in Medical and Health Product Management
2nd Batch
BSM 1233 – Financial Accounting
End-Semester Examination – 1st Year 2nd Semester – Assignment

Date: 15th July 2024
Time: 1.30 pm – 3.00 pm

Question 01 **(100 Marks)**

Financial statements are a set of documents that show your company's financial status at a specific point in time. They include key data on your company."

1.1 Explain, in your definition, what the financial statements are in any business organization, and explain what the balance sheet is.

1.2 Kamal Traders Company seeks your assistance in completing the following balance sheet for the sole proprietorship. Please support Mr. Kamal in filling out that balance sheet.

Kamal Trading Company.
Statement of Finance Position,
At Year 2024.03.31.

Description	Amount	Amount
Non Current Assets		
Land	150,000.00	
Building	200,000.00	
Machinery	200,000.00	
Vehicle	100,000.00	
Total Nan Current Assets	650,000.00	650,000.00
Current Assets		
Stocks	100,000.00	
Debtors	50,000.00	
Bank	100,000.00	
Cash	100,000.00	
Total Current Assets	.....	.....

Total Assets		
Non Current Liabilities	500,000.00	
Bank Loan	.....	
Current Equity		
Current Liabilities	100,000.00	
Acquired Payable	200,000.00	
Creditors	.....	
Total current Liabilities	.....	.....
Total Liabilities		

1.3 Briefly explain, in your definition, what working capital is in any business. Also, explain four advantages of maintaining positive working capital in a small business.

1.4 Briefly explain with a chart what the working capital cycle is, and provide an example of how this working capital cycle affects a small manufacturing business.

Question 02 **(100 Marks)**

2.1 Explain briefly what cost is and what costing is. Write down four advantages of cost calculation.

2.2 Write down the direct material cost, direct labor cost, indirect cost, and total cost separately for a textile manufacturing company (Product: Denim material frocks).

Direct Material Cost	Direct Labour Cost	Indirect cost	Total Cost

2.3 Show the behavior of fixed cost, variable cost, and total cost in any industry by using graphs.

2.4 The table below shows the production cost of a furniture manufacturing company. Calculate the total cost and marginal cost and fill in the blanks.

Product	Fixed Cost	Variable Cost	Total Cost	Marginal Cost
0	500	..	500	0
1	500	700	1200	700

2	500	800	1300	100
3	500	900	……	……
4	500	1000	……	……
5	500	1100	……	……
6	500	1200	…..	……
7	500	1300	……	……
8	500	1400	……	……
9	500	1500	……	……
10	500	1600	……	……

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences
B.Sc. (Hons) in Medical and Health Product Management
2nd Batch
BSM 1213 – Industrial Psychology
End-Semester Examination – 1st Year 2nd Semester

Date: 19th July 2024
Time: 09.00 am – 12.00 – Three Hours

Question 01 **(100 Marks)**

1.1 Name the **three (03)** Major Philosophical issues in Psychology. **(15 Marks)**

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1.2 Mention a scenario in which you have experienced the relationship between **mind and body. (20 Marks)**

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1.3 What is an emotion? **(25 Marks)**

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1.4 Briefly mention the **four (04)** stages of a sleep cycle. **(40 Marks)**

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Question 02 **(100 Marks)**

2.1 Distinguish between the two terms "**growth" and "Development".** **(10 Marks)**

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2.2 List the **four (04)** stages of Piagetian Theory of Cognitive Development. **(20 Marks)**

2.3 Briefly mention **Secondary sexual development** in the male and female body with **two (02)** examples for each sex. **(40 Marks)**

2.4

2.4.1. what is prenatal development? **(15 Marks)**

2.4.2. What is psychosexual development theory? **(15 Marks)**

Question 03 **(100 Marks)**

3.1 Define "**intelligence**". **(10 Marks)**

3.2 What is the equation for calculating an IQ score? **(20 Marks)**

3.3 Rose has a mental age of 12 and a chronological age of 10. What is her IQ would be? **(30 Marks)**

3.4 Name each of **Gardner's multiple intelligences** as they apply to the following examples. **(40 Marks)**
The first one is done for you.

Linguistic	Understanding Shakespeare
	a scientist conducting experiments and analysing data
	An architect designing buildings
	A dancer performing a choreographed routine
	A musician composing or performing music
	A therapist understanding and helping clients
	A philosopher reflecting on their own thoughts and emotions
	A gardener cultivating plants

Question 04 **(100 Marks)**

4.1 List the major subdivisions of our nervous system. **(10 Marks)**

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4.2 What is an '**action potential**' and list the main stages through which it takes place? **(20 Marks)**

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4.3 What **three (03)** important structures make up the limbic system and write their functions respectively **(30 Marks)**

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4.4 Fill in the following table with **four (04)** hormones and their respective function for each. **(40 Marks)**

Hormone	Function

Question 05 **(100 Marks)**

5.1 What are the **three main** areas of Industrial-organization psychology? **(10 Marks)**

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5.2 How do organizational psychology and industrial psychology differ in their focus and applications within workplace settings? **(20 Marks)**

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5.3 **List three (03)** main areas of organizational psychology and write their significance in understanding workplace dynamics and employee behaviour. **(30 Marks)**

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5.4 Briefly mention five (05) factors that cause job satisfaction in an employee with examples. **(40 Marks)**

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Question 06

(100 Marks)

6.1 Write the main **six (06)** functions of the brain. **(10 Marks)**

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6.2 State the difference of "Sensation" and "perception". **(30 Marks)**

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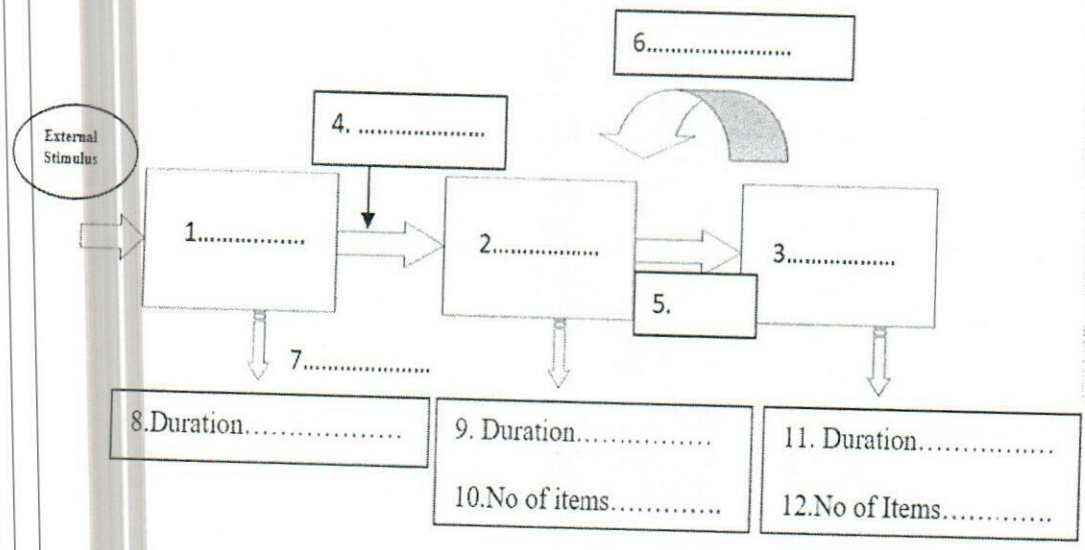
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6.3 Fill in the blanks of the below **"Multi Store Model of Memory"** **(36 Marks)**



6.4 What are the main **functions of attention ?** **(24 Marks)**

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Examination Department
17 JUL 2024
CINEC Campus, Sri Lanka

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Faculty of Health Sciences
B.Sc. (Hons) in Medical and Health Product Management
2nd Batch
BSM 1242– Basic Statistics
End-Semester SEQ Examination – 1st Year 2nd Semester

Date: 17th July 2024
Time: 09.00 am – 11.00 – Two Hours

Question 01 **(100 Marks)**

The workspace of company "A" is divided into three departments: Sales, Marketing, and HR. The management of the company observed that employees from different departments seemed to have varying levels of job satisfaction. They wanted to investigate whether the department employee work (Sales, Marketing, and HR) affects their overall job satisfaction scores.

1.1 Write the null hypothesis and alternative hypothesis for the given question. **(20 Marks)**

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1.2 Random samples of 10 employees from each department were selected and summary statistics for the scores of each department are shown in the table below.

Department	Sales	Marketing	HR
Sample size	10	10	10
Mean	75.71	67.11	53.50
St. Dev	17.63	10.95	8.96
Variance	310.90	119.86	80.29

1.2.1. Using the above-given information, fill in the blanks of the ANOVA table. **(60 marks)**
Grand Mean= 64.5

Source	SS	df	MS	F
Between		2		
Within	3384			
Total	5288			

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1.2.2. Write the conclusion of the ANOVA test based on the F value. **(20 marks)**
(At the significance level of 0.05, the critical value of the F is 5.49)
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Question 02

(100 Marks)

2.1 What do the terms "relative frequency" and "cumulative relative frequency" mean? **(10 mark**
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2.2 A die is tossed 50 times and lands 4 times on the number 5. What is the relative frequency of observing the die land on the number 5? **(05 marks)**
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2.3 Complete the following table. **(25 marks)**

Data value	Frequency	Relative frequency	Cumulative relative frequency
1	28		
2	12		
3	35		
4	19		
5	06		

2.4 A researcher is experimenting to determine the effect of different amounts of sunlight on plant growth. Clearly mention the independent and dependent variables. **(20 marks)**

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2.5 Briefly mention the properties of "t" distribution and draw the t-distribution curves for sample sizes of 30, greater than 30, and less than 30. **(40 marks)**

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Question 03 **(100 Marks)**

3.1 What are the **two (02)** main types of statistics? **(25 Marks)**

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3.2 Mention **five (05)** Importance of statistics. **(25 Marks)**

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3.3 Mention the **two (02)** types of data. **(25 marks)**

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3.4 Differentiate the types of data you mentioned in 3.3. **(25 marks)**

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Question 04 **(100 Marks)**

4.1 What is a sample? **(20 Marks)**

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4.2 Mention the main **two (02)** types of sampling techniques and give two examples per each. **(30 Marks)**

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4.3 Write the types of errors in hypothesis testing. **(20 Marks)**

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4.4 Mention **three (03)** assumptions that are made in hypothesis testing. **(30 marks)**

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Faculty of Health Sciences
B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/ B.Sc. (Hons) Cosmetic Science
End Semester Examination-SEQ
Batch 10
BSM1133 – Biology
1st Year 1st Semester

Date: 04th of November 2025
Time: 09.00 am – 12.00 pm – Three Hours

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX Structured Essay Type Questions**.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

Question 01 **(100 Marks)**

1.1 "Cells are the building blocks of life." Discuss this statement with reference to the cell theory. **(30 Marks)**
1.2 List any **five (05)** characteristics that distinguish living organisms from non-living things. **(20 marks)**
1.3 What is homeostasis? Give **one (01)** example. **(20 marks)**
1.4 Describe the main structural components of a eukaryotic cell and explain the function of each. **(30 Marks)**

Question 02 **(100 Marks)**

2.1 Describe the pathway of blood through the heart. **(30 Marks)**
2.2 What is the difference between oxygenated and deoxygenated blood? **(20 marks)**
2.3 Draw a labelled diagram comparing the cross-section of an artery and a vein, highlighting differences in wall thickness, lumen size, and valves. **(20 Marks)**
2.4 Briefly describe the major functions of the lymphatic system. **(30 Marks)**

Question 03 **(100 Marks)**

3.1 List the main constituents present in human saliva. **(20 Marks)**
3.2 What are accessory digestive organs, and mention why are they important? **(30 Marks)**
3.3 List the main organs of the respiratory system. **(20 Marks)**
3.4 Briefly describe how breathing in (inspiration) and breathing out (expiration) happen. **(30 Marks)**

Question 04 **(100 Marks)**

4.1 What are the **four (04)** primary function of nervous system **(20 Marks)**
4.2 Write **two (02)** examples for the somatic reflexes and **two (02)** examples for autonomic reflexes. **(20 Marks)**
4.3 Define "neuralgia" and provide **three (03)** examples. **(30 marks)**

4.4 Mention the effects of sympathetic and parasympathetic nervous systems on each organ mentioned in the table below. **(30 Marks)**

Organ	Sympathetic nervous system	Para sympathetic nervous system
Lungs	A.	a. .....
Digestive system	B.	b. .....
Eye	C.	c. .....

Question 05 **(100 Marks)**

5.1 State **three (03)** phases of urine production. **(25 Marks)**

5.2 Write **one (01)** main function of each of the following organs in urinary system **(25 Marks)**

i. Bladder ii. Ureter iii. Urethra iv. Nephron

5.3 Write **one (01)** main function of each of the following organs in male reproductive system **(25 Marks)**

ii. Testes ii. Prostate gland iii. Epididymis iv. Vas deferens (sperm duct)

5.4 Write **one (01)** main function of each of the following organs in the female reproductive system. **(25 Marks)**

i. Ovaries ii. Fallopian tubes (uterine tubes) iii. Uterus iv. Vagina

Question 06 **(100 Marks)**

6.1 List all the bones in **axial** and **appendicular skeleton separately**. **(30 Marks)**

6.2 List **five (05)** functions of Skeletal system. **(20 marks)**

6.3 Name the **three (03)** types of muscle tissue and give one example of each. **(20 Marks)**

6.4 Name five (05) endocrine glands, and for each gland, state one hormone it secretes and one main function of that hormone. **(30 Marks)**

Endocrine gland	**One (01)** hormone secreted	**One (01)** function
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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences/ BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 10
1st Year 1st Semester
End Semester SEQ Examination

Date : **30th of October 2025**
Time : **9.00am-12.00pm (Three Hours)**

QUINSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QESTION 01 **(100 marks)**

1.1 Define the term Information and Communication Technology (ICT) and how is it used to manage and handle information in businesses? (25 marks)
1.2 Briefly describe the generations of computers from the first to the fifth generation. (25 marks)
1.3 Identify the different types of computers and how are they different in use and speed. (25 marks)
1.4 "Computers do some basic steps to change raw data into useful information". Briefly outline the each steps. (25 marks)

QUESTION 02 **(100 marks)**

2.1 Define the Operating System (OS) and mention how it helps the computer and programs along with examples. (25 marks)
2.2 State the main types of user interfaces and how are they different from each other? (25 marks)
2.3 Name four important settings in an OS along with their functions. (25 marks)
2.4 Name five important things about managing files in a computer. (25 marks)

QUESTION 03 **(100 marks)**

3.1 "Computer memory is like the human brain." Outline the role of memory in a computer. (25 marks)
3.2 Name the main types of computer memory and the advantages and disadvantages of each. (25 marks)
3.3 Mention the difference between ROM and RAM. (25 marks)
3.4 Briefly describe secondary storage along with examples. (25 marks)

QUESTION 04 **(100 marks)**

4.1 Define the term database and mention the use of databases in hospitals or schools. (25 marks)
4.2 State the layers of a database system along with example. (25 marks)
4.3 Mention the two main ways to collect data along with examples. (25 marks)
4.4 Outline the steps to collect data. (25 marks)

QUESTION 05 **(100 marks)**

5.1 Mention the main uses of the Internet and three advantages and three disadvantages. (25 marks)
5.2 Write an email asking your teacher to let you skip a class using a correct email format. (25 marks)
5.3 Compare and contrast the internet and the web along with the use of web. (25 marks)
5.4 Name five (05) companies that provide Internet, operating systems, and databases. (25 marks)

QUESTION 06 **(100 marks)**

6.1 "An online community is a network of people who communicate with one another and an organization through interactive tools." Briefly explain this statement further. (25marks)
6.2 State the importance of network in schools, offices, and hospitals. (25 marks)
6.3 Briefly explain three types of computer networks LAN, WAN, and MAN along with example. (25 marks)
6.4 Name four common Internet services (like email or video calls) along with their function. (25 marks)

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Faculty of Health Sciences

BSc (Hons)Biomedical Sciences/ BSc (Hons)Industrial Pharmaceutical Sciences/ BSc (Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management
General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester – Batch 10
End Semester SEQ Examination

Date	**: 07th of October 2025**
Time	**: 9. 00A.M – 12.00P.M (3 hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

Question 1 **(100 marks)**

Factorize the given expressions.

1.1 $x^2 + 6x + 8$ (20 marks)

1.2 $2x^2 - 5x + 2$ (30 marks)

1.3 $4t^2 - 25$ (20 marks)

1.4 $x^2 - 3x + 2x - 6$ (30 marks)

Question 2 **(100 marks)**

Solve

2.1 $2x + 5 = 4x - 15$ (20 marks)

2.2 $x^2 = y^2 + 5$ and $x + y + 5 = 0$ (50 marks)

2.3 $9x^2 - 12x + 4 = 0$ (30 marks)

Question 3 **(100 marks)**

The 6th term of a arithmetic progression is twice the 3rd term and the first term is 3. The sequence has 10 terms. [$T_n = a + (n-1)d$, $S_n = \frac{n}{2}\{2a + (n-1)d)\}$]

3.1 Build the equations. (40 marks)

3.2 State the common difference. (10 marks)

3.3 Identify the 8th term. (20 marks)

3.4 Mention the sum of the given arithmetic progression? (30 marks)

Question 4 **(100 marks)**

Prove these identities

4.1 $cos^2x - sin^2x = 2\,cos^2x - 1$ (20 marks)

4.2 $\frac{\sin\theta}{1-\cos\theta} = \frac{1+\cos\theta}{\sin\theta}$ (30 marks)

4.3 $\frac{\cos x}{1-\sin x} - \frac{1}{\cos x} = \tan x$ (50 marks)

Question 5 **(100 marks)**

5.1 Differentiate with respect to x ,

5.1.1 $y = (-2x + 5)(3x - 7)$ (30 marks)

5.1.2 $y = \frac{3}{2}x^2 - 6x^{-\frac{1}{2}} + e^x$ (20 marks)

5.2 Given that $y = \sqrt{x} - \frac{8}{x^2}$, find,

5.2.1 $\frac{dy}{dx}$ (30 marks)

5.2.2 The gradient of the curve at the point, $\left(4, 1\frac{1}{2}\right)$ (20 marks)

Question 6 **(100 marks)**

6.1 Find $\int (8x^{-5} - 5x^7 + 4x)\ dx$ (20 marks)

6.2 Find $\int \left(\frac{7}{x^2} + \frac{6}{x^{-3}} + 4\right)\ dx$ (20 marks)

6.3 Evaluate $\int_0^2 \frac{1}{5x+3}\ dx$ (30 marks)

6.4 Evaluate $\int_5^7 \frac{1}{4-x}\ dx$ (30 marks)

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Faculty of Health Sciences

Bachelor of Science Honors in Industrial Pharmaceutical Science/ Bachelor of Science Honors in Medical and Health Product Management

BSM 1153 General Pharmaceutics/ BSM 1144 General Pharmaceutics

Batch 09

1st Year 1st Semester

End Semester Examination - SEQ

Date : 06th of August 2025

Time : 9.00 a.m. - 12.00 noon (Three hours)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** structured essay type questions.
- Answer **ALL** the questions.
- Final answers should be given legibly in black or blue ink.

Question 01 **(100 marks)**

1.1 State **two (02)** differences between a "medicine" and a "drug". (20 marks)

1.2 What is 'pre-clinical development phase' of a medicine? (20 marks)

1.3 Outline the functions and services of the World Health Organization (WHO) in supporting the pharmaceutical and healthcare systems globally. (30 marks)

1.4 List **five (05)** types of tablet dosage forms. (30 marks)

Question 02 **(100 marks)**

2.1 List **four (04)** types of semisolid dosage forms. (20 marks)

2.2 Write an account on sterile dosage forms. (30 marks)

2.3 Mention **four (04)** types of excipients used in liquid dosage forms. (20 marks)

2.4 Outline the function of following types of excipient, giving **one (01)** example for each.

2.4.1 Lubricants (15 marks)

2.4.2 Binders (15 marks)

Question 03 **(100 marks)**

3.1 What are 'specific monographs' in British Pharmacopoeia? (20 marks)

3.2 Mention the difference between "pharmacopoeia" and "formulary". (20 marks)

3.3 State **four (04)** advantages of plastics, as a packaging material. (20 marks)

3.4 Outline the characteristics of following types of pharmaceutical packaging materials.

3.4.1 Fibrous matter (20 marks)

3.4.2 Soda-lime glass (Type III) (20 marks)

Question 04 **(100 marks)**

4.1 List **five (05)** basic characteristics of a good pharmaceutical label. (25 marks)

4.2 Why is it required to mention manufacturer's contact details on a drug label? (25 marks)

4.3 Mention the main types of contamination, giving **one (01)** example for each type. (20 marks)

4.4 Outline the importance of controlling humididty inside a manufacturing plant. (30 marks)

Question 05 **(100 marks)**

5.1 What is the main importance of following Good Manufacturing Practices (GMP)? (20 marks)

5.2 State **three (03)** major risks that may occur when GMP are not followed in the pharmaceutical industry. (30 marks)

5.3 Mention **three (03)** differences between analytical reference standard and a working standard. (30 marks)

5.4 Why most of the pharmaceutical companies prepare analytical reference standards from working standards? (20 marks)

Question 06 **(100 marks)**

6.1 What is the importance of having a good pharmaceutical plant layout? (20 marks)

6.2 State **three (03)** features of a good pharmaceutical plant layout. (30 marks)

6.3 Write **four (04)** methods to minimize the particulate matters within a clean room. (20 marks)

6.4 Comment on the material movement and the personnel movement within a pharmaceutical plant. (30 marks)

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Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences / BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 09
1st Year 1st Semester
End Semester SEQ Examination

Date	**: 01st of August 2025**
Time	**: 9.00 p.m. – 12.00 pm. (Three Hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX Structured Essay Type Questions**.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Define ICT along with five examples of ICT tools or systems. **(20 marks)**

1.2 Information can be presented and used in different ways. List the main types or formats **(25 marks)**

1.3 1.3.1. The time **(10 marks)**
1.3.2. The main technology used **(10 marks)**
1.3.3. One or two key features or improvements **(10 marks)**

1.4 Briefly explain how ICT helps improve the quality of a hospital management syste with examples of how it can be used in different areas of the hospital. **(25 marks)**

QUESTION 02 **(100 marks)**

2.1 Define the term computer network and list the main benefits of a network **(25 marks)**

2.2 List the different types of network structures and provide brief descriptions for each **(25 marks)**

2.3 Define the term network topology and draw Bus, Ring, Star, and Mesh topologies. **(25 marks)**

2.4 Name **three (03)** network devices and **two (02)** internet service providers in Sri Lanka **(25 marks)**

QUESTION 03 **(100 marks)**

3.1 Differentiate the **Three (03)** device types that you can see in the IT field with examples. **(25 marks)**

3.2 Briefly describe two (2) primary storage technologies. **(25 marks)**

3.3 Briefly explain the main function of a storage device and give one example of a secondary storage device. **(25 marks)**

