CINEC CAMPUS
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<u>PAST PAPERS</u>

Faculty	Department / Section/Division
Not Applicable	Learning Resource Centre

Past Papers

Faculty of Humanities & social Sciences
Department of Logistics & Transportation

Bsc.in International Transportation Management and Logistics Transportation

(Year 1 – Semester I)

Document Control & Approving Authority	Senior Director – Quality Management & Administration

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Faculty of Management and Social Sciences
Department of Logistics & Transport
BSc in International Transportation Management and Logistics
Course CODE: COM550

Year 1 Semester I

REPEAT EXAMINATION

Microeconomics – ECON0316

- This paper consists of EIGHT questions on TWO (02) pages.
- Answer FIVE Questions including Question 01.
- Only non-programmable calculators are allowed.
- You may use appropriate graphs, diagrams, equation/s to prove or justify the answers.
- If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it on the script.
- Write Legibly.

Date: 2022.08.18   Pass mark: 50%   Time: 03 Hours

Question 01 (Compulsory)

Explain that following concepts with relevant diagrams and examples.
      (a) Scarcity   (05 Marks)
      (b) Opportunity Cost   (10Marks)
      (c) Rational Thinking   (05 Marks)

Question 02

(a) Explain the meaning of each basic economic problems and explain that how does market economy different form centrally planned economy when solving those questions   (15 Marks)

(b) What do you mean by increasing opportunity cost? Explain.   (05 Marks)

Question 03
(a) Explain determinates of demand with appropriate examples   (10 Marks)

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(b) Explain difference types of price elasticity of demands with appropriate demand
curves and provide examples   (10Marks)

Question 04
Explain the effects of imposing indirect tax on producer with appropriate example.
(20 Marks)

Question 05

(a) Explain the "stages of production"   (08 Marks)
(b) Explain the concept of "Law of returns to scale' with reasons.   (06 Marks)
(c) Explain the relationship between Marginal Production and Average Production
(06 Marks)

Question 06

(a) Distinguish between Explicit cost, Implicit cost, Accounting profit and Economic
profit with appropriate examples.   (10 Marks)
(b) Distinguish between Economies of scale and diseconomies of scale with reasons
(10Marks)

Question 07

Explain that four types of market structures with appropriate examples (20 Marks)

Question 08
<u>Write short notes on any Four (4) of the following</u>
   (a) Supply Elasticity of Demand
   (b) Giffen goods
   (c) Income Elasticity of Demand.
   (d) Maximum Price Controls.
   (e) Economic Growth

(05X 4= 20 Marks)

--------------------END OF THE QUESTION PAPER-----------------

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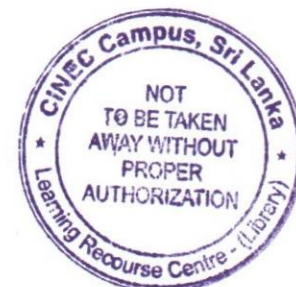
Year 1 Semester I

REPEAT EXAMINATION

Financial and Cost Accounting – FACA0373

- This paper consists of EIGHT questions on EIGHT (08) pages.
- Answer FIVE Questions including Question 01.
- Only non-programmable calculators are allowed.
- You may use appropriate graphs, diagrams, equation/s to prove or justify the answers.
- If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it on the script.
- Write Legibly.

Date: 2022.08.16   Pass mark: 50%   Time: 03 Hours

Scenario

SADAMA (Pvt) Ltd   is a leading private limited company in Sri Lanka. Its Trail balance as at 31.03.2021 is given below.

(Whenever required logical assumptions are allowed)

Revenue		35,000,000
Inventory as at 01st April 2020	4,500,000	
Purchases	15,000,000	
Sales returns	3,500,000	
Purchase Returns		1,500,000
Carriage inwards	2,500,000	
Import taxes	3,500,000	
Dividends Income		3,000,000

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Legal & Consultation charges	1,400,000	
Cost :		
Furniture & Fittings	14,000,000	
Motor vehicles	13,500,000	
Land	14,500,000	
Buildings	15,000,000	
Accumulated Depreciation as at 01.04.2020		
Furniture & Fittings		4,000,000
Motor vehicles		3,725,000
Buildings		4,500,000
Fixed Deposit @ 18% p.a	6,500,000	
Goodwill	6,000,000	
Salaries & wages	8,000,000	
Miscellaneous Expense	450,000	
Repairs & maintenance	350,000	
Advertising & Promotion	500,000	
Courier charges	400,000	
Auditors remuneration	800,000	
Utility expenses	500,000	
Insurance expenses	850,000	
Bank Loan @ 18 % interest rate per annum		6,500,000
Cash & Bank	13,000,000	
Debentures @ 12% interest per annuam		16,500,000

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Stated Capital(Rs. 10 each)		40,575,000
Retained earnings		6,500,000
Trade Receivables	7,850,000	
Trade Payables		4,300,000
Other Payables		6,500,000
Total	132,600,000	132,600,000

Following are the adjustments which should be made in the financial statements for 2020/2021 financial year.

(1) Inventory as at 31st March 2021 amounting to Rs.2,000, 000.

(2) Following expenses are accrued as at 31st March 2021.

Utilities Rs.700, 000

Courier Charges Rs.500, 000

(3) For 2020/2021 depreciation expenses has not been charged. All fixed assests are depreciated based on the straight-line basis.

Buildings – Cost 20% per annum.

Motor vehicles- Cost 18% per annum.

Furniture and Fittings- Cost 15% per annum.

(4) Loans and debentures interest not adjusted for the year 2020/2021.

(5) Fixed Deposits interest not adjusted for the year 2020/2021.

(6) Corporate tax rate imposed by Inland Revenue Department (IRD) of Sri Lanka is 25% Per annum. For 2020/2021 year of assessment income tax has not been adjusted.

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Question 01- COMPULSORY

By using the information presented in above scenario candidates are required to

Prepare **Income statement** for the financial year 2020/2021.   (20 Marks)

<u>Note:</u> Related working and notes should be shown by the candidates clearly.

Question 02

By using the information presented in above candidates are required to prepare the

statement of financial position as at 31st March 2021.   (20 Marks)

<u>Note:</u> Related working and notes should be shown by the candidates clearly.