3.4 Identify whether the following devices are input, output, or storage devices **(25 marks)**

Device

3.4.1 Mouse
3.4.2 Projector
3.4.3 DVD
3.4.4 Keyboard
3.4.5 Monitor
3.4.6 USB Flash Drive
3.4.7 Scanner

3.4.8 Printer

3.4.9 Hard Disk

Type

QUESTION 04 **(100 marks)**

4.1 Define and differentiate the terms "data" and "information" with an appropriate example. **(25 marks)**

4.2 Define the term "internet" and briefly describe **five (05)** advantages of internet **(25 marks)**

4.3 Define the term web browser and state the names of web browsers commonly used to access the Internet **(25 marks)**

4.4 Briefly explain the use of the Internet in the Health Science field. **(25 marks)**

QUESTION 05 **(100 marks)**

5.1 Mention the main purpose of cybersecurity. **(25 marks)**

5.2 Briefly explain why it is important to use a strong password **(25 marks)**

5.3 Define the term computer virus, and state how it can affect your device **(25 marks)**

5.4 Outline the role of antivirus software on a computer. **(25 marks)**

QUESTION 06 **(100 marks)**

6.1 State the function of Microsoft Word. **(25 marks)**

6.2 Write down the shortcut keys for the following actions. **(25 marks)**

Action	Shortcut Key
a) Copy	
b) Cut	
c) Paste	
d) Undo	
e) Redo	
f) Select All	
g) Save	
h) Open a document	
i) Bold	
j) Italic	
k) Underline	
l) Print	

6.3 Identify the font, and how can you change it in MS Word. **(25 marks)**

6.4 Briefly explain how to insert a picture into a Word document. **(25 marks)**

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Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences/ BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 09
1st Year 1st Semester
End Semester Assignment Examination

Date : **01st of August 2024**
Time : **1.30 p.m. – 2.30 pm. (One Hour)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 State the use of Microsoft PowerPoint and briefly describe its main features and common uses. (25 marks)

1.2 Outline the steps to create a new slide and add text and images in Microsoft PowerPoint. (25 marks)

1.3 Define the term animations and slide transitions in PowerPoint and outline how do they improve their presentation. (25 marks)

1.4 Briefly explain how Microsoft PowerPoint is used in the Health Science field by undergraduate students. (25 marks)

QUESTION 02 **(100 marks)**

2.1 List the main advantages and disadvantages of using the Internet and provide a brief explanation for each point. (30 marks)

2.2 Mention two examples of primary and secondary data collection methods and write a short description for each method you list. (20 marks)

2.3 Briefly explain how Information and Communication Technology (ICT) has helped improve the health industry along with few examples to support your answer. (50 marks)

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Faculty of Health Sciences
B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/ B.Sc. (Hons) Cosmetic Science
End Semester Examination-SEQ
Batch 09
BSM1133 – Biology
1st Year 1st Semester

Date: 04th of August 2025
Time: 09.00 am – 12.00 pm – Three Hours

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX Structured Essay Type Questions**.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

Question 01 **(100 Marks)**

1.1 What are the **three (03)** main principles of 'cell theory'? **(20 Marks)**
1.2 List **three (03) differences** between prokaryotic and eukaryotic cells. **(30 Marks)**
1.3 List **four (04)** characteristics of life. **(20 marks)**
1.4 Identify the level of organization starting from the "cell". **(15 Marks)**
1.5 What is the total magnification if the objective lens is twenty-five times and eye piece lens five times? **(15 Marks)**

Question 02 **(100 Marks)**

2.1 List the main valves present in the human heart. **(20 Marks)**
2.2 List **two (02)** differences between closed and open circulatory system. **(20 Marks)**
2.3 List the main components in conductive system in the heart. **(10 marks)**
2.4 What is the difference between arteries and veins in terms of structure. **(30 Marks)**
2.5 List **three (03)** functions of Lymphatic system **(30 Marks)**

Question 03 **(100 Marks)**

3.1 What are the **three (03)** main salivary glands? **(20 Marks)**
3.2 List **three (03)** function of stomach. **(20 Marks)**
3.3 Differentiate between external respiration vs internal respiration. **(30 Marks)**
3.4 List **three (03)** functions of the respiratory system. **(30 Marks)**

Question 04 **(100 Marks)**

4.1 Draw and label the structure of a neurone. **(20 Marks)**
4.2 Name **two (02)** main divisions of the nervous system. **(20 Marks)**
4.3 Below are the steps in neural signal transmission. Arrange them in the correct sequence (1–6), starting from the stimulus to the final response. **(20 Marks)**

The brain or spinal cord processes the signal. (.....)
The sensory receptor detects a stimulus (e.g., heat or pain). (.....)

The signal travels through a motor neuron. (.....)
An interneuron relays the signal within the spinal cord. (.....)
The effector (e.g., muscle) performs the response. (.....)
The sensory neuron sends the signal toward the central nervous system (CNS) (.....)

4.4 Mention the effects of sympathetic and parasympathetic nervous systems on each organ mentioned in the table below. **(40 Marks)**

Organ	Sympathetic nervous system	Para sympathetic nervous system
Heart	A.	a. .....
Lungs	B.	b. .....
Digestive system	C.	c. .....
Blood vessels	D.	d. .....
Eye	E.	e. .....

Question 05 **(100 Marks)**

5.1 List the main components found in normal human urine. **(20 Marks)**

5.2 List **three (03)** phases of urine production. **(20 Marks)**

5.3 Write **one (01)** main function of each of the following organs in male reproductive system **(30 Marks)**

i. Testes ii. Prostate gland iii. Epididymis iv. Vas deferens (sperm duct)

5.4 Write **one (01)** main function of each of the following organs in the female reproductive system. **(30 Marks)**

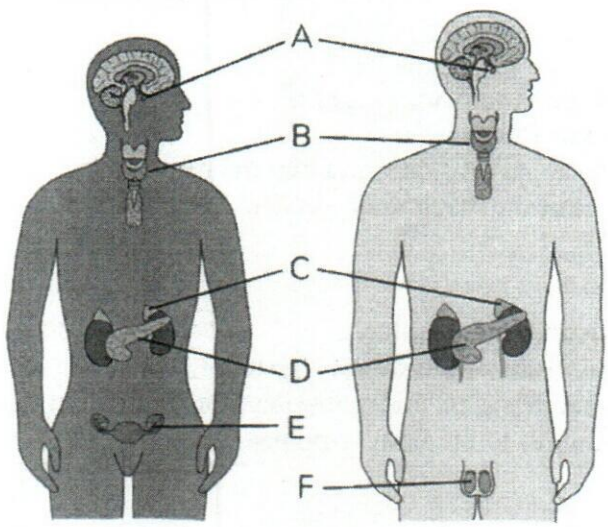
i. Ovaries ii. Fallopian tubes (uterine tubes) iii. Uterus iv. Vagina

Question 06 **(100 Marks)**

6.1 Name **four (04)** organs of the excretory system. **(20 Marks)**

6.2 Compare the **three (03)** types of muscles in the human body. **(30 Marks)**

6.3 List **four (04)** functions of Skeletal system. **(20 Marks)**



6.4 Identify the endocrine glands labeled as A to F. **(30 Marks)**

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Faculty of Health Sciences
Bachelor of Science Honours in Biomedic Science/ Bachelor of Science Honours in Cosmetic Sciences
BSM 1122 Medical Terminology (Non-GPA Course)
1st Year 1st Semester
End Semester Assignment Based Examination

Date	**: 30th July 2025**
Time	**: 09.00 a.m. – 11.00 a.m. (Two hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write the answers in black or blue ink.

Question 1 **(100 marks)**

1.1 Discuss the important of anatomical position of human body. (50 marks)

1.2. Illustrate directional terms of human body using a label diagram. (25 marks)

1.3 Make two sentences including each directional terms you mentioned in 1.2. (25 marks)

Question 2 **(100 marks)**

2.1 Write five medical terms related to each of following systems and write the meaning of those after analyzing the main components of those i.e. Prefix, Root, Combining vowel, Suffix.

2.2.1 Digestive system (25 marks)

2.2.2 Musculoskeletal system (25 marks)

2.2.3 Cardiovascular system (25 marks)

2.2.4 Female reproductive system (25 marks)

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Faculty of Health Sciences
Bachelor of Science Honours in Industrial Pharmaceutical Science/ Bachelor of Science Honours in Medical Health Product Management
BSM 1122 Medical Terminology (GPA-Course)
1st Year 1st Semester
End Semester Assignment Based Examination

Date	**: 30th July 2025**
Time	**: 09.00 a.m. – 11.00 a.m. (Two hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **FOUR** questions.
- Answer **ALL** questions.
- You should write the answers in black or blue ink.

Question 1 **(100 marks)**

1.1 Define the following terms.

1.1.1 Prefix (15 marks)
1.1.2 Word root (15 marks)
1.1.3 Suffix (15 marks)

1.2 Define following cell types.

1.2.1 Osteoblasts (15 marks)
1.2.2 Osteocytes (15 marks)
1.2.3 Osteoclasts (15 marks)

1.3 What is the difference between dysmenorrhea and amenorrhea? (10 marks)

Question 2 **(100 marks)**

2.1 Write meanings of the following prefixes. (5 marks X 10 = 50 marks)

2.1.1 a-
2.1.2 peri-
2.1.3 endo-
2.1.4 intra-
2.1.5 inter-
2.1.6 hypo-
2.1.7 hyper-
2.1.8 anti-
2.1.9 brady-
2.1.10 tachy-

2.2 Write meanings of the following suffixes. (5 marks X 5= 25 marks)

2.2.1.-algesia
2.2.2.-logy
2.2.3 .-phil
2.2.4 -ologist

2.2.5 -ia

2.3 Define following terms.

2.3.1Leukocytosis (5 marks)
2.3.2 Nephromegaly (5 marks)
2.3.3 Thrombocytopenia (5 marks)
2.3.4 Hepatitis (5 marks)
2.4.5 Bradycardia (5 marks)

Question 3 **(100 marks)**

3.1 Complete the sentence with the correct term(s) selecting from following given terms. carcinoma, tolerance, lysis, skin, incision, inflammation, pharmacology, stethoscope, acute, subcutaneous (5 marks X 10 = 50 marks)

3.1.1 Heat, pain, redness, and swelling are signs of .....
3.1.2 A disease that is sudden and severe is described as.....
3.1.3 A word, sometimes used as a suffix, that means "separation," "dissolving," or "destruction" is .....
3.1.4 The study of drugs and drug actions is called .....
3.1.5 A transdermal drug is absorbed through the .....
3.1.6 Chronic use of a drug can result in a decrease in its efficacy. This is called .....
3.1.7 ..... means beneath the skin.
3.1.8 A cut, as for surgery, or the act of cutting is .....
3.1.9 A simple instrument used to listen to body sounds is a(n) .....
3.1.10 A malignant neoplasm composed of epithelial cells is a(n) .....

3.2 Compare and contrast the following.

3.2.1 Para sagittal plane and Frontal plane (25 marks)
3.2.2 Dorsal body cavity and Ventral body cavity (25 marks)

Question 4 **(100 marks)**

4.1 Define following terms. (5 X 5 marks = 25 marks)

4.1.1 Inferolateral –
4.1.2 Laterosuperior –
4.1.3 Mediosuperior –
4.1.4 Posteromedial –
4.1.5 Anterolateral –

4.2 Write the difference between an embolus and thrombus. (25 marks)

4.3 Fill in the blanks in following table with suitable terms. (5 marks X 4= 20 marks)

	Female	Male
3.3.1 Germ cells	(a)	(b)
3.3.2 Reproductive organ	(a)	(b)

4.4 Write the meaning of the following word roots. (5 X 6 marks = 30 marks)

4.4.1 neph –

4.4.2 cost -

4.4.3 lingu –

4.4.4 angi-

4.4.5 ped-

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Faculty of Health Sciences

BSc (Hons)Biomedical Sciences/ BSc (Hons)Industrial Pharmaceutical Sciences/ BSc (Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management

General Mathematics – BSM1143/BSM 1123 1st Year 1st Semester – Batch 09
End Semester SEQ Examination

Date : 28th of July 2025
Tim : 9. 00A.M – 12.00P.M (3 hours)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX Structured Essay Type** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

Question 1 **(100 marks)**

Prove these identities

1.1 $cos^2x + 1 = 2\,cos^2x + sin^2x$ (20 marks)

1.2 $1.2\,(1 - sin^2\theta)\tan\theta \equiv \cos\theta \sin\theta$ (30 marks)

1.3 $\frac{1+\sin x}{\cos x} + \frac{\cos x}{1+\sin x} = \frac{2}{\cos x}$ (50 marks)

Question 2 **(100 marks)**

The 5th term of a arithmetic progression is 28 and the 10th term is 58.
$[\,T_n = a + (n-1)d,\ S_n = \frac{n}{2}\{2a + (n-1)d\}\,]$

Build and solve the equations. (40 marks)

2.1 What is the first term. (10 marks)

2.2 State the common difference (10 marks)

2.3 The sum of all the terms in this progression is 444. How many terms are there. (40 marks)

Question 3 **(100 marks)**

Solve,

3.1 $8x - 3y = 21$
$5x + y = 16$ (30 marks)

3.2 $x^2 + y^2 = 10$ and $x + y = 4$ (40 marks)

3.2 $3x^2 - 5x + 2 = 0$ (30 marks)

Question4 **(100 marks)**

A. Differentiate with respect to x,

4.1 $y = (8 - 7x)(-5x + 2)$ (30 marks)

4.2 $y = -\frac{1}{5}x^2 + 7x^{-\frac{1}{3}} + e^x$ (30 marks)

4.3 Given that $y = \sqrt{x}$, find

4.3.1 $\frac{dy}{dx}$ (30 marks)

4.3.2 The Gradient of the curve at the point $(3, 2\frac{1}{2})$ (20 marks)

Question 5 **(100 marks)**

Simplify

5.1 $-7x + 6y - 3z + 4x - 2y + 8z - 50x - 11y + 30z$ (20 marks)

5.2 $\frac{x}{8} + \frac{4x}{3} = \frac{x}{10}$ (50 marks)

5.3 $(-2x - 3y)(-7x + 8y)$ (30 marks)

Question 6 **(100 marks)**

6.1 Find $\int (7x^5 + 4x - 6)dx$ (30 marks)

6.2 Evaluate $\int_1^2 \frac{1}{4x+1} dx$ (30 marks)

6.3 Evaluate $\int_5^7 \frac{1}{4-x} dx$ (40 marks)

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Faculty of Health Sciences

BSc (Hons)Biomedical Sciences/ BSc (Hons)Industrial Pharmaceutical Sciences/ BSc (Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management
General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester -Batch 09
End Semester Practical Examination

Date : 28th of July 2025
Time : 1.30 P.M – 3.30P.M (2 HOURS)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink
-

Question 1 **(100 marks)**

Standard equations of the geometric progression $T_n = ar^{n-1}$, $S_n = \frac{a(r^n-1)}{(r-1)}$

The 5th term of a geometric progression is 48 and the 9th term is 768.

1.1 Build the equations and solve. (40 marks)

1.2 Find the common ratio. (10 marks)

1.3 What is the first term. (10 marks)

1.4 Find the sum of the first 10 terms. (40 marks)

Question 2 **(100 marks)**

2.1 Sketch the curve $y = x^2 - 6x$ (30 marks)

2.2 Write down the co-ordinates of the points where the curve crosses the x axis (10 marks)

2.3 Differentiate $y = x^2 - 6x$ (20 marks)

2.4 Show that the point (3, -9) lies on the curve $y = x^2 - 6x$ (20 marks)

2.5 Find the gradient of the curve at this point. (20 marks)

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Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences/ BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 08B
1st Year 1st Semester
End Semester SEQ Examination

Date : **24th of October 2024.**
Time : **9.00 a.m – 12.00 noon (3 Hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

QUESTION 01 **(100 marks)**

1.1 What is Information Communication Technology (ICT), and how does it use technology to manage and process different types of information? (25 marks)

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1.2 State the evolution of computers from the first generation using vacuum tubes to the fifth generation using Artificial Intelligence (AI). (25 marks)

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1.3 What are the different types of computers and how do they differ in their uses and processing power? (25marks)

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1.4 "All types of computers follow the same basic logical structure with five basic operations to convert raw data to meaningful data" What are the five operations? (25 marks)

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QUESTION 02 **(100 marks)**

2.1 "Operating Systems (OS) make it easy to use your computer and for applications to carry out their tasks"

State the role of an Operating System with examples. (25 marks)

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2.2 What are the main user interfaces? (25 marks)

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2.3 Name the four basic operating system settings. (25marks)

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2.4 Name five key aspects related to file management in a computer system. (25 marks)

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QUESTION 03 **(100 marks)**

3.1 "A memory is just like a human brain."

State how computer memory is similar to the human brain and the role of memory in a computer system. (25 marks)

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3.2 List the types of memory, and the advantages and disadvantages of each. (25 marks)

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3.3 What are the main differences between ROM and RAM? (25marks)

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3.4 Explain what secondary storage is and list down the different types. (25 marks)

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QUESTION 04 **(100 marks)**

4.1 What is a database and why do we use them in the health sector (explain with examples).

(25marks)

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4.2 State the typical database architecture given by Figure 1 with an example.

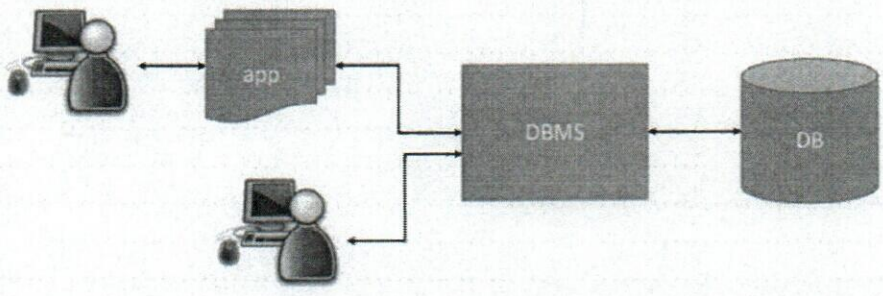


Figure 1

(25 marks)

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4.3 State the two types of data collection (25marks)

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4.4 What are the steps to collect data? (25 marks)

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QUESTION 05 **(100 marks)**

5.1 What are the uses of the Internet? List its advantages and disadvantages. (25marks)

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5.2 What is mail service? Write an email to your course coordinator, requesting to be excused from an IT lecture. Ensure to use the correct structure. (25 marks)

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5.3 "**Internet** and **Web** is not the same thing". Explain the term "web" and what we do from it. (25marks)

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5.4 Name the vendors of each. (25 marks)

Browser
Internet Explorer
Google Chrome
Mozilla Firefox
Netscape Navigator
Opera
Safari

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QUESTION 06 **(100 marks)**

6.1 "An online community is a network of people who communicate with one another and an organization through interactive tools." Explain this statement further. (25marks)

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6.2 What are phishing techniques used by attackers? (25marks)

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6.3 State the term hacking by listing four different types. (25marks)

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6.4 Convert the following numbers to the given formats.

1. 348_{10} to Binary
2. 534_{8} to Decimal
3. $15C_{16}$ to Binary
4. $1A3_{16}$ to decimal.
5. 756_{8} to Binary

(25 marks)

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library

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Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences/ BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 08B
1st Year 1st Semester
End Semester SEQ Examination

Date : **24th of October 2024.**
Time : **9.00 a.m – 12.00 noon (3 Hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

QUESTION 01 **(100 marks)**

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1.3 What are the different types of computers and how do they differ in their uses and processing power? (25marks)

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1.4 "All types of computers follow the same basic logical structure with five basic operations to convert raw data to meaningful data" What are the five operations? (25 marks)

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QUESTION 02 **(100 marks)**

2.1 "Operating Systems (OS) make it easy to use your computer and for applications to carry out their tasks"

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2.2 What are the main user interfaces? (25 marks)

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2.3 Name the four basic operating system settings. (25marks)

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2.4 Name five key aspects related to file management in a computer system. (25 marks)

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QUESTION 03 **(100 marks)**

3.1 "A memory is just like a human brain."

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3.3 What are the main differences between ROM and RAM? (25marks)

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3.4 Explain what secondary storage is and list down the different types. (25 marks)

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QUESTION 04 **(100 marks)**

4.1 What is a database and why do we use them in the health sector (explain with examples).

(25marks)

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4.2 State the typical database architecture given by Figure 1 with an example.

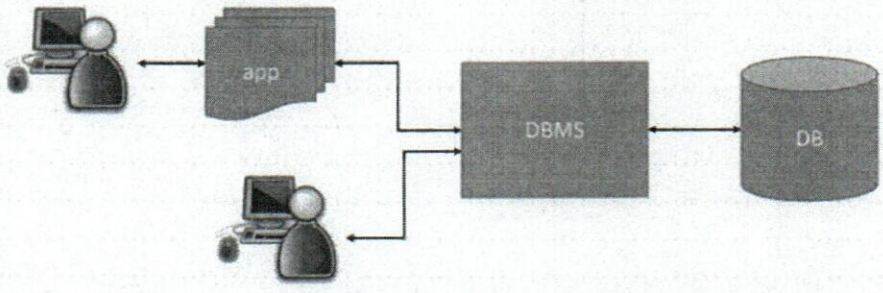


Figure 1

(25 marks)

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4.3 State the two types of data collection (25marks)

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4.4 What are the steps to collect data? (25 marks)

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QUESTION 05 **(100 marks)**

5.1 What are the uses of the Internet? List its advantages and disadvantages. (25marks)

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5.2 What is mail service? Write an email to your course coordinator, requesting to be excused from an IT lecture. Ensure to use the correct structure. (25 marks)

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5.3 "**Internet** and **Web** is not the same thing". Explain the term "web" and what we do from it. (25marks)

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5.4 Name the vendors of each. (25 marks)

Browser
Internet Explorer
Google Chrome
Mozilla Firefox
Netscape Navigator
Opera
Safari

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QUESTION 06 **(100 marks)**

6.1 "An online community is a network of people who communicate with one another and an organization through interactive tools." Explain this statement further. (25marks)

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6.2 What are phishing techniques used by attackers? (25marks)

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6.3 State the term hacking by listing four different types. (25marks)

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6.4 Convert the following numbers to the given formats.

1. 348_{10} to Binary
2. 534_{8} to Decimal
3. $15C_{16}$ to Binary
4. $1A3_{16}$ to decimal.
5. 756_{8} to Binary

(25 marks)

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Faculty of Health Sciences
BSc(Hons)Biomedical Sciences/ BSc(Hons)Industrial Pharmaceutical Sciences/ BSc(Hons)Cosmetic Sciences
BSM 1113 Information Technology
Batch – 08B
1st Year 1st Semester
End Semester Assignment Examination

Date : **24th of October 2024.**
Time : **1.30 noon- 2.30 noon (1 Hour)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

QUESTION 01

1.1 "Computers are generally applied or used in various fields." Explain with examples how it is used in your field.

(25 marks)

1.2 Fill out the table below

Generations & Year	Description	Advantages	Disadvantages

(25 marks)

1.3 Outline the dependability between hardware and software with examples

(50 marks)

QUESTION 02

2.1 "A network's topology is the layout of the cables and devices that connect the nodes." Name the four most common network topologies and explain them.

(25 marks)

2.2 What are the main aspects to consider when choosing a topology?

(25 marks)

2.3

A. List network devices.
B. You are setting up a new home network for your family. You have a modem, a router, and a couple of laptops. Describe how you would connect these devices to create a reliable and secure home network. What roles do each of the devices play in this setup?