Question 03

Discuss the financial accounting cycle and importance of financial accounting to a

business. (Provide examples)   (20 Marks)

Question 04

Define the below terms with examples.

(a) Non-Current assets

(b) Useful economic life time

(c) Depreciation

(d) Accrual basis

(20 Marks)

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Question 05

Trade Link Service Company has the following account balances:

Cash, $6,000; Accounts Receivable, $7,000; Prepaid Rent, 1,900; Prepaid Insurance, $1,200, Supplies/ Stock, $950; Equipment, $7,000; Trucks, $10,000; Accounts Payable, $2,700; Common Stock $25,000; Retained Earnings $6,350.

Business transactions during December are presented as follows:

1. Company received cash from clients for services, $7,500
2. Company paid to creditors $600,
3. Paid office rent for the month of December, $950,
4. Company billed client for accounting services on account, $8,200
5. Supplies were purchased on account, $450,
6. Company received cash from clients billed previously, $4,200
7. Company received an invoice for services from Copy Plus for December (the invoice will be paid next month), $550,
8. Company paid monthly salaries, $4,700,
9. Utilities expense were paid, $380,
10. Miscellaneous expense were paid, $250,
11. Paid for monthly insurance, $200
12. Dividends were paid, $750.

Required:

Enter the above transactions to the accounting equations and calculate the final ending balance. (Hint: Start with the opening balance provided). (20 Marks)

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Question 06

(a) Explain the cost classification for a supermarket both in nature and based on behavior. (10 marks)

(b) Briefly describe the cost controlling techniques available for a business.

(10 marks)

Question 07

Use the following information to complete the ratio analysis calculations:

TendyElectricals
Income Statement for the year ended June 30 2021

	2020	2021
	$	$
Sales (all credit)	2 550 000	2 890 000
Less Cost of Sales		
Opening Stock	76 500	93 500
Plus Purchases	1 071 000	1 190 000
	1 147 500	1 283 500
Less Closing Stock	93 500	127 500
Cost of Sales	1 054 000	1 156 000
Gross Profit	**1 496 000**	**1 734 000**
Less Operating Expenses		
Selling and Administration Expenses	892 500	892 500
Operating Expenses before Interest	**892 500**	**892500**
Net Profit before Interest	603 500	841 500
Interest Paid	(21 250)	(18 700)

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Net Profit after Interest	582 250	822 800

Timex Electricals
Statement of Financial Position as at June 30 2020 and 2021

	2020	2021			2020	2021
Assets	$	$		Liabilities	$	$
Current Assets				Current Liabilities		
Cash at Bank	34 000			Bank Overdraft		68 000
Debtors	85 000	136 000		Creditors	90 950	85 000
Stock	93 500	127 500		Total Current	90950	153 000
Prepaid Expenses		8 500		Liabilities		
Total Current Assets	212500	272 000		Non-Current Liabilities		
				Mortgage Loan - The Tango Bank	216 750	119 000
Non-Current Assets				Total Liabilities	307 700	272 000
Equipment	17 000	51 000		Owners Equity		
Buildings	510 000	595 000		Paid-Up capital	867 000	867 000
Vehicles	102 000	102 000				
Plant	850 000	850 000		Retained Profits	516 800	731 000
Total NCA	1 479 000	1 598 000		Total O.E.	1 383 800	1598 000
Total Assets	1 691 500	1 870 000		Totals	1 691 500	1 870 000

Additional Information

- opening debtors 2020 was $127 500
- opening total assets 2020 was $1 275 000

Calculate the following ratios for 2020 and 2021

(a) current ratio

(b) quick asset ratio

(c) net profit margin

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(d) gross profit margin

(e) stock turnover (times per year)

(f) stock turnover (in days)

(g) debtors turnover (times per year)

(h) debtors turnover (in days)

(20 marks)

Question 08

Elaborate the internal and external stakeholders' interest about the financial information of a Logistics business and discuss the what kind of information that they expect.

(Provide examples) (20 Marks)

------------END OF THE QUESTION PAPER------------

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Year 1 Semester I

SEMESTER END EXAMINATION

Financial and Cost Accounting – FACA0373

- This paper consists of EIGHT questions on SEVEN (07) pages.
- Answer FIVE Questions including Question 01.
- Only non-programmable calculators are allowed.
- You may use appropriate graphs, diagrams, equation/s to prove or justify the answers.
- If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it on the script.
- Write legibly

Date: 2022.03.29   Pass mark: 50%   Time: 03 Hours

Scenario

Chaya (Pvt) Ltd   is a leading private limited company in Sri Lanka. Its Trail balance as at 31.03.2021 is given below.

(Whenever required logical assumptions are allowed)

Revenue		50,000,000
Inventory as at 01st April 2020	6,500,000	
Purchases	18,000,000	
Sales returns	3,000,000	
Purchase Returns		2,000,000
Carriage inwards	3,700,000	
Import taxes	3,600,000	
Dividends Income		4,500,000

Legal & Consultation charges	3,600,000	
Cost :		
Furniture & Fittings	25,000,000	
Motor vehicles	18,500,000	
Land	16,500,000	
Buildings	17,000,000	
Accumulated Depreciation as at 01.04.2020		
Furniture & Fittings		6,000,000
Motor vehicles		4,725,000
Buildings		3,500,000
Fixed Deposit @ 8 % p.a	8,500,000	
Goodwill	13,000,000	
Salaries & wages	12,000,000	
Miscellaneous Expense	1,050,000	
Repairs & maintenance	2,350,000	
Advertising & Promotion	2,500,000	
Courier charges	1,400,000	
Auditors remuneration	1,800,000	
Utility expenses	500,000	
Insurance expenses	850,000	
Bank Loan @ 16 % interest rate per annum		6,500,000
Cash & Bank	13,000,000	
Debentures @ 15% interest		18,000,000
Stated Capital(Rs. 10 each)		40,000,000
Retained earnings		45,000,000
Trade Receivables	18,375,000	
Trade Payables		4,000,000
Other Payables		6,500,000
Total	190,725,000	190,725,000

Following are the adjustments which should be made in the financial statements for 2020/2021 financial year.