(50 marks)

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Bachelor of Science Honours in Biomedic Science/ Bachelor of Science Honours in Cosmetic Sciences/ Bachelor of Science Honours in Medical Health Product Management
BSM 1122 Medical Terminology
1st Year 1st Semester
End Semester Assignment Based Examination

Date	**: 18th October 2024**
Time	**: 09.00 a.m. – 11.00 a.m. (Two hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write the answers in black or blue ink.

Question 1 **(100 marks)**

1.1 Following case study describe a case on thyroid cancer surgery and fill in the blanks based on that. (10X 5 marks= 50 marks)

Case Study: Thyroid Cancer Surgery

DISCHARGE DIAGNOSIS: Follicular thyroid cancer.

HOSPITAL COURSE: The patient came into the surgery department on Friday, 4 days prior to this dictation. She underwent an uneventful left thyroid lobectomy, and intraoperatively, her frozen section diagnosis was follicular adenoma. She did well postoperatively and was subsequently prepared for discharge. However, the pathology demonstrated that she had a moderately well differentiated follicular cancer. A completion thyroidectomy was then planned, and she was returned to the operating room. The contralateral lobe was then removed.

Parathyroid glands were well identified, as were the recurrent laryngeal nerves bilaterally, and the procedure was well tolerated.

Postoperatively, her calcium level was 7.9, with a preoperative calcium of 8.5. She had no Chvostek or Trousseau sign on postoperative examination and felt no irritability. She had some very mild hoarseness after the second operation but good phonation and was able to cough well. She was instructed on postoperative wound care, and it was discussed with her that she should have radioiodine ablation in several weeks when she becomes hypothyroid.

PLAN: Discharge her home on oral Vicodin for pain and have her return to the office later in the week. Additional plans for outpatient ablation will be forthcoming

1.1.1 The prefix and its meaning in uneventful are ..... and .....

1.1.2 The patient's preoperative calcium level would be measured, ...

1.1.3 The prefix and its meaning in discharge are ..... and .....

1.1.4 The word contralateral means .....

1.1.5 The prefix in the word postoperative means .....

1.1.6 During a surgery, the recurrent laryngeal nerves are visualized bilaterally. This means that they are seen on .....

1.1.7 The prefix and its meaning in the word ablation are ..... and .....

1.1.8 The word hypothyroid refers to .....

1.1.9 The patient's discharge notes predict a good outcome for the patient. This prediction is a(n) .....

1.1.10 The patient's thyroid is surgically removed. Another word that means "to cut out" is .....

1.2 Suppose that you need to explain above case in Question 1.1 to family members of the patient. Write above description in lay language explaining the meninges of all medical terms at there. (50 marks)

Question 2 **(100 marks)**

2.1 Make 1 sentence for each of the following anatomical directional term. (50 marks)

2.1.1 Cranial (Superior)
2.1.2 Inferior (Caudal)
2.1.3 Posterior (Dorsal)
2.1.4 Anterior (Ventral)
2.1.5 Medial
2.1.6 Lateral
2.1.7 Proximal
2.1.8 Distal
2.1.9 Central
2.1.10 Perpheral

2.2 Write five medical terms related to each of following systems and write the meaning of those after analyzing the main components of those i.e. Prefix, Root, Combining vowel, Suffix.

2.2.1 Female and male reproductive systems (25 marks)

2.2.2 Endocrine system (25 marks)

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Faculty of Health Sciences
B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/ B.Sc. (Hons) Cosmetic Science
Examination – 8th B Batch
BSM1133 – Biology
1st Year 1st Semester

Date: 22nd of October 2024
Time: 09.00 am – 12.00 pm – Three Hours

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

Question 01 **(100 Marks)**

1.1 State the three main principles of cell theory. **(20 Marks)**

1.2 State the **differences** between active transport and passive transport across cell membrane. **(30 Marks)**

1.3 Draw and label the main organelles present in a typical prokaryotic cell. **(50 Marks)**

Question 02 **(100 Marks)**

2.1 Compare the characteristics of the open circulatory system and the closed circulatory system. **(20 Marks)**

2.2 What are the main valves present in the human heart? **(20 Marks)**

2.3 Briefly state the process of blood flow through the human hear. **(30 Marks)**

2.4 What are the main components and functions of the lymphatic system? **(30 Marks**

Question 03 **(100 Marks)**

3.1 What are the main functions of the gastrointestinal system? **(20 Marks)**

3.2 Briefly explain the three main parts of the pharynx? **(30 Marks)**

3.3 Draw and label the structure of the large intestine. **(20 Marks)**

3.4 Briefly state the process of inhalation and exhalation. **(30 Marks)**

Question 04 **(100 Marks)**

4.1 Draw and Label the structure of a neurone. **(20 Marks)**

4.2 Outline the organization of the nervous system **(20 Marks)**

4.3 Mention **three (03)** factors affecting for the speed of nerve conduction. **(30 Marks)**

4.4 What is the differences among the three muscle types? **(30 Marks)**

Question 05 **(100 Marks)**

5.1 List the organs of the urinary system and state the function of each. **(20 Marks)**

5.2 Briefly state the role of nephrons in the kidney? **(30 Marks)**

5.3 List the internal and external parts of the female reproductive system. **(20 Marks)**

5.4 Draw and label the main structures of the male reproductive system. **(30 Marks)**

Question 06 **(100 Marks)**

6.1 Define the term **''neurotransmitter"** with two examples. **(10 Marks)**

6.2 List the hormones secreted by the anterior pituitary gland. **(20 Marks)**

6.3 State the functions of the hormones listed in **6.2** **(30 Marks)**

6.4 Briefly state the **"Appendicular Skeletal system"** and the **''Axial skeletal system''.** **(40 Marks)**

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Faculty of Health Sciences

BSc (Hons)Biomedical Sciences/ BSc (Hons)Industrial Pharmaceutical Sciences/ BSc (Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management
General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester – Batch 08B
End Semester Practical Examination

Date	**: 14th of October 2024**
Time	**: 1.30 noon – 3.30 noon (2 hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

Question 1 **(100 marks)**

Given that $\frac{dy}{dx} = 3x^2 + 4x + 3$

1.1 Find the general solution of this differential equation. (50 marks)

1.2 Find the equation of the curve with this gradient function which passes through (1, 10).

(50 marks)

Question 2 **(100 marks)**

2.1 Differentiate $f(x) = \frac{(x^3+1)(x-5)}{x}$. (50 marks)

2.2 Given that $y = 12\sqrt{x} + \frac{4}{x^{-3}}$, find

2.2.1 $\frac{dy}{dx}$. (25 marks)

2.2.2 The gradient of the curve at the point $\left(6, -8\frac{4}{5}\right)$. (25 marks)

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General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester – Batch 08B
End Semester SEQ Examination

Date	**: 14th of October 2024**
Time	**: 9. 00a.m – 12.00 noon (3 hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

Question 1 **(100 marks)**

Prove these identities

1.1 $\text{Cos}^2x + 1 = 2\,\text{Cos}^2x + \text{Sin}^2x$ (25 marks)

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1.2 $-\frac{\text{Sin}\theta}{1-\text{Cos}\theta} + \frac{1+\text{Cos}\theta}{\text{Sin}\theta} = 0$ (25 marks)

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1.3 $\frac{1+2\text{Sin}x}{\text{Cos}\,x} = \text{Tan}\,x + \frac{\text{Cos}\,x}{1-\text{Sin}\,x}$ (25 marks)

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1.4 $\text{Tanx} + \frac{1}{\text{Tanx}} = \frac{1}{\text{Sinx.Cosx}}$ (25 marks)

Question 2 **(100 marks)**

2.1 Solve: $\frac{1}{5}(10x + 25) = 2x - \frac{1}{2}(2x - 8)$ (20 marks)

2.2 Solve: $x^2 - 2y^2 = 8$ and $x + 2y = 8$ (30 marks)

2.3 Solve $x^2 - 40x - 6000 = 0$ (20 marks)

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2.4 Use the quadratic formula to solve $3x^2 - 6x + 2 = 0$ (30 marks)

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Question 3 **(100 marks)**

Factorize the given expressions.

3.1 $-2x + 6xy - 12x^2$ (20 marks)

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3.2 $xp - 2xq + yp - 2yq$ (20 marks)

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3.3 $16x^4 - 121$ (30 marks)

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3.4 $6x^2 + x - 12$ (30 marks)

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Question 4 **(100 marks)**

4.1 Sketch the curve $y = x^2 - 64$. (30marks)

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4.2 Write down the co-ordinates of the points where the curve crosses the x axis. (20 marks)

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4.3 Differentiate $y = x^2 - 64$ with respect to x. (20marks)

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4.4 Find the Gradients of the curve where the points it crosses the x axis. (30 marks)

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Question 5 **(100 marks)**

5.1 Find $\int(8x^6 + 5x - 9)\ dx$ (20 marks)

5.2 Find $\int\left(-\frac{4}{x^3} + \frac{7}{x^5} - 10x\right)\ dx$ (20 marks)

5.3 Evaluate $\int_1^3 \frac{1}{x}\ dx$ (30 marks)

5.4 Evaluate $\int_2^{10} \frac{1}{5x}\ dx$ (30 marks)

Question 6 **(100 marks)**

6.1. Rationalize the denominator

6.1.1 . $\frac{4}{\sqrt{5}-1}$ (20 marks)

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6.1.2 . $\frac{5}{2\sqrt{3}-3\sqrt{2}}$ (30 marks)

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6.2 Simplify

6.1.1 $\log_2 128$ (20 marks)

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6.2.2 $\log_3(27 \times 243)$ (30 marks)

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CINEC CAMPUS
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PAST PAPERS

Faculty	Department / Section/Division
Not Applicable	Learning Resource Centre

Past Papers

Faculty of Health Sciences

General Papers

(Year 1 – Semester I)

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Bachelor of Science Honours in Biomedic Science/ Bachelor of Science Honours in Cosmetic Sciences/ Bachelor of Science Honours in Medical Health Product Management
BSM 1122 Medical Terminology
1st Year 1st Semester
End Semester Assignment Examination

Date	**: 13th August 2024**
Time	**: 09.00 a.m. – 11.00 a.m. (Two hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write the answers in black or blue ink.

Question 1 **(100 marks)**

1.1 Discuss the important of anatomical position of human body. (50 marks)

1.2 Describe anatomical direction terms of human body giving examples for each of them. (50 marks)

Question 2 **(100 marks)**

2.1 Describe the differences of following two conditions defining them based on major components of each medical terms. Clearly separate each component in medical terms and write meaning of them when you define the terms. (40 marks)

Hypochromic, Microcytic Anemia and Normocytic, Normochromic Anemia

2.2 Write five medical terms related to each of following systems and write the meaning of those.

2.2.1 Respiratory system (20 marks)

2.2.2 Urinary system (20 marks)

2.2.3 Nervous system (20 marks)

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Faculty of Health Sciences
B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/
B.Sc. (Hons) Cosmetic Science
Examination – 8th Batch
BSM1133 – Biology
1st Year 1st Semester

Date: 08th of August 2024
Time: 09.00 am – 12.00 pm – Three Hours

Question 01 **(100 Marks)**

1.1 What are the three main principles of 'cell theory'? **(20 Marks)**

1.2 State the **differences** between prokaryotic and eukaryotic cells. **(30 Marks)**

1.3 Draw and label the main organelles present in a typical eukaryotic cell. **(50 Marks)**

Question 02 **(100 Marks)**

2.1 List the main valves present in the human heart. **(20 Marks)**

2.2 State the structural differences between different types of blood vessels. **(20 Marks)**

2.3 What is the process of blood flow through the human heart? **(30 Marks)**

2.4 State the components of Lymphatic system **(30 Marks)**

Question 03 **(100 Marks)**

3.1 List the main organs and accessory organs of GI system respectively. **(20 Marks)**

3.2 Write the main salivary glands with their respective locations. **(20 Marks)**

3.3 State the structure of large intestine. **(30 Marks)**

3.4 State the gas exchange mechanism in alveoli **(30 Marks)**

Question 04 **(100 Marks)**

4.1 Draw and Label the structure of a neurone. **(20 Marks)**

4.2 Name two neurotransmitters with their potential effect on behaviour. **(20 Marks)**

4.3 List the major subdivisions of nervous system. **(30 Marks)**

4.4 Mention the effects of sympathetic and parasympathetic nervous systems on each organ mentioned in the table below **(30 Marks)**

Organ	Sympathetic nervous system	Para sympathetic nervous system
Heart		
Lungs		
Digestive system		
Blood vessels		
Urinary bladder		
Eye		
Salivary glands		
Sweat glands		
Sex organs		
Metabolism		

Question 05 **(100 Marks)**

5.1 List the main organs and accessory organs of the excretory system respectively. **(20 Marks)**

5.2 State the process of urine formation. **(30 Marks)**

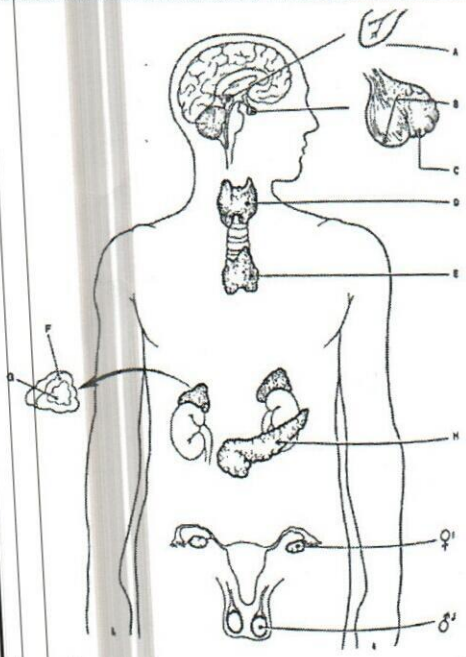
5.3 List the internal and external parts of the male reproductive system. **(20 Marks)**

5.4 Draw and label the main structures of the female reproductive system. **(30 Marks)**

Question 06 **(100 Marks)**

6.1 What is the difference between endocrine and exocrine glands? **(20 Marks)**

6.2 Write the name of the labeled gland (A to J) and mention its functions respectively **(40 Marks)**



6.3 Compare the three types of muscles in the human body. **(20 Marks)**

6.4 What is the "**Appendicular Skeletal system**"? **(20 Marks)**

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Faculty of Health Sciences

BSc (Hons)Biomedical Sciences/ BSc (Hons)Industrial Pharmaceutical Sciences/ BSc (Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management
General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester – Batch 08
End Semester SEQ Examination

Date : **2024.08.07**
Time : **9. 00A.M – 12.00P.M (3 hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

Question 1 **(100 marks)**

Prove these identities

1.1 $cos^2x - sin^2x = 2\,cos^2x - 1$ (20 marks)

1.2 $\frac{\sin\theta}{1-\cos\theta} = \frac{1+\cos\theta}{\sin\theta}$ (40 marks)

1.3 $\frac{\cos x}{1-\sin x} - \frac{1}{\cos x} = \tan x$ (40 marks)

Question 2 **(100 marks)**

The 6th term of a arithmetic progression is twice the 3rd term and the first term is 3. The sequence has 10 terms. [$T_n = a + (n-1)d$, $S_n = \frac{n}{2}\{2a + (n-1)d)\}$]

2.1 Build the equations. (40 marks)

2.2 State the common difference. (10 marks)

2.3 State the 8th term. (20 marks)

2.4 State the sum of the given arithmetic progression. (30 marks)

Question 3 **(100 marks)**

Solve

3.1 $2x + 5 = 4x - 15$ (20 marks)

3.2 $x^2 - 2y^2 = 8$ and $x + 2y = 8$ (50 marks)

3.3 $x^2 - 40x - 6000 = 0$ (30 marks)

Question 4 **(100 marks)**

A. Differentiate with respect to x,

4.1 $y = (5x + 7)(3x - 2)$ (30 marks)

4.2 $y = -\frac{1}{3}x^2 + 4x^{-\frac{1}{2}} + e^x$ (20 marks)

4.3 Given that $y = \sqrt{x} - \frac{8}{x^2}$, find

4.3.1 $\frac{dy}{dx}$ (30 marks)

4.3.2 The gradient of the curve at the point $\left(4, 1\frac{1}{2}\right)$ (20 marks)

Question 5 **(100 marks)**

Simplify

5.1 $8x - 3y + 6z - 3x + 12y - 6z + 5x + 9y - 20z$ (20 marks)

5.2 $\frac{3x}{4} + \frac{3y}{2} - \frac{3z}{10}$ (30 marks)

5.3 $\frac{15x+6}{4(5x+2)}$ (20 marks)

5.4 $(8x - 3y)(4x - 5y)$ (30 marks)

Question 6 **(100 marks)**

6.1 Find $\int (2x^3 - 3x + 4) \quad dx$ (20 marks)

6.2 Find $\int \left(\frac{3}{x^4} - \frac{1}{x^2} + 4\right) \quad dx$ (20 marks)

6.3 Evaluate $\int_0^2 \frac{1}{5x+3}\, dx$ (30 marks)

6.4 Evaluate $\int_5^7 \frac{1}{4-x}\, dx$ (30 marks)

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EXAMINATION
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Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences / BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 08
1st Year 1st Semester
End Semester SEQ Examination

Date : **2024.08.05**
Time : **9.00 p.m. – 12.00 pm. (Three Hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Computer is a machine which can take instructions and perform computations based on those instructions. Computer system is a collection of four(4) specific parts. List and give short descriptions to them. (25 marks)

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1.2 Define the information processing cycle. (25 marks)

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1.3 Briefly describe the five (5) generations of computers. (25 marks)

1.4 Briefly describe how ICT can be used to increase quality in a hospital management system. (25 marks)

QUESTION 02 **(100 marks)**

2.1 Define the term computer network is and list main benefits of a network. (25 marks)

2.2 State the types of network structures and give short descriptions about them. (25 marks)

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2.3 Define the term network topology iand draw Bus, Ring, Star and Mesh topologies.
(25 marks)

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2.4 Name three (3) network devises and two (2) network protocols. (25 marks)

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QUESTION 03 **(100 marks)**

3.1 Differentiate storage medium and storage devices. (25 marks)

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3.2 Describe two (2) primary storage technologies. (25 marks)

3.3 Name the four areas created on a magnetic disk during formatting. (25 marks)

3.4 How data is stored on the surface of magnetic and optical disks ? (25 marks)

QUESTION 04 **(100 marks)**

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4.1 Define and differentiate the terms "data" and "information" with an appropriate example.

(25 marks)

4.2 Convert the following valid numbers into decimal numbers. If the number is not valid state the validity and give the reason.

4.2.1 1101.1110_2
4.2.2 $F56_8$
4.2.3 $789B_{16}$
4.2.4 17.745_8
4.2.5 7482_8

(25 marks)

4.3 Convert following numbers into binary numbers. Show your work clearly.

4.3.1 45_{10}
4.3.2 789.25_{10}
4.3.3 13_8
4.3.4 $A10_{16}$
4.3.5 $BB.C_{16}$

(25 marks)

4.4 Carry out the following calculations using 4-bit two's complement. Show all your work clearly.

a. (-8) + 2.

b. (-6) - 2

(25 marks)

QUESTION 05 **(100 marks)**

5.1 State five (5) advantages of internet. (25 marks)

5.2 Differentiate active attacks and passive attacks. (25 marks)

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5.3 Name the symptoms of a computer virus. (25 marks)

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5.4 Define the following terms related to hacking.

5.4.1 Trojan Horse
5.4.2 Phishing
5.4.3 Distributed Denial-of-Service (DDoS) (25 marks)

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QUESTION 06 **(100 marks)**

6.1 Describe transient and persistent data. (25 marks)

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6.2 Represent the typical database application architecture with aid of a diagram.

(25 marks)

6.3 A local garage wants to modernize its operations by creating a database to manage its business more effectively. The garage needs to store detailed information about the cars they service, including CarID, LicensePlate, Make, Model, Year, and the OwnerID, which references the customer who owns the car. Customer details, such as CustomerID, FirstName, LastName, and ContactNumber, also need to be stored in a separate table. To track the various services offered by the garage, a Service table is required, containing ServiceID, ServiceDescription, and Cost. Additionally, the garage wants to keep a record of all transactions, which involves tracking each service performed on a car, linking to both the CarID and CustomerID to indicate which car received the service and who the owner is. This setup will allow the garage to maintain comprehensive records of all cars, customers, services, and transactions, facilitating efficient management and better customer service.

Identify relations (tables) and primary keys that need to create a database from given scenario.

(25 marks)

6.4 Create a relational schema for the given scenario (25 marks)

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/ B.Sc. (Hons) Cosmetic Science
BSM 1243 – Foundation of Chemistry
End-Semester Examination – 1st Year 2nd Semester – Assignment (Repeat)
1st YEAR 2nd SEMESTER

Date: 22nd of July 2024
Time: 11.00 am – 12.00 pm – ONE HOUR

INSTRUCTIONS TO CANDIDATES Page
- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

Question 01 **(100 marks)**

1 .Consider the following molecules: H_2O, CO_2, NH_3, and CH_4.

1.1. Draw the Lewis structures for each molecule, indicating the placement of all valence electrons. (30 marks)

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1.2. Determine the type of chemical bonding (ionic, covalent, or metallic) in each molecule. (20 marks)

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1.3. Identify the polarity (polar or nonpolar) of each molecule and explain your reasoning. (20 marks)

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1.4. Based on the Lewis structures and bonding types, predict and explain the relative melting and boiling points of the molecules. (30 marks)

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Question 02 **(100 marks)**

2. Consider the molecules H_2 and O_2,

2.1 Draw the molecular orbital diagrams for each molecule, indicating the placement of all electrons in the molecular orbitals. (40 marks)

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2.2 Identify the bond order for each molecule and explain its significance in terms of stability and bond strength. (20 marks)

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2.3 Determine whether each molecule is paramagnetic or diamagnetic and explain your reasoning. (20 marks)

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2.4 Compare the bond lengths in each molecule and explain any variations observed. (20 marks)

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Beyond A Graduate

Faculty of Health Sciences

B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/ B.Sc (Hons) Cosmetic Science/ B.Sc (Hons) Medical & Health Product Management
7th Batch
BCS 1243 – Foundation of Chemistry
End-Semester Examination – 1st Year 2nd Semester – SEQ

1st YEAR 2nd SEMESTER

Date: 22nd of July 2024
Time: 09.00 am – 12.00 pm - Three Hours

INSTRUCTIONS TO CANDIDATES Page
- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

Question 01 **(100 marks)**

1.1 When the initial rate of this reaction was measured at various starting concentrations of the three reactants, the following results were obtained.

experiment number	$[CH_3CHO]$ / mol dm^{-3}	$[CH_3OH]$ / mol dm^{-3}	$[H^+]$ / mol dm^{-3}	relative rate
1	0.20	0.10	0.05	1.00
2	0.25	0.10	0.05	1.25
3	0.25	0.16	0.05	2.00
4	0.20	0.16	0.10	3.20

1.1.1 Use the data from the table and write the rate equation for the reaction. (30 marks)

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1.1.2 State the units of the rate constant in the rate equation. (20 marks)

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1.1.3 Calculate the relative rate of reaction for a mixture in which the starting concentrations of all three reactants are 0.20 mol dm^{-3} (20 marks)

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1.1.4 Find the half-life of [CH_3CHO]. (30 marks)

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Question 02 **(100 marks)**

2.1 An impure sample of ammonium vanadate (V), NH_4VO_3, with mass 0.150 g, is dissolved in an excess of dilute acid. In this solution all vanadium is present as VO_2^+ ions. An excess of zinc powder is added to the solution and all the VO_2^+ ions are reduced to V_2^+ ions. The mixture is filtered to remove any remaining zinc powder.