(1) Inventory as at 31st March 2021 amounting to Rs.1,200, 000.

(2) Following expenses are accrued as at 31st March 2021.

Utilities Rs.300, 000

Courier Charges Rs.200, 000

(3) For 2020/2021 depreciation expenses has not been charged. All fixed assests are depreciated based on the straight-line basis.

Buildings – Cost 10 % per annum.

Motor vehicles- Cost 12% per annum.

Furniture and Fittings- Cost 18% per annum.

(4) Loans and debentures interest not adjusted for the year 2020/2021.

(5) Fixed Deposits interest not adjusted for the year 2020/2021.

(6) Corporate tax rate imposed by Inland Revenue Department (IRD) of Sri Lanka is 25% Per annum. For 2020/2021 year of assessment income tax has not been adjusted.

Question 01 (Compulsory)

By using the information presented in above scenario candidates are required to Prepare **Income statement** for the financial year 2020/2021.   (20 Marks)

Note: Related working and notes should be shown by the candidates clearly.

Question 02

By using the information presented in above candidates are required to prepare the **statement of financial position** as at 31st March 2021.   (20 Marks)

Note: Related working and notes should be shown by the candidates clearly.

Question 03

Define the below terms with examples.

    (a) Cost Center

    (b) Overheads

    (c) Direct Cost

    (d) Fixed Cost

    (e) Variable Cost

    (f) Cost Objects

    (g) Production Overheads

    (h) Administrative Overheads   (20 Marks)

Question 04

Identify five different stakeholders who required financial information and explain the types of the financial information they require.   (20 Marks)

Question 05

Define the below terms with examples.

(a) Intangible assets

(b) Retained profits

(c) Debentures

(d) Dividends

(e) Current Liabilities   (20 Marks)

Question 06

Use the following information to complete the ratio analysis calculations:

Gerry's Jarmies
Income Statement for the year ended June 30 2021

	2020	2021
	$	$
Sales (all credit)	3 000 000	3 400 000
Less Cost of Sales		
Opening Stock	90 000	110 000
Plus Purchases	1 260 000	1 400 000
	1 350 000	1 510 000
Less Closing Stock	110 000	150 000
Cost of Sales	1 240 000	1 360 000
Gross Profit	1 760 000	2 040 000
Less Operating Expenses		
Selling and Administration Expenses	1 050 000	1 050 000
Net Profit before Interest	710 000	990 000
Interest Paid	(25 000)	(22 000)
Net Profit after Interest	685 000	968 000

Gerrys' Jarmies-

Statement of Financial Position as at June 30 2020 and 2021

	2020	2021			2020	2021
Assets	$	$		Liabilities	$	$
Current Assets						
Cash at Bank	40 000			Bank Overdraft		80 000
Debtors	100 000	160 000		Creditors	107 000	100 000
Stock	110 000	150 000		Total Current	107 000	180 000
Prepaid Insurance		10 000		Liabilities		
Total Current Assets	250 000	320 000		Non-Current Liabilities		

				255 000	140 000
			Mortgage Loan - The XYZ Bank	255 000	140 000
Non-Current Assets			Total Liabilities	362 000	320 000
Equipment	20 000	60 000	Owners Equity		
Buildings	600 000	700 000	Paid-Up capital	1 020 000	1 020 000
Vehicles	120 000	120 000			
Plant	1 000 000	1 000 000	Retained Profits	448 000	860 000
Total NCA	1 740 000	1 880 000	Total O.E.	1 628 000	1 880 000
Total Assets	1 990 000	2 200 000	Totals	1 990 000	2 200 000

Additional Information

- opening debtors 2020 was $150 000
- opening total assets 2020 was $1 500 000

Calculate the following ratios for 2020 and 2021

(a) current ratio

(b) quick asset ratio

(c) return on equity

(d) net profit margin before tax

(e) gross profit margin

(f) stock turnover (times per year)

(g) stock turnover (in days)

(h) debtors collection (times per year)

(i) debtors collection (in days)

(20 marks)

Question 07

    (a) Explain the difference between the financial accounting and Cost and Management Accounting.

    (b) What is the importance of cost and management accounting discipline for a business.

    (c) How to classify cost in a business? (provide examples)

    (d) Explain the methods business can implement to control cost.

(5*4 Marks)

Question 08

Analyse the effect of each transaction and prove that the accounting equation (A = L + C) always remains balanced.

    (a) Introduced Rs 4,00,000 as cash and Rs 25,000 by stock.

    (b) Purchased plant for Rs 1,50,000 by paying Rs 7,500 in cash and balance at a later date. iii. Deposited Rs 3,00,000 into the bank.

    (c) Purchased office furniture for Rs 50,000 and made payment by cheque.

    (d) Purchased goods worth Rs 40,000 for cash and for Rs 17,500 on credit.

    (e) Goods amounting to Rs 22,500 was sold for Rs 30,000 on cash basis.

    (f) Goods costing to 1 40,000 was sold for 1 62,500 on credit basis.

    (g) Cheque issued to the supplier of goods worth Rs 17,500.

    (h) Cheque received from customer amounting to Rs 37,500.

    (i) Withdrawn by owner for personal use Rs 12,500

(20 Marks)

------------END OF THE QUESTION PAPER------------

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Year 1 Semester I
SEMESTER END EXAMINATION
Introduction to Transportation – INTP0301

- This paper consists of EIGHT questions on THREE (03) pages.
- Answer FIVE Questions including <u>Question 01.</u>
- Only non-programmable calculators are allowed.
- You may use appropriate graphs, diagrams, equation/s to prove or justify the answers.
- If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it on the script.
- Write legibly

Date: 2022.03.24   Pass mark: 50%   Time: 03 Hours

Question 01 (Compulsory)

(a) What is meant by a transport mode?   (03 Marks)

(b) The components of a transport system can be separated into 3 categories. Briefly

explain each component with appropriate examples.   (06 Marks)

(c) Explain 4(four) significant conditions that affects transport costs.   (08 Marks)

(d) Explain why the demand for transportation is considered a derived demand?

(03 Marks)

Question 02

(a) Define the term "Accessibility". Explain factors that affects the accessibility of a

transport system.   (07 Marks)

(b) Roads can be classified as Arterial roads, Local roads and Collector roads based

on their function. List down properties of Collector roads.   (05 Marks)

(c) Briefly explain the 4(four) categories of international road freight transport with examples. (08 Marks)

Question 03

(a) Differentiate between Conventional rail transport and Mass Rapid Transit (MRT)
(05 Marks)
(b) Identify the rail transportation problems of Sri Lanka. Give your recommendations to mitigate these rail transportation problems. (09 Marks)
(c) The global rail network involves three main types of rail lines. Explain briefly?
(06 Marks)

Question 04

(a) Identify 5 (five) types of ships with examples for cargo carried in each ship type.
(05 Marks)
(b) Explain the 3(three) types of maritime hazards with examples and list down measures to avoid them. (10 Marks)
(c) Identify 5 (five) benefits of Flag of Convenience (FOC) (05 Marks)

Question 05

(a) "Pipelines are limited in the markets they serve and very specified in terms of the products they can transport and a unique mode of transport". Explain.
(12 Marks)
(b) Explain the different types of pipelines with the use of a diagram. (08 Marks)

Question 06

(a) Explain the airside and landside components of an airport with examples.
(06 Marks)
(b) Air cargo accounts for less than one percent of world trade by volume and 40 percent of world trade by value. Despite the much higher cost, air cargo transport becomes more desirable when cargo has certain characteristics. List down these characteristics with examples.

(05 Marks)

(c) "In this pandemic situation air transportation industry has impacted in several ways. But it has played a major role as well". Briefly discuss the role aviation played in the transport industry specially in this pandemic situation and limitations of using it. (09 Marks)

Question 07

(a) Graphically explain the difference between intermodal transportation and multimodal transportation. (10 Marks)
(b) Identify the advantages of a hub in a transport system. (05 Marks)
(c) Explain the impact of transportation on globalization (05 Marks)

Question 08

(a) Briefly describe the direct, indirect and cumulative impacts of transportation on the environment with examples. (06 Marks)
(b) Explain ways to mitigate the environmental impacts of transportation.
(06 Marks)
(c) Identify the systems of Intelligent Transport Systems (ITS) into road transportation of Sri Lanka and discuss what are the benefits of applying advances in information technology to transportation? (08 Marks)

--------------------END OF THE QUESTION PAPER----------------
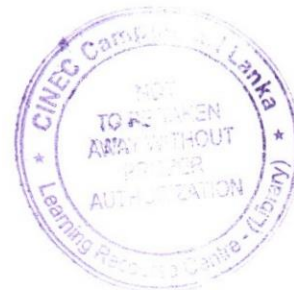
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Year 1 Semester I

SEMESTER END EXAMINATION

English for Business I – ENGL0378

- This paper consists of FIVE questions on THIRTEEN (13) pages.
- Answer ALL Questions.
- Only non-programmable calculators are allowed.
- You may use appropriate graphs, diagrams, equation/s to prove or justify the answers.
- If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it on the script.
- Write legibly

Date: 2022.03.22   Pass mark: 50%   Time: 03 Hours

Section A – Business Vocabulary/ Structures

Question 1

A. Underline the most appropriate word given within brackets. **(10 marks)**

(i). An idea suggested by a word in addition to its main meaning is called (denotation/ connotation).

(ii). The actual object or idea to which a word refers is called (denotation/ connotation)

(iii). Logistics is the practical (organization/ arrangement) that is needed to make a complicated plan successful when a lot of people and equipment are involved.

(iv). A logistics firm was (purchased/ hired) for the deliveries.

(v). The federal (intervention/ interference) effectively terminated the strike.

(vi). The case was (transferred/ referred) to a competent authority.

(vii). Managing effective teams is a matter of (accomplishing/ achieving) synergy between the individual members.

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(viii). Researchers around the world are (collaborating/ cooperating) to develop a new vaccine.

(ix). The electronic library catalogue can be (accessed/ reached) from terminals all over the university.

(x). Businesses often provide their products at a discount in order to acquire a (prospective/ potential) market.

B. Put the words in the following sentences in the correct order. (10 marks)

(i). top-down/ decision-making/ flexible/ style/ company's/ slow/ the/ management/ made/ and

....
....

(ii). very/ risks/ business/ great/ the/ be/ your/ starting/ can/ of/ own

....
....

(iii). she/ company/ 4 per cent/ stake/ acquired/ direct/ the/ a/ in

....
....

(iv). Baltic/ their/ the/ from/ line/ mainly/ shipping/ operates/ ports

....
....

(v). apartments/ submitted/ build/ the/ the/ the/ a/ company/ bid/ to/ contract/ for

....
....

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Section B – English in Pragmatic/ Realistic Settings

Question 2

A. **Identify the errors in the following sentences and rewrite correcting them.**
(10 marks)

Example: The issue is still *on* debate.   The issue is still *under* debate.

(i). Everyone condemns to violence.   ....

(ii). We went there in last week.   ....

(iii). They asked from me.   ....

(iv). The manager scolds others seldom.   ....

(v). He always is late.   ....

(vi). Nuwan settles his dues never.   ....

(vii). You should abide the laws.   ....

(viii). Students mustn't copy, no?   ....

(ix). The statistics is wrong.   ....

(x). We are understanding customers.   ....

B. **Write the functions of the following expressions used in everyday language choosing from the box.** (10 marks)

~~possibility~~, certainty, obligation, permission, past ability, no necessity, criticism, assumption, request, advice, law

Example: Smoking can cause cancer? *[possibility]*

(i). You ought to be very careful when you invest money? ....

(ii). The former manager could widen the product portfolio. ....

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(iii). The company shouldn't have spent so much on refurbishing

....

(iv). The new manager can't be a charted accountant. ....

(v). The HR officer must be an experienced man. ....

(vi). The employees have to cooperate with the manager. ....

(vii). The company must be registered before operations. ....

(viii). Can I use your phone, please? ....

(ix). Will you lend me two million rupees next month? ....

(x). The manager should have treated the employees well. ....