$VO_2^+ + 4H^+ + 3e^- \rightarrow V_2^+ + 2H_2O$

When the resulting solution is titrated, 20.10 cm^3 of 0.0250 $moldm^{-3}$ acidified MnO_4^- oxidizes all V_2^+ ions back to VO_2^+ ions.

$MnO_4^- + 8H^+ + 5e \rightarrow Mn^{2+} + 4H_2O$

Calculate the percentage by mass of NH_4VO_3 in the 0.150 g impure sample of NH_4VO_3. Give your answer to three significant figures. [MW: NH_4VO_3, 116.9 $gmol^{-1}$] (50 marks)

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2.2

2.2.1 The table below shows the elements in the third period of the Periodic Table, the number of electrons in their outer energy level, their oxidation state in their common compo and their melting points.

element	Na	Mg	Al	Si	P	S	Cl	Ar
number of outer electrons	1	2						
oxidation state	+1	+2	+3	+4/–4	–3	–2	–1	0
melting point/°C	98	650	660	1414	317	115	–101	–189

2.2.1.1 Explain why Na, Mg and Al are good conductors of electricity. (20 marks)

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2.2.1.2 Which element exists as diatomic molecules of the type X_2? (10 marks)

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2.2.1.3 Silicon has a similar structure to diamond. Explain why silicon has the highest melting point in the period. (20 marks)

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Question 03 **(100 marks)**

3.1 Draw the molecular orbital diagram of He^+ and figure out the bond order of the molecule (30 marks)

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3.2 Draw a dot-and-cross diagram showing the bonding in magnesium oxide. Show outer electrons only. (20 marks)

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3.3 Sodium chloride is a crystalline solid with a high melting point. It dissolves in water to give a neutral solution. Phosphorus trichloride is a liquid at room temperature. It reacts with water to form an acidic solution. Suggest an explanation for these differences in properties. (30 marks)

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3.4 This question is about equilibrium systems. An equilibrium exists in aqueous solution between the chromate (VI) ions and the dichromate (VI) ions.
Explain any change in the position of equilibrium if a few drops of sodium hydroxide solution are added to this equilibrium system. (20 marks)

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Question 04 **(100 marks)**

4.1 Draw the structures for the following IUPAC names. (25 marks)

4.1.1 Propan -2-ol

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4.1.2 1,3 - hexanediol

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4.1.3 2- propylcyclohexanol

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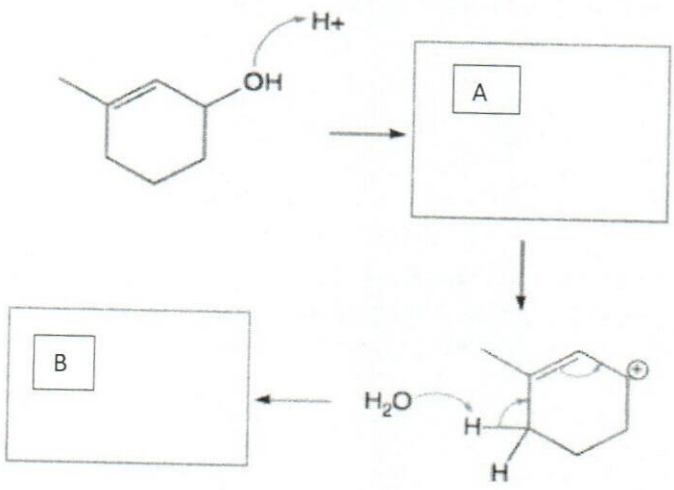
4.1.4 2-pentanone

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4.1.5 2,4,6-tribromophenol

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4.2 Complete the given A and B boxes based on the arrow- pushing mechanism given below. (30 marks)



4.3 Briefly explain the homolytic and heterolytic cleavage in bond breaking. (30 marks)

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4.4 Write **three** intermolecular forces between organic molecules. (15 marks)

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Question 05 **(100 marks)**

5.1 Calcium (Ca) is a S-block element and its physical and chemical properties are closely related to its electronic structure and size.

5.1.1 Write the electron configuration of Ca^{+2} according to the Hund's rule. (10 marks)
(Mass number of Ca is 40 $gmol^{-1}$ and the atomic number is 20)

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5.1.2 Briefly explain why 3rd ionization energy is large compare to the 1st and 2nd ionization energy of Calcium (Ca). (20 marks)

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5.1.3 Given that melting point of Ca is larger than the melting point of Ba. Explain the reason for the difference in the melting points. (20 marks)

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5.2 Metal (X) shows oxidation states such as +2, +3, +4, +5, +6 and +7. When reacts with oxygen gas it forms its oxide which is black to brown in color. Metal Y is paramagnetic in nature. Find the metal (X) and write the compounds which is responsible to +2, +4 and +7 oxidation state. (50 marks)

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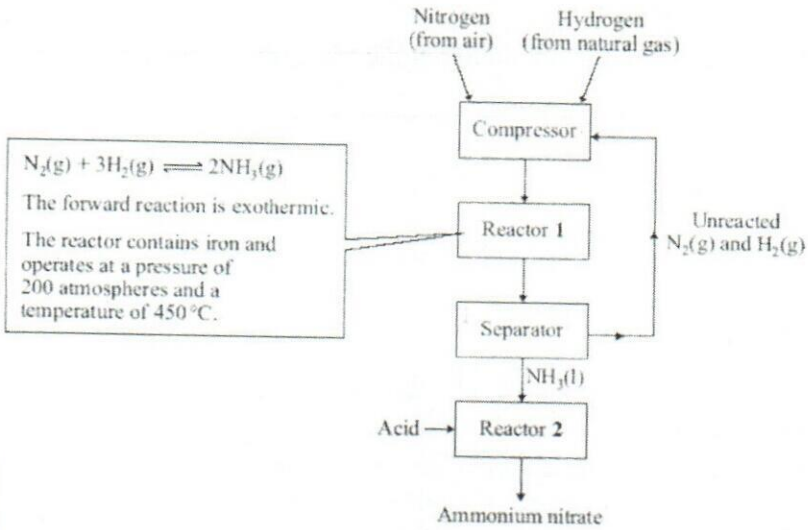
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Question 06 **(100 marks)**

6.1 The following questions are based on the Haber-Bosh process method.



6.1.1 What is the purpose of the iron in reactor 1? (10 marks)

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6.1.2 Write the balance reaction for hydrogen gas obtained from natural gas. Consider methane (CH_4) as the main component of natural gas. (20 marks)

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6.1.3 In the separator, it consists of a mixture of ammonia, hydrogen and nitrogen. Briefly explain how to separate the ammonia from the other gases? (30 marks)

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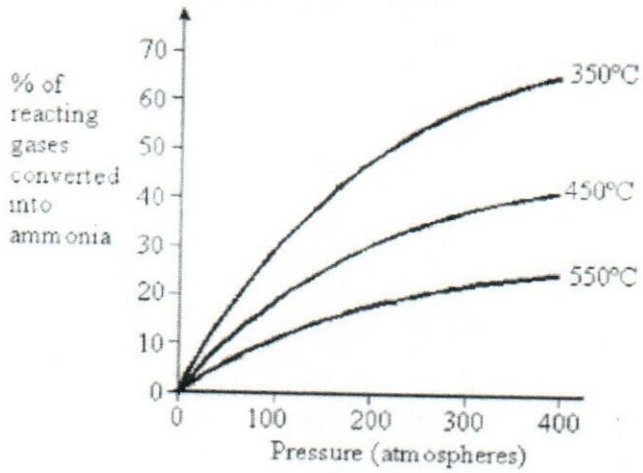
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6.2 The optimum industrial conditions employed for the process are a temperature in the range of 450-500 °C, and a pressure of 250-300 atm.

$N_2+3H_2 \rightleftharpoons 2NH_3$ + Heat

6.2.1 Following graph is for the yield of ammonia produced with changes made to temperature and pressure. Briefly describe the low yield of ammonia at 550°C (40 marks)



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-THE END-

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Faculty of Health Sciences
B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/ B.Sc. (Hons) Cosmetic Science
7th Batch
BSM 1233 – General Psychology
End-Semester Examination – 1st Year 2nd Semester – Assignment

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Date: 19th July 2024
Time: 13.30 – 14.30 One Hour

Question 01 **(100 Marks**

"The core of the intelligence resides not in one single factor but in 07 such factors"
Justify the above statement by "Gardner's Theory of Multiple Intelligence".

Question 02 **(100 Marks**

"Effective communication contributes to success in the workplace."
Evaluate the above sentence with the transferable skills you have learnt in the psychology module.

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Faculty of Health Sciences

B.Sc. (Hons) Biomedical Sciences/ B.Sc. (Hons) Industrial Pharmaceutical Sciences/

B.Sc. (Hons) Cosmetic Science

7th Batch

BSM 1213 – Personality Development

End-Semester Examination – 1st Year 2nd Semester – Assignment

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Date: 15th July 2024
Time: 1.30 pm – 2.30 – One Hour

Question 01 **(100 Marks)**

Discuss the importance of body language in delivering an effective presentation. Provide examples to illustrate how positive and negative body language can impact the overall effectiveness of a presentation.

Question 02 **(100 Marks)**

Explain **ten (10)** soft skills that you will need to understand a client.

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

Bachelor of Science Honours in Biomedical Science/ Bachelor of Science Honours in Cosmetic Science/ Bachelor of Science Honours in Medical Health Product Management

7th Batch
BSM 1122 Medical Terminology
1st Year 1st Semester

End Semester Assignment Examination

Date	**: 15th March 2024**
Time	**: 09.00 a.m. – 11.00 a.m. (Two hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write the answers in black or blue ink.

Question 1 **(20 marks X 5= 100 marks)**

Critically analyze the following medical terms related to the cardiovascular system by considering the prefix, root, suffix and meaning of entire term.

1.1 Atherosclerosis
1.2 Thrombocytopenia
1.3 Tachycardia
1.4 Arrhythmias
1.5 Anemia

Question 2 **(20 marks X 5= 100 marks)**

Critically analyze the following medical conditions, giving reasons for your explanations.

2.1 Pneumothorax
2.2 Gastritis
2.3 Diabetic neuropathy
2.4 Endometriosis
2.5 Muscle dystrophy

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Faculty of Health Sciences

Bachelor of Science Honours in Biomedical Science/ Bachelor of Science Honours in Industrial Pharmaceutical Science/ Bachelor of Science Honours in Cosmetic Science

BSM 1122 Medical Terminology

1st Year 1st Semester

End Semester SEQ Repeat Examination

Date	**: 15th March 2024**
Time	**: 09.00 a.m. – 12.00 p.m. (Three hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write the answers in black or blue ink.

Question 1 **(100 marks)**

1.1 What is anatomical position of human body? (25 marks)

1.2 Write short notes on following terms.

1.2.1 Median plane (25 marks)

1.2.2 Transverse plane (25 marks)

1.3 Define following terms. (5 X 5 marks = 25 marks)

1.3.1 Inferolateral

1.3.2 Laterosuperior

1.3.3 Mediosuperior

1.3.4 Posteromedial

1.3.5 Anterolateral

Question 2 **(100 marks)**

2.1 Define following terminologies related to human body position.

2.1.1 Reclining position (15 marks)

2.1.2 Prone position (15 marks)

2.1.3 Supine position (15 marks)

2.2 Define following terms. (6 X 5 marks = 30 marks)

2.2.1 Cystalgia

2.2.2 Cystectomy

2.2.3 Cystolith

2.2.4 Micturition

2.2.5 Nephroma

2.2.6 Hematuria

2.3 Write the difference between an embolus and thrombus. (25 marks)

Question 3 **(100 marks)**

3.1 What is the difference between dysmenorrhea and amenorrhea? (20 marks)

3.2 Define ectopic pregnancy. (20 marks)

3.3 Fill in the blanks in following table with suitable terms. (4 x 5 marks= 20 marks)

	Female	Male
3.3.1 Germ cells	(a)	(b)
3.3.2 Reproductive organ	(a)	(b)

3.4 Define following terms. (2 X 10 marks = 20 marks)

3.4.1 Hypothermia

3.4.2 Peritonsillitis

3.5 Define following cell types.

3.5.1 Osteoblasts (10 marks)

3.5.2 Osteoclasts (10 marks)

Question 4 **(100 marks)**

4.1 Write the appropriate medical term for followings. (6 X 5 marks = 30 marks)

4.1.1 Promotes sleep

4.1.2 Diseases of the muscle

4.1.3 One sided facial paralysis due to inflammation of facial nerve

4.1.4 Group of inherited genetic conditions that gradually cause the muscles to weaken

4.1.5 Accumulation of cerebrospinal fluid within brain ventricles

4.1.6 Paralysis of lower portion of body

4.2 Write the meaning of the following terms. (5 X 6 marks = 30 marks)

4.2.1 Nephrectomy

4.2.2 Calculus

4.2.3 Micturition

4.2.4 Cystalgia

4.2.5 Nephroma

4.3 What is homeostasis? (10 marks)

4.4 Write the meaning of the following word roots. (5 X 6 marks = 30 marks)

4.4.1 neph

4.4.2 cost

4.4.3 lingu

4.4.4 angi

4.4.5 ped

Question 5 **(100 marks)**

5.1 Define following terms.

5.1.1 Word root (15 marks)
5.1.2 Prefix (15 marks)
5.1.3 Suffix (15 marks)

5.2 Fill in the blanks in following table. (6 X 5 marks = 30 marks)

	Prefix	Root	Suffix
5.2.1 Hypothermia	(a)	(b)	(c)
5.2.2 Peritonsillitis	(a)	(b)	(c)

5.3 Write a most appropriate medical term for following descriptions.
(5 X 5 marks = 25 marks)

5.3.1 Pus in the urine
5.3.2 Kidney enlargements
5.3.3 Difficult or painful urination
5.3.4 Inflammation of the kidney
5.3.5 Physical, chemical and microscopic examination of urine

Question 6 **(100 marks)**

6.1 Match following terms with the correct definition in the table. (8 X 5 marks = 40 marks)

6.1.1 cyanosis
6.1.2 angina pectoris
6.1.3 syncope
6.1.4 cardiogenic
6.1.5 cardiodynia
6.1.6 arrythmia
6.1.7 tachycardia
61.8 palpitation

a. sign or symptom that originates from a condition of the heart
b. pounding, racing, or skipping of the heartbeat
c. opposite of bradycardia; fast heartbeat
d. pain associated with the heart
e. chest pain or pressure
f. blue tinge in the skin and mucous membranes
g. fainting
h. term that literally means "condition of without rhythm"

6.2 Describe following terms. (8 X 5 marks = 40 marks)
6.2.1 Benign prostatic hypertrophy
6.2.2 Epispadias
6.2.3 Hydrocele
6.2.4 Androgen
6.2.5 Prostatectomy

6.3 Define following terms.

6.3.1. Thrombocytopenia (10 marks)
6.3.2 Leukocytosis (10 marks)

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Beyond A Graduate

Faculty of Health Sciences

BSc (Hons)Biomedical Sciences/ BSc (Hons)Industrial Pharmaceutical Sciences/ BSc (Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management
General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester – Batch 07
End Semester SEQ Examination

Date : **2024.03.11**
Time : **9. 00A.M – 12.00P.M (3 HOURS)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

QUESTION 01 **(100 marks)**

1.1 Evaluate $(3\frac{1}{16})^{\frac{9}{2}}$. (20 marks)

1.2 Find the set of values for which; $4(x-2)-5x \leq 2(x-3)$ (20 marks)

1.3 Find the sum of first 10 terms of the geometric series 4+12+36…. (20 marks)

1.4 Arithmetic series has first term 5 and common difference 3. Find the 15th term. (20 marks)

1.5 Differentiate y $=-4x^3+5x$. (20 marks)

QUESTION 02 **(100 marks)**

2.1 Simplify following exponential functions. (25 marks)
a) $Y = e^{(-3x+1)}.(e^{3x+2})/\ e^{(3x-1)}$

2.2 Solve following equations for X in terms of Y. (25 marks)
a) $Y = 3ab\ e^{(3x+2b)}$ (a, b are constants.)

2.3 Solve the following System. (25 marks)
a) $\log_y(x) = 7$
b) $x\ y = 256$

2.4 Solve the simultaneous equations. (25 marks)
a) $2x + 3y = 26$
b) $x + 5y = 24$

QUESTION 03 **(100 marks)**

The first three terms of a geometric series are 5, 5(0.2), and $5(0.2)^2$ respectively.

3.1 Calculate the sum of first 20 terms of the geometric series. (25 marks)
3.2 Find the common ratio of the geometric series. (25 marks)
3.3 Find the sum to infinity of the geometric series. (25 marks)
3.4 Is this series is a convergent series? Justify your answer. (25 marks)

QUESTION 04 **(100 marks)**

Consider $f(Y) \equiv Y^3 - Y^2 - 16Y - 14$

4.1 Find the remainder when $f(Y)$ is divided by (Y + 1) is a factor of f(Y). (25 marks)
4.2 Hence factorize $f(Y)$ completely. (25 marks
4.3 Sketch the curve $Z = Y^2 - 3Y + 2$. (25 marks)
4.4 Find the coordinates of the turning points of the curve $Z = Y^2 + 2Y + 4$. (25 marks)

QUESTION 05 **(100 marks)**

5.1 Simplify $\sqrt{1024} + \sqrt{324} - \sqrt{128}$. (25 marks)
5.2 Find the set of values of x for which $-2x^2 + 9x + 5 > 0$. (25 marks)
5.3 Divide $(-x^5 + x^4 - 4x^3 - 6x^2 + 12x - 9)$ by $(x^2 + x - 1)$. (25 marks)
5.4 Rationalize the denominator of $\frac{12}{(\sqrt{5}-\sqrt{2})}$. (25 marks)

QUESTION 06 **(100 marks)**

6.1 Differentiate the following functions. (50 marks)
a) $Y = X^4 (X^3+5)$
b) $Y = 3\text{Sin}(2x) + 7\text{ Sin}(2x - 3)$
c) $Y = x^3 e^{4x}$

6.2 Find the definite Integral for the following function (50 marks)

$$\int_{-2}^{4} x^2 e^{2x} dx$$

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Faculty of Health Sciences

BSc(Hons)Biomedical Sciences/ BSc(Hons)Industrial Pharmaceutical Sciences/ BSc(Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management
General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester -Batch 07
End Semester Practical Examination

Date	:	**2024.03.11**
Time	:	**1.30 P.M – 3.30P.M (2 HOURS)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

QUESTION 01 **(100 marks)**

1.1 Use Sin (A+B) formulae to obtain Sin 105. (20 marks)
1.2 Use Cos (A-B) formulae to obtain Cos 15. (20 marks)
1.3 Convert 300 Degree value into radians. (20 marks)
1.4 Show that Cot B - Tan B = 2Cot2B. (20 marks)
1.5 Convert $3\pi/2$ Radian value into Degree. (20 marks)

QUESTION 02 **(100 marks)**

2.1 Differentiate the following functions. (50 marks)

a) $Y = 3(1 + x^2)\, e^{3\sin x}$
b) $Y = 3\text{Sin}(x^2) + \text{Sin}(5x - 3)$

2.2 Find the definite Integral for the following function. (50 marks)

a) $\int_{\pi}^{2\pi} (\sin x)(2x^2)dx$

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CINEC CAMPUS
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Faculty of Health Sciences

BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences/ BSc (Hons) Cosmetic Sciences/BSc (Hons) Medical Health Product Management

BSM 1113 Information Technology

Batch – 07
1st Year 1st Semester
End Semester SEQ Examination

Date : **07th March 2024**
Time : **9.00 am. – 12.00 pm. (Three Hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QUESTION 01 **(100 marks)**

All types of computers follow the same basic logical structure and perform the following five basic operations for converting raw input data into information useful to their users.

1.1 State five basic operations of a computer. (25 marks)
1.2 Define the terms hardware and software and differentiate in between them. (25 marks)
1.3 Briefly describe four categories of software. (25 marks)
1.4 Explain how ICT can be used to increase quality in a hospital management system. (25 marks)

QUESTION 02 **(100 marks)**

2.1 Define what a computer network is and briefly describe different types of networks. (25 marks)
2.2 State five advantages and disadvantages of computer networking. (25 marks)
2.3 Define what a network topology is and draw Bus, Ring, Star and Mesh topologies. (25 marks)
2.4 Write a short note on topic network devices. (25 marks)

QUESTION 03 **(100 marks)**

3.1 Briefly describe three types of memory. (25 marks)
3.2 Define the secondary memory and state two advantages and two disadvantages of secondary memory. (25 marks)
3.3 Differentiate in between Read-only-memory (ROM) and Random-access-memory (RAM). (25 marks)
3.4 State and explain four major storage levels. (25 marks)

QUESTION 04 (100 marks)

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4.1 Define and differentiate the terms "data" and "information" with an appropriate example. (25 marks)

Age group	Real limits	Frequency	'Less than' CF	'More than' CF
21 – 25	20.5 – 25.5	5		
26 – 30	25.5 – 30.5	12		
31 – 35	30.5 – 35.5	23		
36 – 40	35.5 – 40.5	39		
41 – 45	40.5 – 45.5	32		
46 – 50	45.5 – 50.5	21		
51 – 55	50.5 – 55.5	9		
56 – 60	55.5 – 60.5	2		
Total		**143**		

4.2 Calculate the less than cumulative frequency for above data. (25 marks)

4.3 Calculate the more than cumulative frequency for above data. (25 marks)

4.4 Convert the following numbers to the given formats. State the necessary steps. (25 marks)

- 4.4.1 $BB.C_{16}$ to binary.
- 4.4.2 1001010.10_2 to decimal.
- 4.4.3 457_{10} to octal
- 4.4.4 10111_2 to hexadecimal
- 4.4.5 -99 to 8 bit two's complement

QUESTION 05 (100 marks)

5.1 State and describe five (5) advantages of internet. (25marks)

5.2 Briefly define the following terms related to web.

- 5.2.1 Web (05 marks)
- 5.2.2 Web browser (05 marks)
- 5.2.3 Web server (05 marks)
- 5.2.4 Web page (05 marks)
- 5.2.5 Search engine (05 marks)

5.3 Describe the difference between attack and threat. (25 Marks)

5.3 Briefly define the following terms related to hacking.

- 5.4.1 Passive attack (05 marks)
- 5.4.2 Active attack (05 marks)
- 5.4.3 Trojan Horse (05 marks)
- 5.4.4 Phishing (05 marks)
- 5.4.5 Distributed Denial-of-Service (DDoS) (05 marks)

QUESTION 06 (100 marks)

6.1 Give examples for primary and secondary data collection methods with short descriptions. (25 Marks)

6.2 Represent the typical database application architecture with aid of a diagram. (25 Marks)

Suppose you are working at a library and you need to create a database to store some sort of data. The librarian state that they need to store details of Books such as BookID, Title, Author, ISBN, and PublicationYear. The details of book Authors also needed to be stored separately and authors are identified by AuthorID. Additionally, the 'Genre' table categorizes books based on genres, connected to the Book table via GenreID. The information about library members, including MemberID, FirstName, LastName, and ContactNumber also needed to be stored. Transactions and book loans are tracked, relating to both books and members through their respective IDs. Create a relational schema for above scenario.