Section C – Comprehension

Question 3

I. **Read the following passage and write whether the given statements are true, false or not given.**   **(05 marks)**

The primary market is where investors buy new shares issued by a company. Shares can only be bought in the primary market, and the purchases are done directly from the issuing company at the initial price stated by the company itself. However, subsequent to the original issuance of shares in the primary market, trading of shares can be done by investors in the secondary market. The price of a share in the secondary market is called the market price. The market price of a share varies with time depending on the demand. For example, the price of a share in Alliance Limited Company increased from Rs.10 to Rs.20 in a year and subsequently after several years to Rs.28. Such increases and decreases in the price of a share occur in the secondary market, where investors are able to trade their shares.

(a) The shares can be both bought and sold in the primary market. ....
(b) The price stated by the issuing company is the initial price. ....
(c) More than 50% of shares can be bought at the initial price. ....

(d) The prices of shares can change in the secondary market. ....

(e) Investors are able own companies buying more shares. ....

II. **Read the following description and underline the two correct statements.**

(05 marks)

It is crucial that at the outset of planning your research, you set the study into a framework that justifies the study and explains its structure or design. This framework is like a foundation for a house. It provides the essential support for the study components and also clarifies the context of the study for the reader, much like a house blueprint. By constructing this framework, you not only justify and explain the study to others but also check your own understanding of the need for the study, how the study is conceived, what knowledge it will add regarding the topic, and how the elements of the study design align with the problem identified for the study.

One of the difficulties for new researchers in developing a framework for a study is that conceptual and theoretical frameworks are defined and described differently by different authors, and the definition of what is considered a study framework may vary by institution. Those definitions can be explored to provide a spectrum of understanding of conceptual and theoretical frameworks. Before exploring the various understandings of conceptual frameworks in depth, it is helpful to compare multiple definitions of the term. Some authors view conceptual and theoretical frameworks as synonymous. A conceptual framework provides the orientation to the study and assists both the researcher and the reader in seeing how the study contributes to the body of knowledge on the topic, how elements of the study align, and how the study design and methodology meet rigorous research standards. A conceptual framework may be defined broadly as theory or literature review, or it may be defined more narrowly as the factors and variables addressed in a study. (Maxwell, 2017; Miles, Huberman, &Saldana, 2014). Essentially, all definitions of conceptual framework provide a context for the study, but the scope of that context varies among authors.

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Ravitch and Riggan (2017) presented the most comprehensive understanding of conceptual framework. Their main point was that a conceptual framework is an argument for the study and that argument has two parts. First, the argument establishes the importance of and intended audience for the study. Second, the argument demonstrates alignment among research questions, data collection and data analysis as well as the use of rigorous procedures to conduct the study. They posited that the conceptual framework both informs and describes the development of research questions, design selection, data collection, data analysis and presentation of findings.

(a) Although research framework helps to understand integral parts of research, it doesn't make the situation of the study clear.
(b) Different authors have expressed different opinions on conceptual and theoretical frameworks.
(c) A narrow definition of conceptual framework is literature review while a broader definition is the factors and variables that are investigated.
(d) The explanation of the importance and the audience of a study and the alignment among all research components is the most comprehensive understanding of conceptual framework.

III. **Read the article below about the successful delegation of work. Underline the best word or phrase to fill each gap from (a), (b), (c) or (d). (10 marks)**

Guidelines For Giving Presentations

Most presentations today depend on the use of some technology, such as a laptop computer linked to a projector. While this technology can help to (e.g.) -b- presentations better, it also has a (1)................... of getting in the way. As a general (2)...................... , it is better to (3)...................... on the content of a presentation as a means of (4)...................... your audience's attention, rather than relying on sophisticated equipment. Bear in mind that when an organization invites (5)...................... for a contract, they may schedule four or five presentations from different companies on the same day. Each of these companies will probably be using the same computer graphics (6)................

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and the same equipment. The chances are the presentations will be similar too. That's why the content and (7).................... of what you say are important. Think about what you want to say and how to say it as clearly as possible. As a first step, you need to (8)............... the main points you want to get across. Audiences are easily bored and tend to remember only the most entertaining, exciting or unusual ideas. Next create your materials, choosing the images for your presentation carefully. Remember you do not want to stop your audience from listening to you, nor do you want to (9).............. them. Finally. Make all the necessary arrangements for the equipment you need. If technology is to be an important (10)................... of your presentation, make sure you know how to use it properly and test it out beforehand.

   e.g.   (a). produce *(b). make*   (c). construct (d). build

1.   (a). behavior (b). habit   (c). practice   (d). routine
2.   (a). method (b). law   (c). rule   (d). course
3.   (a). focus   (b). define   (c). target   (d). direct
4.   (a). gaining (b). taking   (c). collecting (d). acquiring
5.   (a). requests (b). calls   (c). bids   (d). commands
6.   (a). parcels (b). packets (c). bundles (d). packages
7.   (a). design   (b). system (c). structure (d). formation
8.   (a). label   (b). mark   (c). identify (d). catalogue
9.   (a). mislead (b). confuse (c). disorder (d). complicate
10. (a). share   (b). role   (c). function (d). element

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Section D – Presenting Information

Question 4

A. Fill in the blanks in the following description of the given data with the correct verb from the bare infinitive given within brackets. **(10 marks)**

Country	China	United States	Russia	Japan	India
Production (billion KWh)	5398	4099	1057	936.2	871
Consumption (billion KWh)	5322	3866	1038	856.7	698.8

The table *e.g. shows* (show) the top five countries for the production and consumption of electricity in 2020. Both the production and the consumption of electricity (1)................ (give) in kilowatts. China (2).................. (lead) the world in the production of electricity. The production of all five countries (3)................... (exceed) the consumption. The consumption of United States (4)................. (be) more than three times that of Russia. The highest amount of electricity (5).................... (consume) in China. In 2020, Japan (6).................... (produce) 1057 kilowatts while 871 kilowatts of electricity (7)...................... (generate) in India. In 2020, there (8)................. (be) only 19 kilowatts difference between the production and consumption of electricity in Russia. The number of countries (9)................. (produce) more than 4000 kilowatts of electricity was only two. In conclusion, all the five countries need (10)................. (use) the full amount of electricity generated for their domestic requirements.

B. Summarize the information given in the table by selecting and reporting the main

    features and make comparisons where relevant. **(10 marks)**

    The following table gives information on the Annual turnover and the production cost of SimSim Multinational Company in million rupees. Use Introduction-Body-Conclusion format.

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Year	Annual Turnover			Production Cost		
	UPS	Batteries	Earphones	UPS	Batteries	Earphones
2020	700.9	250.3	250.2	600.5	125.2	50.8
2021	701.7	500.6	200.1	650.3	250.3	60.7

Write at least 150 words.

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Section E – Business Writing

Question 5

A. In the conclusion of the following report, ten phrases or sentences are missing. Write the number of the missing phrases or clauses given separately in the blanks where they should fit in.   (10 marks)

The Sri Lankan economy contracted by 3.6 percent in 2020 on year-on-year basis in the backdrop of unprecedented disturbances to socio-economic activities due to adverse impacts of Covid-19. The pandemic itself, ...*e.g.* *(iv)*... to contain the spread of pandemic dragged down the performance of economies all over the world and *(a)*............. Some of the business sentiment indices compiled by the Central Bank recorded their lowest values in 2020, particularly during the second quarter, (b).............. The pandemic situation severely affected economic activities for which physical engagement is vital, such as construction, manufacturing and transportation, in addition to the whole ecosystem built around the tourism industry. (c)............. caused the contraction in industry activities, while services activities were adversely affected (d)............., other personal services and accommodation, food and beverage services activities. Meanwhile, (e).................. largely due to the pandemic related disturbances, though the conducive policy environment supported the continuation of most agriculture activities even during the lockdown periods. Investment expenditure contracted in 2020, mainly due to (f)............. locally as well as globally, while consumption expenditure recorded a slower growth. External demand also weakened during the year (g).............. across geographies with the pandemic. However, the rationalization of non-essential imports curtailing the merchandise imports during the year, partly contributed to buffer (h)............... amidst the contraction in exports. In 2020, the national savings-investment gap as percentage of GDP narrowed on account of the considerable contraction in investment expenditure (i)..................... during the year compared to 2019. In line with the adverse impact that the Covid-19 pandemic had on economic activities, the labor market exposed its long-term fragilities and vulnerabilities, deepening structural issues and inequalities further. Accordingly, resulting in a loss of family incomes, (j).................... in 2020, the highest since 2009.

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Write the number of the following missing phrase or statement in the blanks.

(i). the setback in construction and manufacturing activities

(ii). on the grounds of a loss of growth momentum

(iii). the unemployment rate increased to 5.5 per cent

(iv). together with related restrictions

(v). the uncertainty on the recovery timeline of the pandemic

(vi). Sri Lanka was no exception

(vii). though national savings recorded a decline of 3.6 per cent

(viii). agriculture activities also record a decline

(ix). reflecting the adverse impact of the nationwide lockdown

(x). the deterioration in net external demand

(xi). predominantly due to the contraction in transportation

B. You work as the marketing manager for a leading apartments-construction company. The management entrusted you with the task of writing a marketing proposal for the company. Write incorporating your ideas in a report that should follow the following format and content. **(10 marks)**

Introduction - Paragraph 1

- the importance of a market research
Body - Paragraph 2

- building apartments in eco-friendly environments, yet closer to highways with improved infrastructure
Body - Paragraph 3

- choice of 2BR, 3BR (BR-Bed Rooms), maintain quality and appearance, affordable prices
Body - Paragraph 4

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- importance of attracting Sri Lankans earning abroad

Conclusion – Paragraph 5

- suggest condominiums

  • Condominium: an apartment building or group of houses in which each apartment/ house is owned by the person living in it but the shared areas are owned by everyone together

Write at least 250 words.

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-------------END OF THE QUESTION PAPER-------------

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Year 1 Semester I

SEMESTER END EXAMINATION

Introduction to Navigation – NEVI0307

- This paper consists of EIGHT questions on FIVE (05) pages.
- Answer FIVE Questions including Question 01.
- Only non-programmable calculators are allowed.
- You may use appropriate graphs, diagrams, equation/s to prove or justify the answers.
- If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it on the script.
- Write legibly

Date: 2022.03.15   Pass mark: 50%   Time:03Hours

Question 01: (COMPULSORY)

Display for following on a sketch of the plane of observer's rational horizon based on for following information:

Observers latitude: 45^0 N, Longitude 045 W^0.
Celestial body: GHA 090^0, Dec^0 20 S

1. Observer "O"
2. Zenith "Z"
3. Celestial body (say: sun, moon, a planet, a star) "X"
4. Equator "EQ'"
5. Equinoctial "QQ'"
6. Greenwich median (zero longitude)
7. Greenwich hour circle
8. Prime meridian
9. Latitude (Parallels of latitudes)
10. Declamations (parallels of declinations)
11. Longitude
12. Hour circles
13. GHA (Greenwich hour angle)
14. LHA (local hour angle)
15. Declination (dd')of body "X"

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16. Nadir

17. Vertical circles

18. Plane of the observer's rational horizon

19. Poles North & South

20. Prime vertical (the vert circle along E/W direction to Z)

21. Sextant Altitude

22. zenith distance

23. Circumpolar bodies

24. Amplitude

25. Limit of circumpolar bodies

(20 marks)

Question 02

Instruments and Equipment:

With a brief introduction and working technic to each, name the respective navigation equipment and / or instrument used to:

1) Turn the ship
2) Steer the ship along the planed course direction
3) Find ship`s position by satellite system
4) Find ship`s position by celestial observations
5) Measure the wind speed and direction
6) Check the depth of water
7) Move to forward or back (ahead or astern)
8) Check the distance of an object at sea
9) Find the direction which way to go
10) Find the diction of an object at sea

(20 marks)

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Question 03

a) On a passage from Loss Angelis (USA) to Yokohama (Japan), based on the following information, declare the ETA provided all go well and weather permitting.

> Vessel name: MV. ITML Navbatch
> Departed LA = 4th Jan at 0500 hours
> Speed = 20 Kts.
> Distance to destination (Yok) = 15132 N. Miles
> Route = via Atlantic and Indian ocean
> Times kept with GMT:
> > LA = (-) 8 hours
> > YOK = (+) 9 hours

(15 marks)

b) Indicate the above rout by a simple sketch.