6.3 Identify relations (tables) and primary keys that need to create a database from given scenario. (25 Marks)

6.4 Create a relational schema for the given scenario (25 Marks)

Library

00085

CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences /BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 07
1st Year 1st Semester
End Semester Assignment Examination

Date	**: 07.03.2024**
Time	**: 1.30 am. – 2.30 pm. (One Hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Generate a table that contains technologies that used in computer generations (25 marks)
1.2 Discuss the characteristics, advantages and disadvantages of types of memory along with the examples. (25 marks)
1.3 Differentiate passive attacks and active attacks in terms of cyber security. (25 marks)
1.4 Carry out the following calculations using 4-bit two's complement. Show all your work clearly.
1.4.1 5-3 (05 marks)
1.4.2 (-8) + 2 (05 marks)
1.4.3 (-6) - 2 (05 marks)
1.4.4 (-1) + 7 (05 marks)

QUESTION 02 **(100 marks)**

Network traffic of some websites are as follows.

Website Traffic

Websites / Traffic Source	Organic	Direct	Referral
Amazon	60	50	10
Dzone	30	20	10
Gizmodo	20	5	5
StackOverFlow	40	30	10
CNET	25	5	20

2.1 If the class intervals are as follows draw a histogram to represent this data.
0-5, 5-10, 10-15,15-20,… (25 marks)
2.2 If the class intervals are as follows draw a histogram to represent this data. (25 marks)
0-5, 5-10, 10-20,20-30,30-50,50-60
2.3 Give examples for primary and secondary data collection methods with short descriptions. (50 marks)

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

Bachelor of Science Honours in Biomedical Sciences/ Bachelor of Science Honours in Industrial Pharmaceutical Sciences/ Bachelor of Science Honours in Cosmetic Sciences

Biology BSM 1133

1st Year 1st Semester-End Semester SEQ Examination- 7th Batch

Date : **08th March 2024**

Time :**09.00 am – 12.00 pm (Three Hours)**

Instructions to candidates

- This question paper consists of Six SEQ questions.
- Answer ALL questions.
- You should mark the answer legibly in black or blue ink.

Question 1 **(100 marks)**

Briefly describe,

1.1. a typical eukaryotic cell with a labeled diagram. (50 marks)

1.2. mechanisms for transport across cell membranes (50 marks)

Question 2 **(100 marks)**

Describe the,

2.1. process of blood flow through the heart (50 marks)

2.2. structural differences between different types of blood vessels. (25 marks)

2.3. different valves which present in the heart (25 marks)

Question 3 **(100 marks)**

Briefly describe the,

3.1. components of lymphatic system (20 marks)

3.2. structures of Respiratory system. (30 marks)

3.3. gas exchange mechanism. (50 marks)

Question 4 **(100 marks)**

Describe the,

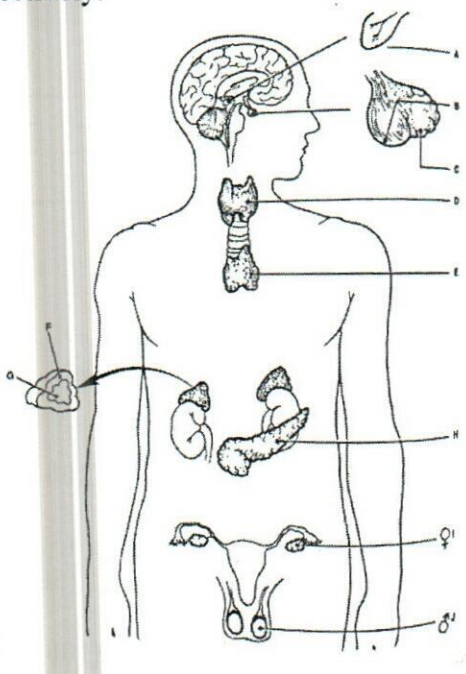
4.1. process of urine formation. (50 marks)

4.2. main organs and accessory organs of GI system. (50 marks)

Question 5 **100 marks)**

5.1. Draw and label the main structures of the reproductive system of females. (50 marks)

5.2. Write the name of the labeled gland and mention its functions respectively. (50 marks)



Question 6 **(100 marks)**

6.1. Draw the diagram of a neuron and label the structures. (20 marks)

6.2. Compare and contrast the three types of muscle tissue (30 marks)

6.3. List down two main neurotransmitters with their functions respectively (20 marks)

6.4. Briefly describe the main external reproductive organs of the male reproductive system. (30 marks)

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

BSc (Hons)Biomedical Sciences/ BSc (Hons)Industrial Pharmaceutical Sciences/ BSc (Hons)Cosmetic Sciences/BSc (Hons) Medical Health Product Management
General Mathematics – BSM1143/BSM 1123
1st Year 1st Semester -Batch 08
End Semester Practical Examination

Date : 2024.08.07
Time : 1.30 P.M – 3.30P.M (2 HOURS)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

Question 1 **(100 marks)**

Standard equations of the geometric progression $T_n = ar^{n-1}$, $S_n = \frac{a(r^n-1)}{(r-1)}$

1.1 Find the 7th term in the geometric sequence 8, 24, 72, 216, ….. (50 marks)

1.2 The first 3 terms of an infinite geometric progression are 16, 12 and 9

1.2.1 Write down the common ratio. (25 marks)

1.2.2 Find the sum of the terms of the progression. (25 marks)

Question 2 **(100 marks)**

The gradient function of a curve is $\frac{dy}{dx} = 4x - 12$

2.1 The minimum y value is 16. By considering the gradient function, find the corresponding x value. (50 marks)

2.2 Use the gradient function and your answer from part (i) to find the equation of the curve. (50 marks)

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences
BSc (Hons) Biomedical Sciences/ BSc (Hons) Industrial Pharmaceutical Sciences/ BSc (Hons) Cosmetic Sciences
BSM 1113 Information Technology
Batch – 08
1st Year 1st Semester
End Semester Assignment Examination

Date : **2024.08.05**
Time : **1.30 p.m. – 2.30 pm. (One Hour)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Generate a table that contains technologies that used in computer generations. (50 marks)

1.2 Carry out the following calculations using 4-bit two's complement. Show all your work clearly.

1.2.1. 5-3
1.2.2. (-8) + 2
1.2.3. (-6) - 2
1.2.4. (-1) + 7

(50 marks)

QUESTION 02 **(100 marks)**

2.1 State the advantages and disadvantages of internet. (50 marks)
2.2 Briefly describe the impact of ICT in health industry. (50 marks)

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FACULTY OF HEALTH SCIENCES

BSc(Hons)Biomedical Sciences/BSc(Hons)Industrial Pharmaceutical Sciences/BSc(Hons)Cosmetic Sciences

GENERAL ENGLISH – BSM1163
1ST YEAR 1ST SEMESTER – END EXAMINATION SEQ- BATCH 06

Date : 01.03.2022
Time : 09.00 am – 12.00 pm

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- The paper will be for **Three** hour (9.00 am – 12.00 am).
- You should write **answers in lined papers** legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Examine the following paragraph, and answer the questions based on it. (20 marks)

Biodiversity, also called biological diversity, is the variety of life found in a place on Earth or, the total variety of life on Earth. A common measure of this variety, called species richness, is the count of species in an area. Colombia and Kenya, for example, each have more than 1,000 species of birds, whereas the forests of Great Britain and of eastern North America are home to less than 200 species. Scientists conduct various types of studies based on these varied species. These studies are much valuable for the generation of new knowledge in the field of biology. Many aspiring researchers go on field studies to observe how biodiversity is spread across various areas. They dedicate their time and energy to conduct research every day at any given time. Biodiversity is important as it provides humans a stabilized environment.

a) What is the tense used in this paragraph? _____

b) What is the voice in the 4th sentence (Active/Passive)? _____

1.2 Identify the following elements from the passage. (80 marks)

c) A subject _____
d) A ditransitive verb _____
e) An intransitive verb _____
f) A direct object _____
g) An indirect object _____
h) An adverbial _____
i) A noun phrase _____
j) A verb _____

QUESTION 02 **(100 marks)**

2.1 Identify the voice (Active or Passive) of the following sentences and transform them into the opposite voice.

1) The professor will discuss the important areas for the exam tomorrow. (20 marks)
(Voice: _____) _____

2) The accident has caused a severe damage to his skull. (20 marks)
(Voice: _____) _____

3) He greets everyone with a slight smile. (20 marks)
(Voice: _____) _____

4) The vote of thanks will be delivered by the president of the association. (20 marks)
(Voice: _____) _____

5) The lecturer taught them how to observe photosynthesis under lab conditions. (20 marks)
(Voice: _____) _____

QUESTION 03 **(100 marks)**

3.1 Convert the following sentences into indirect speech.

1) "You delivered the welcome speech very well", my friend told me. (20 marks)
_____

2) She asked the coordinator, "Where to submit the assignment?" (20 marks)
_____

3) The policeman asked the motorist, "Are you drunk?" (20 marks)
_____

4) "Take two pills everyday at night", the doctor said to me. (20 marks)
_____

5) "Have you prepared the slide?", the lecturer asked the student. (20 marks)
_____

QUESTION 04 **(100 marks)**

4.1 Fill in each blank with the correct form of the verb given in brackets. (100 marks)

An old man who lived in Bandarawela (1) ..... (want) to dig up his potato garden last year, but it was a lot of hard work. His only son, who (2).....(help) him, was in prison and he couldn't afford an attorney to get him out. The old man wrote the following letter to his son and told about his situation:

Dear son,

I am feeling pretty bad because it (3) ..... (look) like I won't be able to plant my potato garden this year. I hate to miss (4) ..... (cultivate) the garden because your mother always loves planting time. I'm just getting too old to be digging up a garden plot. I know you (5)..... (help) me, if you weren't in prison.

Love,
Dad.

Shortly, the old man received this telegram:

"For heaven's sake, Dad, never (6) ..... (dig) the garden!! That's where I buried the GUNS!! Once I return home, I (7) ..... (hide) them somewhere else."

At about 4 a.m. the next morning, a dozen of police officers showed up and dug up the entire garden. However, no gun (8) ..... (find).

Confused, the old man wrote another note telling his son what (9) ..... just ..... (happen) and asked him what to do next.

His son's reply was: 'Go ahead and plant your potatoes, Dad. It's the best I could do for you, from here. At the moment, I (10) ..... (have) a hard time here and everything will be fine soon."

QUESTION 05 **(100 marks)**

5.1 Write the correct word ending selecting from those given in brackets. (100 marks)

A: Excuse me, can you help me? I promised my friend I would meet him half an hour ago, but I don't know where I am now.

B: Yes, I can help you. You're in a hot air balloon, hovering (1) approxima.....(tion,tely, te) 30 feet above a vacant field. There is a 5 knot southwest wind and the air temperature is 75 Degrees Fahrenheit.

A: You must be an engineer.

B: Yes, I am. How did you know?

A: Well, everything you have told me is (2) techni..... (cal, c, cally) correct, but I have no idea what to make of your information.

B: You must be a (3) manage..... (ment, r, rial).

A: Yes, I am. But how did you know?

B: You don't know where you are or how to achieve your (4) objec..... (ts, tions, tives). You made a promise to someone with no idea of how to keep it and now that you are in a (5) despera.....(te, tion, tely) position, you expect me to solve your problem.

QUESTION 06 **(100 marks)**

6.1 "Global warming has become a massive problem across the globe. It is mainly caused by human activities rather than natural phenomena" Do you agree? Write an essay on this topic highlighting your opinion on this statement. You may **use 150-200 words**.

(100 marks)

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

BSc (Hons) Biomedical Sciences/ BSc(Hons)Industrial Pharmaceutical Sciences/BSc(Hons)Cosmetic Sciences

GENERAL ENGLISH -BSM1163

1ST YEAR 1ST SEMESTER -END EXAMINATION ASSIGNMENT -BATCH 06

Date : 01.03.2022
Time : 01.30 pm – 03.30 pm (2 HOURS)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write **answers in lined papers** legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Read the following text and answer the questions based on it:



It was very hot in the small court-room and everybody was tired and sleepy. It had been a tiring morning for there had been several cases that came up for hearing and the clerks and lawyers were anxious to get off for lunch. Even the judge was **relieved** when the last case came up before the court. A tall, old man with grey hair wearing shabby clothes was now standing before *him*. The man had a foolish expression on his face and kept looking around the court-room stupidly trying hard to understand what was going on.

The man was accused of breaking into a house and stealing a cheap watch. The witness who was called was not able to give a clear account of what had happened. He **claimed** to have seen this old man outside the house one night but on being questioned further by the lawyer he **confessed** *he* was not sure whether this was the man. After considering the matter for a while, the judge dismissed the case declaring that as there was no real proof, the man could not be found guilty of any crime. Meanwhile the **accused**, the old man looked very puzzled. It was very **obvious** that he had not understood a thing. The judge who rose to leave the courtroom noticed this and he paused near the old man for a moment and then *he* said suddenly, 'Excuse me, sir, but do I have to give the watch back or not?'

A. Say whether the following Statements are **TRUE** or **FALSE.** (50 marks)

1. All except the judge were relieved when the last case came up.
2. The last case was one of larceny.
3. The man who gave evidence against the old man made a fool of himself.
4. The old man is a very intelligent person.
5. The old man had really stolen the watch.

B. Answer the following questions. Use your own words. (50 marks)

1. Do you think the writer was justified in considering the old man stupid? Give your reasons.

2. a) Explain the meaning of the words in bold print as they appear in the text.
   b) Use each of those words in a sentence.

3. Who do the pronouns in italics refer to?

QUESTION 02 **(100 marks)**

2.1 "Students should be given limited access to the internet" Do you agree with this statement? Comment on your opinion about this statement using not more than 200 words.

CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

BSc(Hons)Biomedical Sciences/BSc(Hons)Industrial Pharmaceutical Sciences/BSc(Hons)Cosmetic Science/BSc(Hons)Medical Health Product Management

MEDICAL TERMINOLOGY – BSM 1122

1ST YEAR 1ST SEMESTER - END EXAMINATION SEQ -BATCH 06

Learning Recourse Centre - (Library)
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Date : 22nd February 2023
Time : 09.00 a.m. – 12.00 p.m. (Three hours)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write the answers in black or blue ink.

01. **(100 marks)**

1.1 Define following terms.

1.1.1 Word root (10 marks)
1.1.2 Prefix (10 marks)
1.1.3 Suffix (10 marks)

1.2 Fill in the blanks in following table. (6 X 5 marks = 30 marks)

	Prefix	Root	Suffix
1.2.1 Hypothermia	(a)	(b)	(c)
1.2.2 Peritonsillitis	(a)	(b)	(c)

1.3 Define following terms. (2 X 5marks = 10 marks)

1.3.1 Hypothermia
1.3.2 Peritonsillitis

1.4 Write the meaning of the following word roots. (5 X 6 marks = 30 marks)

1.4.1 neph
1.4.2 cost
1.4.3 lingu
1.4.4 angi
1.4.5 ped

02. **(100 marks)**

2.1 What is anatomical position of human body? (25 marks)

2.2 Define following terms.

2.2.1 Median plane (15 marks)
2.2.2 Coronal plane (15 marks)
2.2.3 Transverse plane (15 marks)

2.3 Define following terms. (5 X 6 marks = 30 marks)

2.3.1 Laterosuperior
2.3.2 Posteromedial

b. pounding, racing, or skipping of the heartbeat
c. opposite of bradycardia; fast heartbeat
d. pain associated with the heart
e. chest pain or pressure
f. blue tinge in the skin and mucous membranes
g. fainting
h. term that literally means "condition of without rhythm"

3.2 Write the difference between an embolus and thrombus. (15 marks)

3.3 Define following terms.

3.3.1. Thrombocytopenia (15 marks)

3.3.2 Leukocytosis (15marks)

3.3.3 Lymphocytosis (15 marks)

04. **(100 marks)**

4.1 Write the meaning of the following terms. (5 X 6 marks = 30 marks)

4.1.1 rhino

4.1.2 pneumo

4.1.3 -pnea

4.1.4 epistaxis

4.1.5 mucolytic

4.2 Write a most appropriate medical term for following descriptions. (5 X 6 marks = 30 marks)

4.2.1 Pus in the urine

4.2.2 Kidney enlargements

4.2.3 Difficult or painful urination

4.2.4 Inflammation of the kidney

4.2.5 Physical, chemical and microscopic examination of urine

4.3 Write the meaning of the following terms. (5 X 6 marks = 30 marks)

4.3.1 phagia

4.3.2 cys

4.3.3 cholecysto
4.3.4 adeno
4.3.5 crino

4.4 What is homeostasis? (10 marks)

05. **(100 marks)**

5.1 Write the meaning of the following terms. (5 X 6 marks = 30 marks)
5.1.1 nephrectomy
5.1.2 calculus
5.1.3 micturition.
5.1.4 Cystalgia
5.1.5 nephroma

5.2 Define following cell types.
5.2.1 Osteoblasts (15 marks)
5.2.2 Osteocytes (15 marks)
5.2.3 Osteoclasts (15 marks)

5. What is the difference between dysmenorrhea and amenorrhea? (25 marks)

6. **(100 marks)**

6.1 Define following terms. (5 X 6 marks = 30 marks)
6.1.1 palsy
6.1.2 paraplegia
6.1.3 dementia
6.1.4 hypnotic
6.1.5 analgesic

6.2 Write a most appropriate medical term for following descriptions.
(5 X 6 marks = 30 marks)
6.2.1 Record of breast
6.2.2 Inflammation of breast
6.2.3 Study of female reproductive system
6.2.4 Use of artificial kidney machine to filter the blood
6.2.5 Withdrawing fluid using suction

6.3 Define following terms. (2 X 15 marks = 30 marks)
6.3.1 Goiter
6.3.2 Diabetic neuropathy

6.4 What is ectopic pregnancy? (10 marks)

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Beyond A Graduate

00061

FACULTY OF HEALTH SCIENCES

BSc(Hon)Biomedical Sciences/ BSc(Hons)Industrial Pharmaceutical Sciences/BSc(Hons)Cosmetic Sciences
INFORMATION TECHNOLOGY – BSM1113
1ST YEAR 1ST SEMESTER- END EXAMINATION SEQ- BATCH 06

Date : 20.02.2022
Time : 09.00 am – 12.00 pm

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write **answers in lined papers** legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Information and communication technologies (ICT) is defined as a diverse set of technological tools and resources used to transmit, store, create, share or exchange information.
Briefly explain five (05) uses of ICT for day-to-day life with examples. (25 Marks)

1.2 State the best suitable type of computer for each requirement out of the following computer types. (25 Marks)

(Personal computer, Supercomputer, Mainframe computer, Minicomputer, Workstation)

A. Need to support hundreds of users simultaneously, should have a larger memory storage and processing speed should range from 3-4 MIPS to 100 MIPS (more powerful).
B. Should be able to process very complex programs very fast by executing hundreds of millions of instructions per second.
C. Need to use as a single user computer. Yet should have a more powerful microprocessor.
D. Should support multiple users but okay to have a moderately powerful processor specification.
E. A device with a moderately powerful processor to be used by a single user for daily activities.

1.3 Define the terms hardware and software and differentiate in between them. (25 Marks)
1.4 Explain how ICT can be used to increase quality in the patient assistance. (25 Marks)

QUESTION 02 **(100 marks)**

2.1 Define what a computer network is and state five (05) components of a computer network. (25 Marks)
2.2 Briefly explain the four (04) types of computer networks. (You may use diagrams if needed.) (25 Marks)
2.3 Define what a network topology is and state two (02) advantages and two (02) disadvantages of Bus, Ring, Star and Mesh topologies. (25 Marks)
2.4 Briefly explain differences and similarities of a network switch and a network hub. (25 Marks)

QUESTION 03 **(100 marks)**

3.1 Define what computer memory is and state the purpose of memory in a computer system. (25 Marks)
3.2 What is cache memory? State two (02) advantages and two (02) disadvantages of cache memory. (25 Marks)
3.3 Differentiate in between Read-only-memory (ROM) and Random-access-memory (RAM). (25 Marks)
3.4 Draw the memory hierarchy diagram containing up to quaternary memory. (25 Marks)

QUESTION 04 **(100 marks)**

4.1 Define and differentiate the terms "data" and "information" with an appropriate example.

(25 marks)

4.2 State all the units from bits up to petabyte with the notations in the correct order and state the conversion pattern from one unit to another.

(25 marks)

4.3 Convert the following decimal to binary. State the necessary steps. (25 marks)

a) 147_{10}
b) 420_{10}

4.4 Convert the following binary to decimal. State the necessary steps. (25 marks)

a) 11010_2
b) 1001010.10_2

QUESTION 05 **(100 marks)**

5.1 Briefly define what is internet (Define, discuss about components, advantages and disadvantages). (25 marks)

5.2 Briefly define the following terms related to web.

a) Web
b) Web browser
c) Web server
d) Web page
e) Search (25 marks)

5.3 Describe the difference between CC and BCC fields in an email. Provide a suitable example to describe the difference.

(25 marks)

5.4 Write a proper email body with a subject line addressing your lecturer for the purpose of requesting an excuse for a missed IT class on a particular day.

(25 marks)

QUESTION 06 **(100 marks)**

6.1 Briefly explain the terms "database" and "Database Management System" (DBMS).

(25 marks)

6.2 Considering a pet as an example, write five (05) "qualitative data" and five (05) "quantitative data".

(25 marks)

6.3 State three (03) techniques each for primary and secondary data gathering.

(25 marks)

6.4 State five (05) types of databases. (25 marks)

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

Bachelor of Science Honours in Biomedical Sciences/ Bachelor of Science Honours in Industrial Pharmaceutical Sciences / Bachelor of Science Honours in Cosmetic Science

BSM 1163 – General English

1st Year 1st Semester

Batch 05

End Semester SEQ Examination

INDEX NUMBER: .....

Date : 28th of September 2021
Time : 09.00 am – 12.00 pm (Three Hours) - To answer the questions
12.00 pm – 12.30 pm (30 minutes) - To upload & email the compiled answer script

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INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- The paper will be for three hours (9.00 am – 12.00 pm). You will be given an extra 30 minutes for submission.
- You should write **answers in lined papers** legibly in black or blue ink.
- You MUST write **your index number in the top right corner** of each answer script.
- **Answer script should be numbered** (right bottom) clearly.
- Photograph of your answer scripts must be taken by keeping them on a clear platform (e.g. table).
- Arrange the photographs of your answer script in a word document in an orderly manner, then convert the word document to a **PDF**.
- **Label the PDF: Your Index No – General English SEQ**
- **Upload** the labelled **PDF to LMS AND** also **email** the PDF to Fohs.exams@cinec.edu

Question 01 **(100 Marks)**

Read the passage and answer the questions given below.