(5 marks)

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Question 04

What would indicate on the following by voice on VHF radio ?

    i. MAY DAY......MAYDAY..........MAYDAY
    ii. PAN PAN...........PANPAN..........PANPAN
    iii. SECURITE.........SECURITE........SECURITE

(20 marks)

Question 05

Passage Planning:

With the aid of a sketch, briefly explain in point form how you would draw up a passage on a chart from A to B?

(20 marks)

Question 06

List 5 common tasks an officer of the watch should perform during:

    a. Navigating at sea
    b. At anchor off a port
    c. While in port / berth

(20 marks)

Question 07

Explain why mariners are required to possess a good knowledge on meteorology and on weather predictions?

(20 marks)

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Question 08

Give a good description on how you understand by the term GMDSS ?

(20 marks)

--------------------END OF THE QUESTION PAPER-----------------

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Year 1 Semester I

SEMESTER END EXAMINATION

Microeconomics – ECON0316

- This paper consists of EIGHT questions on FIVE (05) pages.
- Answer FIVE Questions including Question 01.
- Only non-programmable calculators are allowed.
- You may use appropriate graphs, diagrams, equation/s to prove or justify the answers.
- If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it on the script.
- Write legibly

Date: 2022.03.13   Pass mark: 50%   Time: 03 Hours

Question 01 (Compulsory)

1. Economics is ,
    a. the study of choice under conditions of scarcity
    b. exclusively the study of business firms
    c. fundamentally the same as sociology
    d. applicable only when scarcity is not a problem

2. Due to a scarcity of resources,
    a. every society must undertake central planning
    b. the government must decide how to allocate available resources
    c. some members of each society must live in poverty
    d. every society must choose among competing uses of available resources

3. Microeconomics deals with which of the following?
    a. the total output of an economy
    b. the measurement of a nation's inflation rate
    c. how producers and consumers interact in individual markets
    d. how tax policies influence economic growth

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4. The opportunity cost of a particular activity
   a. is the same for everyone pursuing this activity
   b. may include both monetary costs and forgone income
   c. usually is known with certainty
   d. measures the direct benefits of that activity

5. A point inside the production possibility curve indicates except,
   a. Inefficiencies
   b. Scarcity
   c. Underutilization
   d. Underemployment

6. If the demand for a good is inelastic, an increase in its price will cause the total producer's revenue from the good to:
   a. Increase
   b. Decrease
   c. Remain the same
   d. Become zero

7. An Excess Demand for a product arises,
   a. below equilibrium price
   b. Above equilibrium price
   c. below the equilibrium quantity
   d. above the equilibrium quantity

8. When the government imposed a tax on product, when demand is inelastic & supply is elastic,
   a. Total of tax burden will be borne by the consumers
   b. Most tax burden will be borne by the consumer
   c. Total of tax burden will be borne by the producer
   d. Tax burden will be equally shared by both consumer & producer

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9. Which one of the following is an implicit cost in a firm?
   a. Wages for workers
   b. Payment for raw materials
   c. Electricity payment
   d. Normal profit

10. Which one of the following not a characteristic of an oligopoly market?
    a. Existence of a downward sloping market demand curve.
    b. Marginal revenue is equal to price for all firms
    c. Economic profits exist in the long run
    d. There is a price rigidity

(20 Marks)

Question 02

(a) "Economists said that "people are rational" justify this statement with examples related day-do-day life and business perspective. (06 Marks)

(b) Why is "what to produce" a problem in every economy?
(i) How does the price mechanism solve this problem in a free-enterprise economy?
(ii) In a mixed enterprise economy?
(iii) In a centralized economy? (08 Marks)

(c) What do you mean by increasing opportunity cost? Explain with production possibility curve?. (06 Marks)

Question 03

(a) What is the relationship between "need" or "want" and "demand"? (04 Marks)

(b) Explain that reasons for shifting demand curve for bus transportation.
(04 Marks)

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(c) Explain term "Demand Elasticity", its types and importance of elasticity concepts when taking pricing decisions   (12 Marks)

Question 04

(a) What factors determine supply of vegetables to market, explain with appropriate examples   (06 marks)

(b) Distinguish between extension of supply and contraction of supply. (04 Marks)

(c) Define supply elasticity and determinates of supply elasticity   (10 Marks)

Question 05

(a) Consider the following demand and supply equations for the commodity

Qd = 100- 10P

Qs = -50 + 20P

    a. What is the equilibrium price, quantity?   (03 Marks)

    b. Find price elasticity of demand and supply at equilibrium price (05 Marks)

    c. If government fixed Rs 3/- as maximum price of this commodity, explain economic effects of this price support. Explain with diagram/s.

(12 Marks)

Question 06

(a) Explain the relationship between Marginal Production and Average Production
                                                                        (06 Marks)

(b) Distinguish between Explicit cost, Implicit cost, Accounting profit and Economic profit with appropriate examples.   (08 Marks)

(c) Explain the reasons for shape of the average coat curve in long run. (06 Marks)

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Question 07

(a) Explain that four types of market structures with appropriate examples
(16 Marks)

(b) What do you meant by barriers to enter market? explain with appropriate examples.
(04 Marks)

Question 08
Write short notes on any Four (4) of the following
   (a) Maximum price controls
   (b) Ways of change in equilibrium price and quantity in the marketplace.
   (c) Minimum Price controls
   (d) Stage of production
   (e) Law of returns to scale

(5X4 Marks)

--------------------END OF THE QUESTION PAPER-----------------

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Year 1 Semester I

SEMESTER END EXAMINATION

Mathematics for Business I – MATH0377

- This paper consists of EIGHT questions on SEVEN (07) pages.
- Answer FIVE Questions including Question 01.
- <u>Calculators are NOT allowed.</u>
- You may use appropriate graphs, diagrams, equation/s to prove or justify the answers.
- If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it on the script.
- Write legibly

Date: 2022.03.11   Pass mark: 50%   Time: 03 Hours

Question 01 (Compulsory)

a) Find the value of $27^{\frac{2}{3}}$.   (02 Marks)

b) Find the set of solutions which satisfies the inequality $4(x - 5) \le 5(x - 2)$.