1. The Coronavirus pandemic is the defining global health crisis of our time. Since its emergence late last year, the virus has spread to every continent except Antarctica. The World Health Organization has made the assessment that COVID-19 can be characterized as a pandemic, but it is a pandemic that can be controlled. COVID-19 is the infectious disease caused by the most recently discovered coronavirus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019. Countries are racing to slow the spread of the disease by testing and treating patients, carrying out contact tracing, limiting travel, quarantining citizens, and cancelling large gatherings such as sporting events, concerts, and schools.
2. The pandemic is moving like a wave—one that may yet crash on those least able to cope. But COVID-19 is much more than a health crisis. By stressing every one of the countries it touches, it has the potential to create devastating social, economic and political crises that will leave deep scars. Every country needs to act immediately to prepare, respond, and recover. The UN system will support countries through each stage, with a focus on the most vulnerable. Drawing on our experience with other outbreaks such as Ebola, HIV, SARS, TB and malaria, as well as our long history of working with the private and public sector, UNDP will help countries to urgently and effectively respond to COVID-19 as part of its mission to eradicate poverty, reduce inequalities and build resilience to crises and shocks.
3. During the COVID-19 outbreak, like all hospitals around the world, hospitals in Sri Lanka are also facing shortages of medical supplies, specifically Personal Protective Equipment (PPE) kits. At a critical time such as this where community effort was needed the most, UNDP was able to support the need of the hour through its ongoing Climate Change Adaptation Project (CCAP II) by teaming up with Green Coop. Through this initiative, garment factories established through the project in Polonnaruwa area were approached, seeking a solution to address the shortage of Personal Protective Equipment (PPE) by exploring methods of local production.
4. From their hardwork, 500 Personal Protective Equipment for healthcare workers, 250 patient safety kits and 1,400 masks were donated to healthcare workers in the frontlines in Colombo and Polonnaruwa. Recently, these safety kits were handed over to the Governor of the Western Province Mr. Roshan Goonatileke and Provincial Director of Health Western Province Dr. Damayanthi Jayathilaka.
5. While we do this, we must also consider ways to prevent a similar pandemic recurring. In the longer term, UNDP will look at ways to help countries to better prevent and manage such crises and ensure that the world makes full use of what we will learn from this one. Ending the COVID-19 pandemic is our duty. Extraordinary times demand extraordinary measures. We face a colossal test, which demands decisive, coordinated and innovative action from all, for all.

Question 02 **(100 marks)**

Part A **(50 marks)**

Fill in the blanks with the words given below in the box. (The first one has been done for you).

Showered	biggest	dinosaurs	injured	relatively	people
coincidence	atmosphere				
colliding	comets	Earth	millions	equivalent	
Complex	damage	gravitational	Expecting	dangerous	small
lucky	diameter				

It weighed about 10,000 tons, entered the atmosphere at a speed of 64,000 km/h and exploded over a city with a **blast** of 500 kilotons. But on 15 February 2013, we were 1..... . The meteorite that 2..... pieces of rock over Chelyabinsk, Russia, was relatively small, at only about 17 metres wide. Although many people were 3..... by falling glass, the damage was nothing compared to what had happened in Siberia nearly one hundred years ago. Another 4..... small object (approximately 50 metres in diameter) exploded in mid-air over a forest region, flattening about 80 million trees. If it had exploded over a city such as Moscow or London, 5..... of people would have been killed. By a strange 6....., the same day that the meteorite terrified the 7..... of Chelyabinsk, another 50m-wide asteroid passed relatively close to Earth. Scientists were 8.....that visit and know that the asteroid will return to fly close by us in 2046, but the Russian meteorite earlier in the day had been too 9..... for anyone to spot. Most scientists agree that 10.....and asteroids pose the 11..... natural threat to human existence. It was probably a large asteroid or comet 12..... with Earth which wiped out the 13.....about 65 million years ago. An enormous object, 10 to 16 km in diameter, struck the Yucatan region of Mexico with the force of 100 megatons. That is the 14..... of one Hiroshima bomb for every person alive on 15..... today. Many scientists, including the late Stephen Hawking, say that any comet or asteroid greater than 20 km in 16..... that hits Earth will result in the complete destruction of 17..... life, including all animals and most plants. As we have seen, even a much smaller asteroid can cause great 18..... The Earth has been kept fairly safe for the last 65 million years by good fortune and the massive 19..... field of the planet Jupiter. Our cosmic guardian, with its stable circular orbit far from the sun, sweeps up and scatters away most of the 20..... comets and asteroids which might cross Earth's orbit. After the Chelyabinsk meteorite, scientists are now monitoring potential hazards even more carefully but, as far as they know, there is no danger in the foreseeable future.

1. In what continent we can't find the corona virus? (05 mark)

.....

2. When and where did the first outbreak of corona virus take place? (05 mark)

.....

3. Mention 4 steps taken by the countries to slow the spread of corona virus. (10 marks)

.....

.....

4. What is the author's main purpose of writing this article? (10 marks)

.....

.....

5. Why has the author mentioned that, 'corona virus is much more than a health crisis'? Support your answer referring to the text. (10 marks)

.....

.....

6. What is the mission of UNDP mentioned in the passage? (05 mark)

.....

.....

7. According to your point of view, as a developing country is Sri Lanka trying to minimize the spread of corona virus. Support your answer by giving reasons you have experienced. (Word count 100) (15 marks)

.....

.....

.....

.....

.....

8. What is the main idea of the following paragraphs? (20 marks)

1-.....

2-.....

3-.....

4-.....

9. Do you agree with the author's statement that everyone should cooperate to eradicate the virus? (15 marks)

.....

.....

.....

.....

.....

10. Provide a suitable title for the passage. (05 marks)

.....

Part B **(50 marks)**

suggested	if	careful	managed	flying	getting
must		accident	whether	sips	
in case	operating	forward	complicated	recover	hole

A surgeon flying from Hong Kong to London on a jumbo jet 1 ..... a fellow passenger's life by 2..... on her with a pair of scissors, a coat hanger, and a bottle of brandy. Pauline Dixon was involved in a motorcycle 3..... on the way to Hong Kong airport, but she didn't want to see a doctor 4..... she complained about a pain in her arm. The pilot asked 5..... or not there were any doctors on board, and Professor Wallace and Dr. Tom Wong came 6..... At first, they thought her arm was broken, but within minutes they saw that her condition was 7..... worse. They realized that one of her lungs 8..... have collapsed and was filling up with liquid. Professor Wallace said; " I felt we had 9..... operate as soon as we could, but of course we didn't have 10..... right equipment, so we had to see what was there. I cut a 11..... in her chest with a pair of scissors and then we had to find something to push a tube into the lung. One of the cabin crew 12..... using a coat hanger, which worked well, and we 13..... to get the tube in quite easily. Normally, it is not a 14..... operation 15..... you have the right equipment, but we had to be very 16..... . We sterilized everything with five star brandy. When the operation was over I had a few 17..... myself. I can tell you, I needed it."

After the plane landed safely in London, Miss Dixon went to hospital to 18..... Although, the operation had been very 19....., she was very grateful to the doctors for saving her life, and was full of 20.....for what they had done.

Question 03 **(100 marks)**

Part A **(50 marks)**

Put the verbs in the brackets into the correct tense.

Sue Thomas is a fashion designer. She 1..... (to make) clothes ever since she 2..... (to be) a young girl. She 3..... (to get) her first job in a clothes factory when she was sixteen. She 4..... (to sew) buttons on to a shirt one day when she 5..... (to have) a brilliant idea for a design. After she spoke to her bank manager, she got a loan and she 6..... (to open) her own little workshop. Now she 7..... (to make) lots of money. Next year she 8..... (to open) a shop which will sell her own designs. She 9..... (to sell) clothes to a lot of famous people including film stars and singers and she 10..... (to think) she will be very rich soon.

Part B **(50 marks)**

One day a little Indian boy 1..... (to sit) outside his wigwam. He 2..... (to wonder) how the Indians 3..... (to choose) their children's names. He 4..... (to decide) to go and ask the Indian chief. "Well," the chief 5..... (to explain), "we love nature and when a new baby 6..... (to be) born, we 7..... (to look) around and 8..... (to choose) a name like Flowing Waterfall, Bright Star, Running Bull. And so on. 9..... (you/to understand)? "Yes, chief", the Indian boy said. Why 10..... (you/to be) so interested in this, Two Dogs Fighting?", the chief asked.

Question 04 **(100 marks)**

Re-write the sentences in reported speech.

1. Don't do it!" (10 marks)
   She.....
2. "I'm leaving tomorrow" (10 marks)
   She.....
3. "Please get me a cup of tea" (10 marks)
   She.....
4. "She got married last year" (10 marks)
   She.....
5. "Be quick!" (10 marks)
   She.....
6. "Could you explain number four, please?" (10 marks)
   She.....
7. "Where do you live?" (10 marks)
   She.....
8. "We went to the cinema and then to a Chinese restaurant" (10 marks)
   She.....
9. "I'll come and help you at twelve" (10 marks)
   She.....
10. "What are you doing tomorrow?" (10 marks)
    She.....

Question 05 **(100 marks)**

Part A **(50 marks)**

Change the following sentences into passive voice.

1. The government is planning a new road near my house. (5 marks)
   .....
2. My grandfather built this house in 1943. (5 marks)
   .....
3. Picasso was painting Guernica at that time. (5 marks)
   .....
4. The cleaner has cleaned the office. (5 marks)
   .....
5. He had written three books before 1897. (5 marks)
   .....
6. John will tell you later. (5 marks)
   .....
7. By this time tomorrow we will have signed the deal. (5 marks)
   .....
8. Somebody should do the work. (5 marks)
   .....
9. People speak Portuguese in Brazil. (5 marks)
   .....
10. The traffic might have delayed Jimmy. (5 marks)
    .....

Part B **(50 marks)**

Fill the gaps with the correct tenses suitably. (active or passive voice)

1. The robbers ..... by the police yesterday. (arrest) (5 marks)
2. We ..... preparing for the examination now. (prepare) (5 marks)
3. It ..... since yesterday. (rain) (5 marks)
4. I ..... for five hours. (working) (5 marks)
5. The students ..... to submit the reports by Wednesday. (submit) (5 marks)
6. She ..... for a while. (lie) (5 marks)
7. The teacher ..... the students for lying. (punish) (5 marks)
8. The inmates of the juvenile home ..... well by the caretakers. (not/ treat) (5 marks)
9. As the patient could not walk, he ..... home in a wheelchair. (carry) (5 marks)

10. The injured …….. to the hospital in an ambulance. (take) (5 marks)

Question 06 **(100 marks)**

Write an essay on:

Do you think Reading books can help people with personal development? Why or why not?
Give your reasons and provide examples.

Word limit 175 – 200

Important! – You will be penalized if you exceed the word limit.

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

Bachelor of Science Honours in Biomedical Sciences/ Bachelor of Science Honours in Industrial Pharmaceutical Sciences/ Bachelor of Science Honours in Cosmetic Science

BSM 1143 – General Mathematics

1st Year 1st Semester

Batch 05

End Semester SEQ Examination

INDEX NUMBER: .....

Date : 24th of September 2021
Time : 09.00 am – 12.00 pm (Three Hours) - To answer the questions
12.00 pm – 12.30 pm (30 minutes) - To upload & email the compiled answer script

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INSTRUCTIONS TO CANDIDATES

- This question paper consists of **EIGHT** questions.
- Answer **SIX** questions.
- The paper will be for three hours (9.00 am – 12.00 pm). You will be given an extra 30 minutes for submission.
- You should write **answers in lined papers** legibly in black or blue ink.
- You MUST write **your index number in the top right corner** of each answer script.
- **Answer script should be numbered** (right bottom) clearly.
- Photograph of your answer scripts must be taken by keeping them on a clear platform (e.g. table).
- Arrange the photographs of your answer script in a word document in an orderly manner, then convert the word document to a **PDF**.
- **Label the PDF: Your Index No – General Mathematics SEQ**
- **Upload** the labelled **PDF to LMS AND** also **email** the PDF to Fohs.exams@cinec.edu

Question 1 **(100 marks)**

1. Factorize the given expressions.

i. $x^2 + 7x + 12$ (25 marks)
ii. $x^2 - 20x + 100$ (25 marks)
iii. $x^2 - 49$ (25 marks)
iv. $6x^2 + x - 12$ (25 marks)

Question 2 **(100 marks)**

2.1. Solve $x^2 - 40x - 6000 = 0$ (50 marks)
2.2. Use the quadratic formula to solve $3x^2 - 6x + 2 = 0$ (50 marks)

Question 3 **(100 marks)**

3.1. How many terms are there in the sequence (50 marks)
11, 15, 19,....., 643 ?
3.2. Find the sum of the first 100 terms of the progression $1,\ 1\frac{1}{4},\ 1\frac{1}{2},\ 1\frac{3}{4},\ldots\ldots$ (50 marks)

Question 4 **(100 marks)**

4.1. Standard equations of the geometric progression $T_n = ar^{n-1}$, $S_n = \frac{a(r^n-1)}{(r-1)}$
4.11. Find the 7th term in the geometric sequence 8, 24, 72, 216, ... (50 marks)
4.12. The first 3 terms of an infinite geometric progression are 16, 12 and 9
(a) Write down the common ratio. (25 marks)
(b) Find the sum of the terms of the progression. (25 marks)

Question 5 **(100 marks)**

5.1. Differentiate $f(x) = \frac{(x^2+1)(x-5)}{x}$ (50 marks)
5.2. Given that $y = \sqrt{x} - \frac{8}{x^2}$, find
(a) $\frac{dy}{dx}$ (25 marks)
(b) The gradient of the curve at the point $\left(4, 1\frac{1}{2}\right)$ (25 marks)

Question 6 **(100 marks)**

6.1. Prove the identity $cos^2x - sin^2x = 2\,cos^2x - 1$ (50 marks)

6.2. Prove the identity $\frac{\cos x}{1-\sin x} - \frac{1}{\cos x} = \tan x$ (50 marks)

Question 7 **(100 marks)**

7.1. Find $\int (2x^3 - 3x + 4)\ \ dx$ (50 marks)

7.2. Find $\int \left(\frac{3}{x^4} - \frac{1}{x^2} + 4\right)\ \ dx$ (50 marks)

Question 8 **(100 marks)**

8.1. Evaluate $\int_0^2 \frac{1}{5x+3}\ dx$ (50 marks)

8.2. Evaluate $\int_5^7 \frac{1}{4-x}\ dx$ (50 marks)

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Faculty of Health Sciences

Bachelor of Science Honours in Biomedical Sciences/ Bachelor of Science Honours in Industrial Pharmaceutical Sciences/ Bachelor of Science Honours in Cosmetic Science

BSM 1113 – Information Technology

1st Year 1st Semester

Batch 05

End Semester SEQ Examination

INDEX NUMBER: .....

Date : 21st of September 2021
Time : 09.00 am – 12.00 pm (Three Hours) - To answer the questions
12.00 pm – 12.30 pm (30 minutes) - To upload & email the compiled answer script

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INSTRUCTIONS TO CANDIDATES

- This question paper consists of **EIGHT** questions.
- Answer **SIX** questions including the **Compulsory question.** (Compulsory question and FIVE other questions)
- The paper will be for three hours (9.00 am – 12.00 pm). You will be given an extra 30 minutes for submission.
- You should write **answers in lined papers** legibly in black or blue ink.
- You MUST write **your index number in the top right corner** of each answer script.
- **Answer script should be numbered** (right bottom) clearly.
- Photograph of your answer scripts must be taken by keeping them on a clear platform (e.g. table).
- Arrange the photographs of your answer script in a word document in an orderly manner, then convert the word document to a **PDF** or use CAMScanner to directly convert it to PDF.
- **Label the PDF: Your Index No – Information Technology SEQ**
- **Upload** the labelled **PDF to LMS AND** also **email** the PDF to Fohs.exams@cinec.edu

QUESTION 01 (Compulsory) **(100 marks)**

(a) List four (04) sectors that use ICT and explain them briefly. (80 marks)
(b) Describe the difference between Intranet and Extranet. (20 marks)

QUESTION 02 **(100 marks)**

(a) Write four (04) uses of internet and explain two (02) of them. (25 marks)
(b) Write five (05) features in email. (25 marks)
(c) Explain the difference between "cc" and "bcc". (25 marks)
(d) What are the types of worms and write four (04) ways of protecting your computer from viruses? (25 marks)

QUESTION 03 **(100 marks)**

(a) Define the terms "Hardware and Software" with examples? (20 marks)
(b) What is EULA? Explain briefly? (20 marks)
(c) What is the file compression? Briefly explain the importance of the file compression. (20 marks)
(d) Write four (04) major functions of an OS. (20 marks)
(e) Write two (02) types of user interfaces and explain one. (20 marks)

QUESTION 04 **(100 marks)**

Following figure shows the income and expenditure of the sports meet of ABC College,

F11 590000

	A	B	C	D	E	F
1	Sport Meet Income and Expenditure					
2	Income			Expenditure		
3	Date	Discription	Amount	Date	Discription	Amount
4	1/2/2016	Claude House	55000	1/20/2016	For Food	50000
5	1/2/2016	Mark House	45000	1/21/2016	drinks	50000
6	1/4/2016	Luke House	52000	1/23/2016	Medals and Cups	20000
7	1/6/2016	Cammilus House	48000	1/26/2016	Certificates	15000
8	1/7/2016	Well wissers	100000	1/27/2016	Transport	10000
9	1/8/2016	Students from abroad	290000	1/28/2016	Main Stage	15000
10				1/31/2016	Balance B/F	430000
11	Total		590000			590000
12	Old students living in abroad		$2,000.00			
13	Doller exchange rate		145			
14						
15						

(a) What is the formula that should be in cell C9 to convert the amount in dollar in C12 to rupee?
(Dollar exchange rate is mentioned in cell C13) (10 marks)

(b) Write the formula in cell C11 to calculate total income. (20 marks)

(c) Total income in C11 should be equal to the amount in F11. What is the formula should be in F11 to fulfill this requirement? (10 marks)

(d) Total expenditure and the total balance Brought forward (B/F) should be equal to the amount in F11. Write the formula that should be in cell F10 to calculate the balance. (20 marks)

(e) You can see the column letter F and row number are shaded. Why is that? (10 marks)

(f) Amount given from Mark house needs to be change to 50000. What are the cells would be change accordingly? (10 marks)

(g) Sports committee want to show how do they expend money for each task in graphically.

I. Name two types of graph that can be used to do this. (10 marks)

II. State the cell range should be used for above graph. (10 marks)

QUESTION 05 **(100 marks)**

(a) List three (03) difficulties of handling large volume of data in an organization.(20 marks)

(b) What is a database? Briefly explain how you would overcome the difficulties mentioned above by using databases. (30 marks)

(c) What do you mean by a "Field" & a "Record" in a database system? (10 marks)

(d) Define the terms "Primary Key" & "Foreign Key" in database environment. (20 marks)

(e) List three (03) types of relationships exist between database tables. (20 marks)

QUESTION 06 **(100 marks)**

(a) What is the difference between a "Printer" and a "Plotter"? (25 marks)

(b) How is a "Network Computer" different from a "Laptop"? (45 marks)

(c) "Shared Folder" is a useful element towards students in an Information Technology Lab Environment. Explain how it is useful (30 marks)

QUESTION 07 **(100 marks)**

(a) Define the term "Computer Virus". (25 Marks)

(b) List down how you can identify that your computer has been attacked by a virus? (25 Marks)

(c) Explain why the viruses are dangerous. (25 Marks)

(d) Name three different types of computer viruses and explain one from them. (25 Marks)

QUESTION 08 **(100 marks)**

Write short notes on the following (5 X 20 Marks)

(a) WWW
(b) CPU
(c) Database
(d) Input devices
(e) ICT

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Faculty of Health Sciences

Bachelor of Science Hons. Biomedical Science / BSc (Hons) Cosmetic Sciences / BSc (Hons) Industrial Pharmaceutical Sciences / BSc (Hons) Medical Health Product Management.

General Mathematics – BSM 1143

1st year 1st semester –Batch 06

End Examination- Practical Examination

INDEX NUMBER: .....

Date	**: 27.02.2022**
Time	**: 01.30 pm – 3.30 pm**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **FOUR** questions.
- Answer **ALL** questions.
- You should write **answers in lined papers** legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Use Sin (A+B) formulae to obtain Sin 75. (20 marks)
1.2 Use Cos (A-B) formulae to obtain Cos 15. (20 marks)
1.3 Convert 315 Degree value into radians. (20 marks)
1.4 Show that tan A + Cot A = 2 / Sin (2A). (20 marks)
1.5 Convert $3\pi/4$ Radian value into Degree. (20 marks)
1.6

QUESTION 02 **(100 marks)**

2.1 Differentiate the following functions. (50 marks)

a) $Y = 3x^2e^{2\sin x}$
b) $Y = 3\text{Sin}(2x^2) + \text{Sin}(4x - 3)$

2.2 Find the definite Integral for the following function. (50 marks)

a) $\int_{\pi}^{2\pi} (\sin x)\,(x^2)dx$

QUESTION 03 **(100 marks)**

3.1 Factorize the followings. (25 marks)

a) $2x^2 - x - 1$

b) $x^4 - 16$

c) $A^3 - 8B^3$

3.2 Solve the following system. (25 marks)

a) $\text{Log}_3 X + \text{Log}_3 Y = 3$

b) $\text{Log}_Y X = 2$

3.2 Solve the following equation. (25 marks)

a) $3^{2X+1} - 3^{X+4} + 3^3 = 3^X$

3.4 Find the range of X values which satisfying below inequality (X€R). (25 marks)

a) $X^2 \geq 0$

QUESTION 04 **(100 marks)**

4.1 Determine the following indefinite integral. (a is a constant). (25 marks)

a) $\int (3e^t + 5\cos at)\,dt$

4.2 Determine the following definite integral. (25 marks)

a) $\int_{-3}^{3} (2x + 5)\,dx$

4.3 Write the following expressions as a single term. (25 marks)

a) $\log_2(80) + \log_2(\frac{8}{5})$

b) $\frac{e^{(3x+5)}}{e^{-x}} e^{5x}$

4.4 Solve following equations for x in terms of y. (where t is constant). (25 marks)

a) $y = te^{\sqrt{2x^2+1}}$

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Faculty of Health Sciences

Bachelor of Science Hons. Biomedical Science / BSc (Hons) Cosmetic Sciences / BSc(Hons) Industrial Pharmaceutical Sciences / BSc(Hons) Medical Health Product Management.

General Mathematics – BSM 1143

1st year 1st semester –Batch 06

End Examination- SEQ

INDEX NUMBER: .....

Date : **27.02.2022**

Time : **09.00 am – 12.00 pm**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write **answers in lined papers** legibly in black or blue ink.

QUESTION 01 **(100 marks)**

1.1 Evaluate $(3\frac{1}{16})^{\frac{5}{2}}$. (20 marks)

1.2 Find the set of values for which; $4(x-6)-3x \leq 2(x-1)$ (20 marks)

1.3 Find the sum of first 20 terms of the geometric series 2+6+18…. (20 marks)

1.4 Aarithmetic series has first term 5 and common difference -6. Find the 25th term. (20 marks)

1.5 Differentiate y $=-2x^3+3x$. (20 marks)

QUESTION 02 **(100 marks)**

2.1 Simplify following exponential functions. (25 marks)

a) $Y = e^{(-3x+1)}.(e^{3x})/e^{(3x+1)}$

2.2 Solve following equations for X in terms of Y. (25 marks)

a) $Y = 2ab\ e^{(2x+b)}$ (a, b are constants.)

2.3 Solve the following System. (25 marks)

a) $\log_y(x) = 3$

b) $x\ y = 256$

2.4 Solve the simultaneous equations. (25 marks)

a) $2x + y = 26$

b) $x + 3y = 24$

QUESTION 03 **(100 marks)**

The first three terms of a geometric series are 15, 15(0.2), and $15(0.2)^2$ respectively.

3.1 Calculate the sum of first 10 terms of the geometric series. (25 marks)

3.2 Find the common ratio of the geometric series. (25 marks)

3.3 Find the sum to infinity of the geometric series. (25 marks)

3.4 Is this series is a convergent series? Justify your answer. (25 marks)

QUESTION 04 **(100 marks)**

Consider $f(Y) \equiv Y^3 - Y^2 - 16Y - 14$

4.1 Find the remainder when $f(Y)$ is divided by (Y + 1) is a factor of f(Y). (25 marks)

4.2 Hence factorize $f(Y)$ completely. (25 marks

4.3 Sketch the curve $Z = Y^2 - 3Y + 2$. (25 marks)

4.4 Find the coordinates of the turning points of the curve $Z = Y^2 + 2Y + 3$. (25 marks)

QUESTION 05 **(100 marks)**

5.1 Simplify $\sqrt{256} + \sqrt{324} - \sqrt{128}$. (25 marks)

5.2 Find the set of values of x for which $-2x^2 + 9x + 5 > 0$. (25 marks)

5.3 Divide $(-3x^5 + 3x^4 - 4x^3 - 6x^2 + 12x - 9)$ by $(x^2 + x - 3)$. (25 marks)

5.4 Rationalize the denominator of $\frac{24}{(\sqrt{6}-\sqrt{2})}$. (25 marks)

QUESTION 06 **(100 marks)**

6.1 Differentiate the following functions. (50 marks)

a) $Y = 2X^4(2X^3+5)$

b) $Y = 3\text{Sin}(2x) + 5\text{ Sin}(2x - 3)$

c) $Y = x^3 e^{4x}$

6.2 Find the definite Integral for the following function (50 marks)

$$\int_{-2}^{4} x^2 e^{2x} dx$$

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PAST PAPERS

Faculty	Department / Section/Division
Not Applicable	Learning Resource Centre

Past Papers

Faculty of Health Sciences

Bachelor of Science Honors in Medical and Health Product Management

(Year 1 – Semester I) /II

1st Issue Date: 2017.011.30	Revision No.00	Revision Date: 27.2.2024	Validated by: Librarian

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Faculty of Health Sciences
Bachelor of Science Honours in Medical and Health Product Management
BSM 1133 - Pharmaceutical Management

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Batch – 02

01st Year 01st Semester

End Semester SEQ Examination

Date : **14th of March 2024**
Time : **09.00 a.m. – 11.00 a.m. (Two hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of FOUR questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

Question 01

1.1 List **three (03)** levels of managers. (10 Marks)

1.2 Define the term "management". (20 Marks)

1.3 Identify the level of skills that need to be acquired by different levels of managers within an organization. (30 Marks)

1.4 Differentiate "efficiency" and "effectiveness". (40 Marks)

Question 02

2.1 Name **four (04)** factors affecting the shape of the organizational structure. (10 Marks)

2.2 List **four (04)** different types of organizational structures. (20 Marks)

2.3 Identify different types of plans based on **four (04)** different bases. (30 Marks)

2.4 Describe why managers need to focus on social responsibility. (40 Marks)

Question 03

3.1 List **four (04)** steps of controlling process. (10 Marks)

3.2 Identify **four (04)** motivational theories. (20 Marks)

3.3 Differentiate "extrinsic motivation" and "intrinsic motivation". (30 Marks)

3.4 Describe following concepts. (40 Marks)

3.4.1. Employee oriented leadership vs Product oriented leadership (20 Marks)

3.4.2. Transactional leadership vs Transformational leadership (20 Marks)

Question 04

4.1 List **four (04)** Human Resource Management functions. (10 Marks)

4.2 Briefly describe the cruciality of human resources for the success of an organization. (20 Marks)

4.3 Differentiate job description and job specification. (30 Marks)

4.4 Describe following concepts. (40 Marks)

4.4.1. Recruitment and selection (20 Marks)

4.4.2. Training and development (20 Marks)

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Faculty of Health Sciences
Bachelor of Science Honours in Medical and Health Product Management
BSM 1143 - General Pharmaceutics
Batch - 02
1st year 1st semester
End Semester SEQ Examination

Date : **12th March 2024**
Time : **09.00 am – 12.00 pm (Three Hours)**

INSTRUCTIONS TO CANDIDATES

This question paper consists of **SIX** questions.
Answer **all** questions.
You should write legibly in black or blue ink.

01 **(100 marks)**

1.1. What is the importance of having standards for drugs? (10 marks)
1.2. State the **05** criteria to be accomplished by a newly invented drug. (15 marks)
1.3. Differentiate pharmacopeia and drug formulary. (20 marks)
1.4. Describe general monographs and specific monographs. (25 marks)
1.5. Describe **02** unique facility designs and operations to be available in a clean room at an injectable biological drug manufacturing facility. (30 marks)

02 **(100 marks)**

2.1. Draw the schematic representation of the cumulative amount of drug released from immediate and extended released dosage forms. (10 marks)
2.2. Differentiate two-phased system from single-phase gels. (20 marks)
2.3. Classify the sterile dosage forms and drug delivery systems. (30 marks)
2.4. Write short notes on the following. (40 marks)
2.4.1. Buccal and sublingual tablets
2.4.2. Plasters
2.4.3. Effervescent tablets
2.4.4. Suppositories

03 **(100 marks)**

3.1. What is the importance of maintaining GMP in the pharmaceutical industry? (20 marks)
3.2. Briefly describe the material and personnel flow in a pharmaceutical manufacturing plant by drawing a simple layout. (30 marks)
3.3. State **05** uses of reference standards in the pharmaceutical industry. (20 marks)
3.4. Describe how an analytical reference standard is prepared from a working standard. (30 marks)

04 **(100 marks)**

4.1. State **03** unique characteristic features of borosilicate glass. (20 marks)

4.2. Comment on the importance of quality assurance aspects of packaging. (30 marks)

4.4. State the main **03** types of hazards encountered by packaging with an example for each. (15 marks)

4.5. Write a descriptive account of types of packaging. (35 marks)

05 **(100 marks)**

5.1. State **05** ideal characteristics of the excipients. (20 marks)

5.2. Briefly describe the function of anti-oxidants as an excipient. (20 marks)

5.3. Differentiate between glidant and lubricant. (30 marks)

5.4. Outline the information that should be available on a dispensing label. (30 marks)

06 **(100 marks)**

6.1. What is a pharmaceutical plant layout? (20 marks)

6.2. State **05** factors that must be considered when developing a pharmaceutical layout. (20 marks)

6.3. Briefly describe how you are going to minimize the external particles and microorganisms within a good manufacturing plant by giving examples. (30 marks)

6.4. A pharmaceutical manufacturing plant has the same place to receive the materials and load the finished products.

6.4.1. Comment on the suitability of receiving materials and loading of finished products from the same place. (30 marks)

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

Bachelor of Science Honours in Medical and Health Product Management

Pharmaceutical Management - BSM1133

Batch 01

1st Year 1st Semester

End Semester Examination Assignment

INDEX NUMBER: .....

Date: 07/03/2023 (Tuesday)

Time: 13.30 pm – 14.30 pm

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **All** questions.
- The paper will be for three hours (13.30 pm – 14.30 pm).
- You should write the answers in the given answer sheets legibly in black or blue ink.

Question 01

Using the recruitment procedure and the selection process, explain how the Human Resource Management Department would recruit a client for a position using an example. (50 Marks)

Question 02

Explain how motivational techniques are important for managers in increasing the productivity of an overall organization. (50 Marks)

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Beyond A Graduate

Faculty of Health Sciences

Bachelor of Science Honours in Medical and Health Product Management

Pharmaceutical Management - BSM1133

Batch 01

1st Year 1st Semester

End Semester Examination SEQ

INDEX NUMBER: .....

Date: 07/03/2023 (Tuesday)

Time: 9.00 am – 11.00 am

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **FOUR** questions.
- Answer **All** questions.
- The paper will be for three hours (9.00 am -11.00 am).
- You should write the answers in the given answer sheets legibly in black or blue ink.

Question 01

1.1 Define 'management' in an organizational context. (20 Marks)
1.2 Briefly describe the three (3) characteristics of professionalism. (20 Marks)
1.3 "Manager's social responsibility is not free from some criticisms".
Prove the statement with three (3) examples. (30 Marks)
1.4 Are all managers leaders? Prove your answer using the functions of management. (30 Marks)

Question 02

2.1 Briefly describe what is 'decision-making process' is in management. (10 Marks)
2.2 Briefly Describe what is 'the span of control' in an organization. (20 Marks)
2.3 Describe three (3) types of leadership. (30 Marks)
2.4 Imagine you are a line manager of a Production Executive employee, and she/he has been complaining to you about her/his workload. However, when considering the company's budget, you cannot recruit a new staff member.
Explain to the employee how she /he could manage her workload using the Time Management Matrix. (40 Marks)

Question 03

3.1 Define 'performance appraisal' in an organization. (10 Marks)
3.2 Mention six (6) objectives of performance appraisal. (20 Marks)
3.3 What elements of direction are responsible for excellent management? (30 Marks)
3.4 Supervision in an organization is important for both organization and the employees. Prove this statement with evidence. (40 Marks)

Question 04

4.1 Write two (2) advantages and two (2) disadvantages of internal recruitment. (10 Marks)
4.2 Design a Job Description and a Job Specification for the "Human Resource Junior Executive" at Star Garments, Galle factory. (25 Marks)
4.3 Explain the difference between non-financial rewards and financial rewards. (25 Marks)
4.4 Imagine you have been appointed as the new Human Resources Manager in an apparel company with a high turnover and high union influence. Using the HRM functions you have learned make a brief plan to solve the problems in the company. (40 Marks)

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

BSc(Hons)Industrial Pharmaceutical Sciences/ BSc(Hons)Medical and Health Product Management

GENERAL PHARMACEUTICS -BSM1153

1ST YEAR 1ST SEMESTER -END EXAMINATION SEQ -BATCH 06

Date	:	**2023-03-03**
Time	:	**9. 00A.M – 12.00P.M (3 HOURS)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of SIX questions.
- Answer ALL questions.
- You should write legibly in black or blue ink

01 **(100 marks)**

1.1. Define standards. (10 marks)

1.2. State the **05** criteria to be accomplished by a newly invented drug. (15 marks)

1.3. Differentiate pharmacopoeia and drug formulary. (20 marks)

1.4. Describe general monographs and specific monographs. (25 marks)

1.5. Describe **02** unique facility designs and operations to be available in a clean room at an injectable biological drug manufacturing facility. (30 marks)

02 **(100 marks)**

2.1. Draw the schematic representation of the cumulative amount of drug released from immediate, delayed and extended released dosage forms. (15 marks)

2.2. Outline the composition of pharmaceutical suspension and emulsion. (20 marks)

2.3. Classify uses of pharmaceutical powders. (25 marks)

2.4. Write short notes on following. (40 marks)

2.4.1. Liniments
2.4.2. Tinctures
2.4.3. Effervescent tablets
2.4.4. Suppositories

03 **(100 marks)**

3.1. State the importance of maintaining GMP in the pharmaceutical industry. (10 marks)

3.2. What is the difference between cGMP and GMP? (20 marks)

3.3. "Reference standards are drugs". Comment on this statement. (30 marks)

3.4. Describe how an analytical reference standard is prepared from a working standard. (40 marks)

04 **(100 marks)**

4.1. Write **05** functions of pharmaceutical packaging. (20 marks)

4.2. Differentiate primary and secondary packaging. (20 marks)

4.3. State **03** advantages of having proper closure system in pharmaceutical packaging. (15 marks)

4.4. State main **03** types of hazards encountered by packaging with an example for each. (15 marks)

4.5. Write a descriptive account on strip packaging. (30 marks)

05 **(100 marks)**

5.1. Classify the excipients according to their origin. Provide **02** examples for each. (20 marks)

5.2. Briefly describe the function of binders as an excipient in tablet preparation by providing an example. (20 marks)

5.3. Describe **02** functional roles of a pharmaceutical excipient. (30 marks)

5.4. Outline the information should be available in a manufacture label. (30 marks)

06 **(100 marks)**

6.1. What is a pharmaceutical plant layout? (10 marks)

6.2. State **05** factors that need to be considered when developing a pharmaceutical layout. (20 marks)

6.3. Briefly describe **05** advantages of a good pharmaceutical plant layout. (30 marks)

6.4. Draw a sample pharmaceutical plant layout by labeling relevant areas. (40 marks)

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CINEC CAMPUS
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Faculty of Health Sciences

BMS 1113- Information Technology

1st year 1st semester

Batch 04

End semester SEQ Examination

INDEX NUMBER: .....

Date : 08/01/2021
Time : 9.00 am- 12.00 pm (3 hours)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of 8 questions.
- Including the compulsory question answer for 6 questions (Compulsory Question+ Another 5 questions)
- You should **write answers in foolscap sheets** legibly in black or blue ink.
- You MUST write your **index number in the top right corner** of each answer script.
- **Answer script** should be numbered (right bottom) clearly.
- Photograph of your answer scripts must be taken by keeping them on a clear platform (e.g. table).
- Arrange the photographs of your answer script in a word document in an orderly manner, then convert the word document to a PDF.
- **Label the PDF: Your Index No – Information Technology SEQ.**
- **Upload** the labelled **PDF to LMS AND** also **email** the PDF to Fohs.exams@cinec.edu

Question 01 (Compulsory)

(a) List and briefly describe four (04) sectors in which ICT is used. (80 Marks)
(b) Describe the difference between intranet and extranet. (20 Marks)

Question 02

(a) Write four (04) uses of internet and explain two (02) of them. (25 Marks)
(b) Write five (05) features in email. (25 Marks)
(c) Explain the difference between "cc" and "bcc" in an email. (25 Marks)
(d) What are the types of worms and write four (04) ways of protecting your computer from viruses (25 Marks)

Question 03

(a) Define the terms "Hardware and Software" with examples. (20 Marks)
(b) What is EULA? Explain briefly. (20 Marks)
(c) What is the file compression? Briefly describe the importance of the file compression. (20 Marks)
(d) Write four (04) major functions of an OS. (20 Marks)
(e) Write two (02) types of user interfaces and explain one. (20 Marks)

Question 04

Following figure shows the income and expenditure of the sports meet of ABC College,

F11 590000

	A	B	C	D	E	F
1	Sport Meet Income and Expenditure					
2	Income			Expenditure		
3	Date	Discription	Amount	Date	Discription	Amount
4	1/2/2016	Claude House	55000	1/20/2016	For Food	50000
5	1/2/2016	Mark House	45000	1/21/2016	drinks	50000
6	1/4/2016	Luke House	52000	1/23/2016	Medals and Cups	20000
7	1/6/2016	Cammilus House	48000	1/26/2016	Certificates	15000
8	1/7/2016	Well wissers	100000	1/27/2016	Transport	10000
9	1/8/2016	Students from abroad	290000	1/28/2016	Main Stage	15000
10				1/31/2016	Balance B/F	430000
11	Total		590000			590000
12	Old students living in abroad		$2,000.00			
13	Doller exchange rate		145			
14						
15						

(a) What is the formula that should be in cell C9 to convert the amount in dollar in C12 to rupee? (Dollar exchange rate is mentioned in cell C13) (10 Marks)
(b) Write the formula in cell C11 to calculate total income. (20 Marks)

CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences

BSM 1143 – General Mathematics

Batch - 04

1st year 1st semester

End semester SEQ Examination

INDEX NUMBER: .....

Date : **07/01/2021**

Time : **9.00 a.m. – 12.00 noon (3 hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **8** questions.
- Answer **6** questions.
- You should **write answers in foolscap sheets** legibly in black or blue ink.
- You MUST write your **index number in the top right corner** of each answer script.
- **Answer script** should be numbered (right bottom) clearly.
- Photograph of your answer scripts must be taken by keeping them on a clear platform (e.g. table).
- Arrange the photographs of your answer script in a word document in an orderly manner, then convert the word document to a PDF.
- **Label the PDF: Your Index No – General Mathematics SEQ.**
- **Upload** the labelled **PDF to LMS AND** also **email** the PDF to Fohs.exams@cinec.edu

Question 01 **(50 marks × 2 = 100 marks)**

(a) Given that $y = \frac{1+\sin x}{\cos x}$ find $\frac{dy}{dx}$ using the quotient rule.

(b) Differentiate $y = 3e^{x+1}$

Question 02 **(50 marks × 2 = 100 marks)**

(a) Find $\int(2x^3 - 3x + 4)\ dx$

(b) Find $\int\left(\frac{3}{x^4} - \frac{1}{x^2} + 4\right)\ dx$

Question 03 **(50 marks × 2 = 100 marks)**

(a) Find the points on the curve with equation $y = x^3 + 6x^2 + 5$ where the value of the gradient is -9.

(b) Find the equation of the tangent to the curve $y = x^2 + 3x + 2$ at the point (2, 12)

Question 04 **(50 marks × 2 = 100 marks)**

(a) Prove the identity $cos^2x - sin^2x = 2\,cos^2x - 1$

(b) Prove the identity $\frac{\cos x}{1-\sin x} - \frac{1}{\cos x} = \tan x$

Question 05 **(50 marks × 2 = 100 marks)**

Standard equations of the geometric progression $T_n = ar^{n-1}$, $S_n = \frac{a(r^n-1)}{(r-1)}$

The first term of a geometric sequence is 5 and the fifth term is 1280.

(a) Find the common ratio of the geometric sequence.

(b) Find the 8th term of the sequence.

Question 06 **(50 marks × 2 = 100 marks)**

(a) Evaluate $\int_0^2 \frac{1}{5x+3}\ dx$ (b) Evaluate $\int_5^7 \frac{1}{4-x}\ dx$

Question 07 **(50 marks × 2 = 100 marks)**

(a) Solve $x^2 + 30x - 1000 = 0$

(b) Use the quadratic formula to solve $5x^2 + 4x - 3 = 0$

Question 08 **(25marks × 4 = 100 marks)**

Factorize the given expressions

(a) $x^2 + 7x + 12$ (b) $x^2 - 20x + 100$

(c) $x^2 - 49$ (d) $6x^2 + x - 12$

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Faculty of Health Sciences

BSM 1163 – General English

Batch - 04

1st year 1st semester

End Semester SEQ Examination

INDEX NUMBER: .....

Date : **06/01/2021**

Time : **01.30 pm – 04.30 pm (3 hours)**

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **06** questions.
- Answer **all** questions.
- You should **write answers in foolscap sheets** legibly in black or blue ink.
- You MUST write your **index number in the top right corner** of each answer script.
- **Answer script** should be numbered (right bottom) clearly.
- Photograph of your answer scripts must be taken by keeping them on a clear platform (e.g. table).
- Arrange the photographs of your answer script in a word document in an orderly manner, then convert the word document to a PDF.
- **Label the PDF: Your Index No – General English SEQ.**
- **Upload** the labelled **PDF to LMS AND** also **email** the PDF to Fohs.exams@cinec.edu

Question 01 **(20 Marks)**

Read the passage and answer the questions given below.

Use the space given: do not answer the questions in a separate paper.

1. Pollution is an environmental concern for people throughout the world. One university study suggests that pollutants in the water, air, and soil cause up to 40% of the premature deaths in the world's population. The majority of these deaths occur in developing countries.
2. Water in many developing countries is contaminated with toxic chemicals, also known as toxins. The World Health Organization (WHO) estimates that 1.1 billion people have little or no access to clean water. In many of these regions the water that is used for drinking, cooking, and washing is the same water that is used for dumping sewage and hazardous waste. Most developing countries cannot afford water treatment facilities. Approximately 80% of infectious diseases in the world are caused by contaminated water.
3. Air pollution is a growing problem throughout the world. Indoor air pollution is one of the leading causes of lung cancer. Families in developing countries use open stoves for cooking and heating their homes. These homes do not have proper ventilation. The smoke, which is full of chemicals and carcinogens, gets trapped inside where families eat and sleep. Outdoor pollution also causes disease and illness, especially in industrial cities such as Beijing, China, where cancer is the leading cause of death. China relies heavily on coal, which is considered the dirtiest source of energy. According to the European Union, only 1% of urban dwellers in China breathe clean air on an average day. Neighbouring countries including Japan and Korea receive much of China's pollution in the form of acid rain. This pollution results mainly from the coal powered factories, which produce inexpensive goods for North American and European consumers. Outdoor air pollution is also a concern in many wealthy countries. Those who live and work in urban centres such as Los Angeles or Toronto experience many warm days beneath a layer of smog.
4. Soil pollution is also a major concern, both in industrial and developing countries. Pollutants such as metals and pesticides seep into the earth's soil and contaminate the food supply. Soil pollution causes major health risks to entire ecosystems. This type of pollution reduces the amount of land suitable for agricultural production and contributes to global food shortages. Dumping of industrial and domestic waste products produces much of the world's soil pollution, though natural disasters can also add to the problem. In wealthy countries such as the US, protection agencies monitor the food supply. The public is generally warned before major disease outbreaks occur. Developing countries do not have this luxury. Farmers in poor nations grow food in contaminated soil both to earn a living and to avoid starvation.
5. As more people move to urban centres, premature deaths caused by pollution are expected to increase worldwide. Today, the developed nations who achieved their wealth at the

expense of the environment will be held accountable for protecting the earth's resources for future generations.

1. What are the three types of environmental pollution discussed in the passage? **(1 mark)**
   I. .....
   II. .....
   III. .....

2. Why has the author mentioned that pollution is an environmental concern? Support your answer referring to the passage. **(2 marks)**
   .....
   .....
   .....
   .....
   .....
   .....

3. What is the author's main purpose of writing this article? **(2 marks)**
   .....
   .....
   .....
   .....

4. What are the two types of air pollution mentioned in the text? **(1 mark)**
   I. .....
   II. .....

5. How does air pollution take place in Sri Lanka? Support your answer with examples. **(2 marks)**
   .....
   .....
   .....
   .....
   .....
   .....
   .....

6. Does soil pollution lead to starving? Support your answer referring to the text. **(2 marks)**
   .....
   .....
   .....

.....

.....

7. According to your point of view, as a developing country is Sri Lanka trying to minimize environmental pollution? Support your answer by giving reasons you have experienced. (Word count 100) **(4 marks)**

.....

.....

.....

.....

.....

.....

.....

.....

8. What is the main idea of the following paragraphs? **(1 marks)**

.....

.....

.....

9. Do you agree with the author's statement that, developed nations will be held accountable for protecting the earth's resources for future generations? If yes, why? **(3 marks)**

.....

.....

.....

.....

.....

.....

.....

10. Provide a suitable title for this passage. **(2 marks)**

.....

Question 02

Part A **(10 marks)**

Fill in the blanks with the words given below in the box. (The first one has been done for you).

regard	**political**	**confinement**	**critic**	**poetry**					
writing	**oppressive**	**awarded**	**existence**	**dramatist**					
acceptance	**literary**	**distinguished**	**Literature**						
imprisonment	**released**	**government**	**won**	**experiences**	**South**				
cultural									

Wole Soyinka, who was born in 1934, is a Nigerian writer, poet and playwright. Many **1)** **regard** him as Africa's most 2)..... playwright. He 3)..... the Nobel Prize for Literature in 1986, the first African writer to win this honour.

Soyinka has played an active role in Nigeria's 4)..... history. In 1967, during the Civil War in Nigeria, he was arrested by the Federal Government and put in solitary 5)..... for attempting to broker a peace between the warring parties. While in prison he wrote 6)..... which was published in a collection. He was 7)..... two years later after international attention was drawn to his 8)..... His 9).....in prison are recounted in a book. He is an outspoken 10)..... of many Nigerian administrations, and of political tyrannies worldwide, including the Mugabe regime in Zimbabwe. Much of his 11)..... has been concerned with "the 12)..... boot and the irrelevance of the colour of the foot that wears it".

1986 was his most glorious year and occurred during the reigns of several violent and repressive African regimes. The Swedish Academy 13)..... him the Nobel Prize for 14).....as a writer "who in a wide 15)..... perspective and with poetic overtones fashions the drama of 16) .....". The foremost Nigerian 17)..... became the first African Nobel laureate, enshrined forever in the history of world literature. His Nobel Lecture was devoted to South African freedom-fighter Nelson Mandela. Soyinka's 18)..... speech criticised apartheid and the politics of racial segregation imposed on the population by the Nationalist 19)..... African 20)..... That year brought him another 21)..... award - the Agip Prize for Literature - and he was awarded a Nigerian national decoration: Commander of the Federal Republic.

Part B **(10 marks)**

buy	**moment**	**with**	**enough**	**off**	**nail**
noticeably	**able**	**else**	**disabled**	**myself**	
awkward	**looking**	**the**	**doghouse**	**and**	
fence	**trouser**	**reached**	**down**	**advertising**	

A farmer had some puppies to sell. He painted a sign 1)..... the four pups and set about nailing it to the post on the edge of his yard. As he was driving the last 2)..... into the post, he felt a tug on his overalls. He looked down into the eyes of a little boy. "Mister," he said, " I want to 3)..... one of your puppies."

"Well," said the farmer, as he rubbed his sweat 4)..... to the back of his neck. "These puppies come from fine parents and cost a good deal of money."

The boy dropped his head for a 5)..... . Then reaching deep into his pocket, he pulled out a handful of change and held it up to 6)..... farmer.

"I've got thirty-nine cents. Is that 7)..... to take a look?" "Sure", said the farmer. And with that he led out a whistle. "Here, Dolly!" he called. Out from the 8)..... and down the ramp ran Dolly forward by four little pups. The little boy's eyes danced 9) ..... delight. As the dogs made their way upto the 10)....., the little boy noticed something 11)..... stirring inside the doghouse. Slowly another little pup appeared, this one 12)..... smaller. Down the ramp it slid. Then in a somewhat 13)..... manner, the little pup began hobbing toward the others, doing its best to catch up.

"I want that one.", the little boy said, pointing to the 14)..... pup. The farmer knell 15)..... at the boy's side and said, "Son, he will never be 16)..... to run and play with you like the other pups."

With that the little boy stepped back from the fence, reached down, and began rolling up one leg of his 17)..... and revealed a steel brace running down both sides of his leg attached to a specially made shoe, 18)..... back up at the farmer, he said, "You see sir, I too don't run well 19)..... and he will need someone who understands."

With tears in his eyes, the farmer 20)..... down and picked up the little pup. Holding it carefully, he handed it to the little boy. "How much?" asked the little boy. "No charge," answered the farmer. "There's no charge for love."

Question 03

Part A **(10 marks)**

Put the verbs in the brackets into the correct tense.

The school fair 1)..... (to be) right around the corner, and tickets have just gone on sale. We 2)..... (to sell) a limited number of tickets at a discount, so move fast and 3)..... (to get) yours while they are still available. This is going to be an event you 4)..... (not /to want) to miss! First off, the school fair is a great value when compared with other forms of entertainment. Also, your ticket purchase 5)..... (to help) our school, and when you help the school, it 6)..... (to help) the entire community. But that's not all! Every ticket you purchase 7)..... (to enter) you in a drawing to win fabulous prizes. And 8)..... (not/ to forget), you will have mountains of fun because there 9)..... (to be) acres and acres of great rides, fun games, and entertaining attractions! 10)..... (to spend) time with your family and friends at our school fair. Buy your tickets now!

Part B **(10 marks)**

I 1)..... (to do) well in school, and people think I 2)..... (to be) smart because of it. But it's not true. In fact, three years ago I 3)..... (to struggle) in school. However, two years ago I decided to get serious about school and made a few changes. First, I 4)..... (to decide) I would become interested in whatever was being taught, regardless of what other people 5)..... (to think). I also decided I would work hard every day and never 6)..... (to give up) on any assignment. I decided to never, never fall behind. Finally, I decided to make school a priority over friends and fun. After implementing these changes, I 7)..... (to become) an active participant in classroom discussions. Then my test scores began to rise. I still 8)..... (to remember) the first time that someone made fun of me because "I was smart." How exciting! It 9)..... (to seem) to me that being smart is simply a matter of working hard and being interested. After all, learning a new video game is hard work even when you are interested. Unfortunately, learning a new video game 10)..... (not/to help) you get into college or get a good job.

Question 04 **(10 marks)**

Re-write the sentences in reported speech.

1. He said, "I like this song."
   .....
2. "Where is your sister?" she asked me.
   .....
3. "I don't speak Italian," she said.
   .....
4. "Say hello to Jim," they said.
   .....
5. "The film began at seven o'clock," he said.
   .....
6. "Don't play on the grass, boys," she said.
   .....
7. "Where have you spent your money?" she asked him.
   .....
8. "I never make mistakes," he said.
   .....
9. "Does she know Robert?" he wanted to know.
   .....
10. "Don't try this at home," the stuntman told the audience.
    .....

Question 05

Part A **(10 marks)**

Change the following sentences into passive voice.

1. John collects money.
   .....
2. Anna opened the window.
   .....
3. We have done our homework.
   .....

4. I will ask a question.

.....

5. He can cut out the picture.

.....

6. The sheep ate a lot.

.....

7. We do not clean our rooms.

.....

8. William will not repair the car.

.....

9. Did Sue draw this circle?

.....

10. Could you feed the dog?

.....

Part B **(10 marks)**

Fill the gaps with the correct tenses suitably. (active or passive voice)

1. The words ..... by the teacher today. ***(explain)***
2. We ..... a letter the day before yesterday. ***(send)***
3. This car ..... It's too old. ***(not/ steal - will-future)***
4. This street ..... because of snow. ***(already/ close - Present Perfect)***
5. A new restaurant ..... next week. ***(open)***
6. He ..... to the party yesterday. ***(invite)***
7. The blue box ..... ***(can/not/ see)***
8. I..... the book by my friend last Sunday. ***(give)***
9. The dishes ..... by my little brother. ***(not/ wash - Present Perfect)***
10. I ..... by Robert. ***(not/ ask - will-future)***

Question 06 **(10 marks)**

Write an essay on:

Do you think our society is too dependent on technology like smartphones? Why or why not?
Give your reasons and provide examples.

Word limit 175 – 200

Important! – You will be penalized if you exceed the word limit.

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences
B.Sc. (Hons) in Medical and Health Product Management
2nd Batch
MHPM 1253 – Fundamentals of Medical Product Development
End-Semester Examination – 1st Year 2nd Semester – Assignment

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Date: 24th July 2024
Time: 13.30 – 14.30 – One Hour

Question 01 **(100 Marks)**

Write a brief description of post-market surveillance and risk analysis of medical devices in the NMRA Act.

Question 02 **(100 Marks)**

2.1 Draw the flowchart including the five steps of the medical product development process. **(30 Marks)**

2.2 State the activities that we could follow in each step in the medical product development process. **(70 Marks)**

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EXAMINATION
24 JUL 2024
CINEC

CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences
B.Sc. (Hons) in Medical and Health Product Management
2nd Batch
MHPM 1253 – Fundamentals of Medical Product Development
End-Semester Examination – 1st Year 2nd Semester

Date: 24th July 2024
Time: 09.00 am – 11.00 – Two Hours

Question 01 **(100 Marks)**

1.1 Name the medical device regulatory authority in Sri Lanka. **(20 Marks)**

.....
.....

1.2 Briefly indicate the medical device regulatory procedure in Sri Lanka. **(30 Marks)**

.....
.....
.....
.....

1.3 What is the role of the National Medicine Quality Assurance Laboratory in medical devices? **(25 Marks)**

.....
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1.4 List two functions of the Medical device regulatory division. **(25 Marks)**

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Question 02 **(100 Marks)**

2.1 What is the FDA definition of a medical device? **(20 marks)**

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2.2 Briefly mention the NMRA definition of a medical device. **(25 Marks)**

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2.3 State the NMRA classification of medical devices. **(25 Marks)**

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2.4 Give an example for the individual class of medical device you mentioned in 2.3. **(30 Marks)**

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Question 03 **(100 Marks)**

3.1 How do you do the usability testing of a medical device? **(25 Marks)**

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3.2 List the content of the usability report of a medical device. **(25 Marks)**

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3.3 Briefly mention about verification process of medical devices. **(25 marks)**

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3.4 What is the process of validation of medical devices? **(25 marks)**

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Question 04 **(100 Marks)**

4.1 Define the term "Medical Device". **(20 Marks)**

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4.2 List the categories of the Medical Device classification system. **(20 Marks)**

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4.3 Order the classes of In Vitro Diagnostic Medical Devices according to increasing risk. **(30 Marks)**

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4.4 Provide one example for each category of medical device classification system. **(30 Marks)**

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EXAMINATION
17 JUL 2024
CINEC

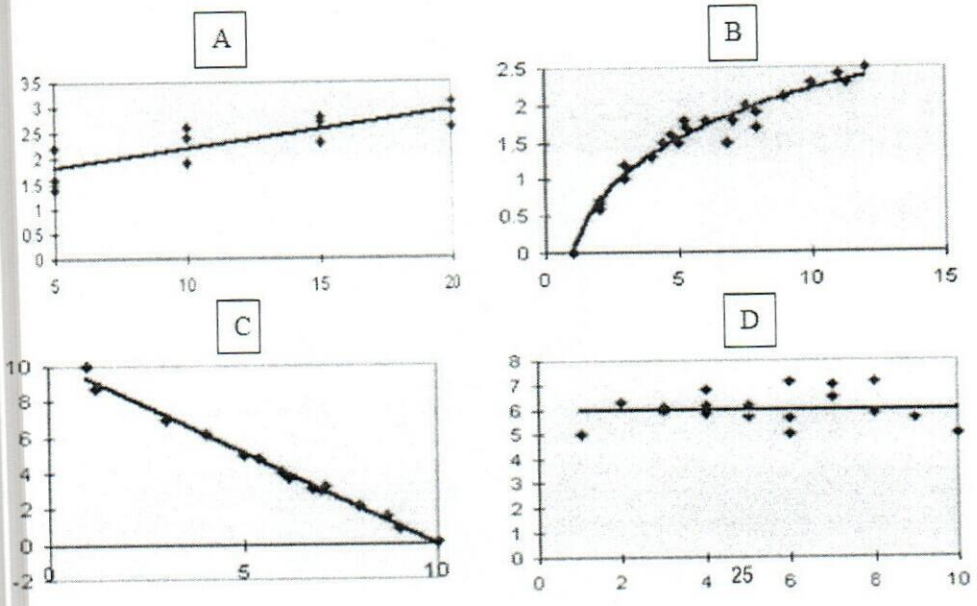
CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences
B.Sc. (Hons) in Medical and Health Product Management
2nd Batch
BSM 1242– Basic Statistics
End-Semester Examination – 1st Year 2nd Semester – Assignment

Date: 17th July 2024
Time: 01.30 pm – 03.00 pm

Question 01 **(100 Marks)**

1.1 Identify the following regression models mentioned in letters A, B, C and D. **(40 marks)**



1.2. Research has been conducted to check whether there is a relationship between the height and the weight of the undergraduate student. The scatter plot between the variables of weight and height is shown in the graph below.

1.2.1. If the slope of the plot is 0.5975, identify the intercept of the plot. **(20 Marks)**

1.2.2. write the regression equation of the plot. **(20 Marks)**

1.2.3. R^2 value for the above plot is 0.8809. Comment on the linear relationship. **(20 Marks)**

Question 02 **(100 marks)**

2.1. Explain the concepts of descriptive statistics and inferential statistics. **(20 marks)**

2.2. How would you define a frequency table? **(10 marks)**

2.3. Suppose we have the following ages of students in a class. **(50 marks)**

14, 15, 14, 16, 15, 14, 17, 16, 15, 14, 16, 17, 15, 14, 16, 18, 15, 14, 15

Create a simple frequency table showing how often each age appears in the dataset.

2.4. How does a histogram differ from a simple bar graph? **(20 marks)**

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences
B.Sc. (Hons) in Medical and Health Product Management
2nd Batch
BSM 1233 – Financial Accounting
End-Semester Examination – 1st Year 2nd Semester – Assignment

Date: 15th July 2024
Time: 1.30 pm – 3.00 pm

Question 01 **(100 Marks)**

Financial statements are a set of documents that show your company's financial status at a specific point in time. They include key data on your company."

1.1 Explain, in your definition, what the financial statements are in any business organization, and explain what the balance sheet is.

1.2 Kamal Traders Company seeks your assistance in completing the following balance sheet for the sole proprietorship. Please support Mr. Kamal in filling out that balance sheet.

Kamal Trading Company.
Statement of Finance Position,
At Year 2024.03.31.

Description	Amount	Amount
Non Current Assets		
Land	150,000.00	
Building	200,000.00	
Machinery	200,000.00	
Vehicle	100,000.00	
Total Nan Current Assets	650,000.00	650,000.00
Current Assets		
Stocks	100,000.00	
Debtors	50,000.00	
Bank	100,000.00	
Cash	100,000.00	
Total Current Assets	.....	.....

Total Assets		
Non Current Liabilities	500,000.00	
Bank Loan	.....	
Current Equity		
Current Liabilities	100,000.00	
Acquired Payable	200,000.00	
Creditors	.....	
Total current Liabilities	.....	.....
Total Liabilities		

1.3 Briefly explain, in your definition, what working capital is in any business. Also, explain four advantages of maintaining positive working capital in a small business.

1.4 Briefly explain with a chart what the working capital cycle is, and provide an example of how this working capital cycle affects a small manufacturing business.

Question 02 **(100 Marks)**

2.1 Explain briefly what cost is and what costing is. Write down four advantages of cost calculation.

2.2 Write down the direct material cost, direct labor cost, indirect cost, and total cost separately for a textile manufacturing company (Product: Denim material frocks).

Direct Material Cost	Direct Labour Cost	Indirect cost	Total Cost

2.3 Show the behavior of fixed cost, variable cost, and total cost in any industry by using graphs.

2.4 The table below shows the production cost of a furniture manufacturing company. Calculate the total cost and marginal cost and fill in the blanks.

Product	Fixed Cost	Variable Cost	Total Cost	Marginal Cost
0	500	..	500	0
1	500	700	1200	700

2	500	800	1300	100
3	500	900	……	……
4	500	1000	……	……
5	500	1100	……	……
6	500	1200	…..	……
7	500	1300	……	……
8	500	1400	……	……
9	500	1500	……	……
10	500	1600	……	……

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CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences
B.Sc. (Hons) in Medical and Health Product Management
2nd Batch
BSM 1213 – Industrial Psychology
End-Semester Examination – 1st Year 2nd Semester

Date: 19th July 2024
Time: 09.00 am – 12.00 – Three Hours

Question 01 **(100 Marks)**

1.1 Name the **three (03)** Major Philosophical issues in Psychology. **(15 Marks)**

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1.2 Mention a scenario in which you have experienced the relationship between **mind and body. (20 Marks)**

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1.3 What is an emotion? **(25 Marks)**

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1.4 Briefly mention the **four (04)** stages of a sleep cycle. **(40 Marks)**

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Question 02 **(100 Marks)**

2.1 Distinguish between the two terms "**growth" and "Development".** **(10 Marks)**

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2.2 List the **four (04)** stages of Piagetian Theory of Cognitive Development. **(20 Marks)**

2.3 Briefly mention **Secondary sexual development** in the male and female body with **two (02)** examples for each sex. **(40 Marks)**

2.4

2.4.1. what is prenatal development? **(15 Marks)**

2.4.2. What is psychosexual development theory? **(15 Marks)**

Question 03 **(100 Marks)**

3.1 Define "**intelligence**". **(10 Marks)**

3.2 What is the equation for calculating an IQ score? **(20 Marks)**

3.3 Rose has a mental age of 12 and a chronological age of 10. What is her IQ would be? **(30 Marks)**

3.4 Name each of **Gardner's multiple intelligences** as they apply to the following examples. **(40 Marks)**
The first one is done for you.

Linguistic	Understanding Shakespeare
	a scientist conducting experiments and analysing data
	An architect designing buildings
	A dancer performing a choreographed routine
	A musician composing or performing music
	A therapist understanding and helping clients
	A philosopher reflecting on their own thoughts and emotions
	A gardener cultivating plants

Question 04 **(100 Marks)**

4.1 List the major subdivisions of our nervous system. **(10 Marks)**

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4.2 What is an '**action potential**' and list the main stages through which it takes place? **(20 Marks)**

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4.3 What **three (03)** important structures make up the limbic system and write their functions respectively **(30 Marks)**

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4.4 Fill in the following table with **four (04)** hormones and their respective function for each. **(40 Marks)**

Hormone	Function

Question 05 **(100 Marks)**

5.1 What are the **three main** areas of Industrial-organization psychology? **(10 Marks)**

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5.2 How do organizational psychology and industrial psychology differ in their focus and applications within workplace settings? **(20 Marks)**

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5.3 **List three (03)** main areas of organizational psychology and write their significance in understanding workplace dynamics and employee behaviour. **(30 Marks)**

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5.4 Briefly mention five (05) factors that cause job satisfaction in an employee with examples. **(40 Marks)**

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Question 06

(100 Marks)

6.1 Write the main **six (06)** functions of the brain. **(10 Marks)**

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6.2 State the difference of "Sensation" and "perception". **(30 Marks)**

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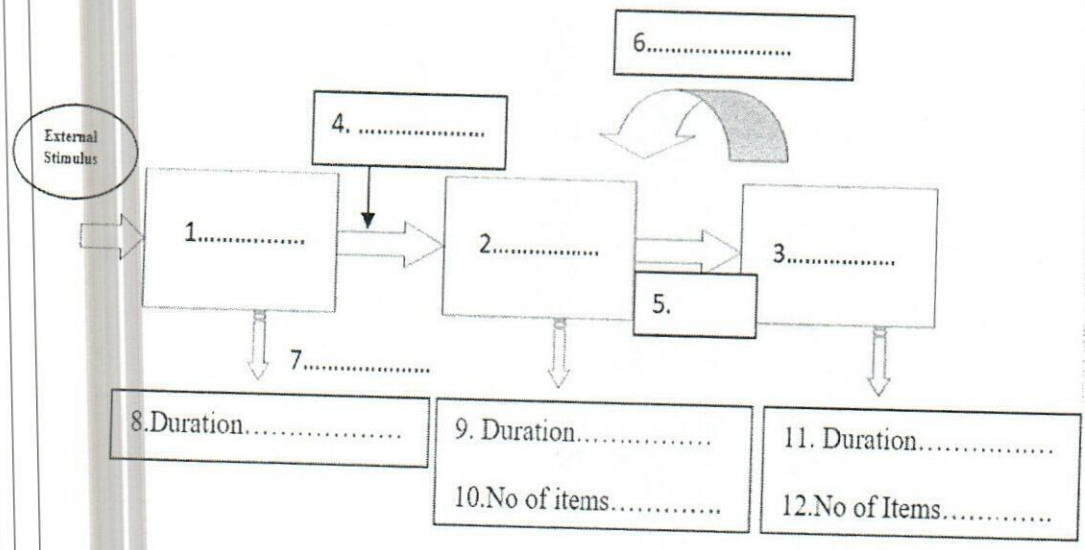
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6.3 Fill in the blanks of the below **"Multi Store Model of Memory"** **(36 Marks)**



6.4 What are the main **functions of attention ?** **(24 Marks)**

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Examination Department
17 JUL 2024
CINEC Campus, Sri Lanka

CINEC CAMPUS
Beyond A Graduate

Faculty of Health Sciences
B.Sc. (Hons) in Medical and Health Product Management
2nd Batch
BSM 1242– Basic Statistics
End-Semester SEQ Examination – 1st Year 2nd Semester

Date: 17th July 2024
Time: 09.00 am – 11.00 – Two Hours

Question 01 **(100 Marks)**

The workspace of company "A" is divided into three departments: Sales, Marketing, and HR. The management of the company observed that employees from different departments seemed to have varying levels of job satisfaction. They wanted to investigate whether the department employee work (Sales, Marketing, and HR) affects their overall job satisfaction scores.

1.1 Write the null hypothesis and alternative hypothesis for the given question. **(20 Marks)**

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1.2 Random samples of 10 employees from each department were selected and summary statistics for the scores of each department are shown in the table below.

Department	Sales	Marketing	HR
Sample size	10	10	10
Mean	75.71	67.11	53.50
St. Dev	17.63	10.95	8.96
Variance	310.90	119.86	80.29

1.2.1. Using the above-given information, fill in the blanks of the ANOVA table. **(60 marks)**
Grand Mean= 64.5

Source	SS	df	MS	F
Between		2		
Within	3384			
Total	5288			

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1.2.2. Write the conclusion of the ANOVA test based on the F value. **(20 marks)**
(At the significance level of 0.05, the critical value of the F is 5.49)
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Question 02

(100 Marks)

2.1 What do the terms "relative frequency" and "cumulative relative frequency" mean? **(10 mark**
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2.2 A die is tossed 50 times and lands 4 times on the number 5. What is the relative frequency of observing the die land on the number 5? **(05 marks)**
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2.3 Complete the following table. **(25 marks)**

Data value	Frequency	Relative frequency	Cumulative relative frequency
1	28		
2	12		
3	35		
4	19		
5	06		

2.4 A researcher is experimenting to determine the effect of different amounts of sunlight on plant growth. Clearly mention the independent and dependent variables. **(20 marks)**

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2.5 Briefly mention the properties of "t" distribution and draw the t-distribution curves for sample sizes of 30, greater than 30, and less than 30. **(40 marks)**

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Question 03 **(100 Marks)**

3.1 What are the **two (02)** main types of statistics? **(25 Marks)**

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3.2 Mention **five (05)** Importance of statistics. **(25 Marks)**

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3.3 Mention the **two (02)** types of data. **(25 marks)**

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3.4 Differentiate the types of data you mentioned in 3.3. **(25 marks)**

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Question 04 **(100 Marks)**

4.1 What is a sample? **(20 Marks)**

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4.2 Mention the main **two (02)** types of sampling techniques and give two examples per each. **(30 Marks)**

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4.3 Write the types of errors in hypothesis testing. **(20 Marks)**

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4.4 Mention **three (03)** assumptions that are made in hypothesis testing. **(30 marks)**

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