(03 Marks)

c) Find the vertex (coordinates) of the quadratic function $f(x) = 2x^2 - 6x + 7$.

(03 Marks)

d) Differentiate the function $g(x) = 4x^{-3} + 8x - 8$ with respect to x.   (02 Marks)

e) Find $\lim_{x \to 3} x^3 - 4x + 9$.   (02 Marks)

f) Evaluate $\int t^2 - \frac{1}{t} + 9 \, dt$ (02 Marks)

Page 1 of 7

g) Write the domain of the function $g(x) = \frac{5+2x^2}{2-x-x^2}$. (02 Marks)

h) Calculate the discriminant of the function $f(x) = 2x^2 - 3x + 8$ and comment on the roots of $f(x)$. (02 Marks)

i) Find the values of x and y, if $\begin{pmatrix} 2x-1 & 4 \\ -2 & 9 \end{pmatrix} = \begin{pmatrix} 0 & 2 \\ 5 & 3y-6 \end{pmatrix}$. (02 Marks)

Question 02

(a) Considering the function $y = 3x^{\frac{1}{2}} - 4x^{-\frac{1}{2}}, x > 0$:

(i) Find $\frac{dy}{dx}$. (02 Marks)

(ii) Find $\int y\, dx$. (03 Marks)

(iii) Hence show that $\int_1^3 y\, dx = A + B\sqrt{3}$, where A and B are integers to be found.

(04 Marks)

(b) Write the roots of the given polynomial in the figure. (03 Marks)
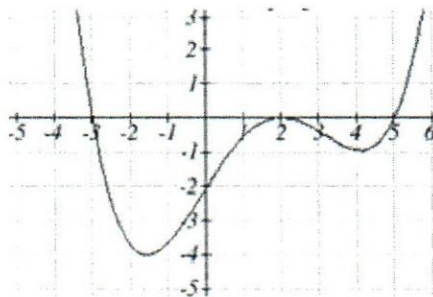
(c) Solve $|x - 2| \geq 3$ (03 Marks)

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(d) Find the values of b and c so $f(x) = -8x^2 + bx + c$ has vertex $(2, -7)$. (05 Marks)

Question 03

(a) Given that the equation $kx^2 + 12x + k = 0$, where k is a positive integer, has equal roots, find the value of k. (03 Marks)

(b) Working as an insurance salesperson, Nimali earns a base salary and a commission on each new policy, so Nimali's weekly income, I, depends on the number of new policies, n, he sells during the week. Last week she sold 3 new policies, and earned $760 for the week. The week before, she sold 5 new policies, and earned $920.

(i) Find an equation for $I(n)$ and interpret the meaning of the components of the equation. (04 Marks)

(ii) Using the answer in (i), calculate the weekly income when she sells 8 policies.

(03 Marks)

(c) Expand the given logarithms.

(i) $\log_a x^2 y z^5$ (02 Marks)

(ii) $\log_b \frac{x\sqrt{y}}{z}$ (02 Marks)

(d) Solve the differential equation $\frac{dr}{dt} = \frac{r^2}{t}$. (03 Marks)

(e) Solve $\log_5(2x + 4) = 2$. (03 Marks)

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Question 04

(a) Find the set of values of x for which:

    (i) $3(2x + 1) > 5 - 2x$ (02 Marks)

    (ii) $2x^2 - 7x + 3 > 0$ (04 Marks)

(b) The curve C has equation $y = x^3 + 2x^2 - 4x + 2$

    (i) Find $\frac{dy}{dx}$. (02 Marks)

    (ii) Using your answer to part (i), find the coordinates of the turning points of C.

(04 Marks)

    (iii) Find $\frac{d^2y}{dx^2}$. (02 Marks)

    (iv) Hence, or otherwise, determine the nature of the turning points of C. (03 Marks)

(c) Solve, giving your answer to 3 decimal places.

    (i) $4^{2x} = 100$ (03 Marks)

Question 05

(a) Solve $|2x - 6| = 8$ (03 Marks)

(b) Simplify $\frac{16x^{\frac{2}{3}}}{2x}$. (02 Marks)

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(c) The diagram shows the finite region, R, bounded by the curve with equation $y = x(x + 4)$, the line with equation $y = 12$ and the y-axis.
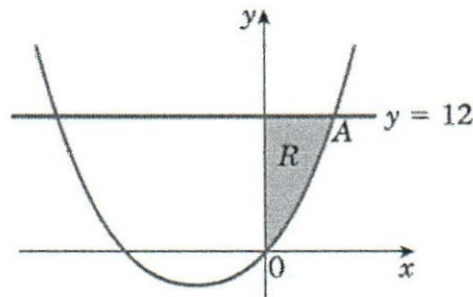
(i) Find the coordinate of the point A where the line meets the curve. (03 Marks)

(ii) Find the area of R. (05 Marks)

(d) If $A = \begin{pmatrix} a & b \\ c & d \end{pmatrix}$, show that AA^T is a symmetric matrix. (04 Marks)

(e) The function $g(x)$ is defined by $g(x) = cx + d$ where c and d are constants to be found. Given $g(3) = 10$ and $g(8) = 12$, find the values of c and d. (03 Marks)

Question 06

(a) Write as a single logarithm, then simplify the answer.

(i) $2\log_{10} 20 - (\log_{10} 5 + \log_{10} 8)$ (02 Marks)

(ii) $\log_8 25 + \log_8 10 - 3\log_8 5$ (02 Marks)

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(b) (i) Using the substitution $u = 2^x$, show that the equation $4^x - 2^{x+1} - 15 = 0$ can be written in the form $u^2 - 2u - 15 = 0$. (03 Marks)

(ii) Using the answer is part (i), solve the equation $4^x - 2^{x+1} - 15 = 0$, giving your answer to 2 decimal places. (04 Marks)

(c) Determine the nature of the roots of $f(x) = -4x^2 + 3x - 2$ without finding the roots. (04 Marks)

(d) If $A = \begin{pmatrix} 1 & 2 \\ 5 & 0 \end{pmatrix}$ and $B = \begin{pmatrix} -1 & 2 \\ -3 & 1 \end{pmatrix}$. Find $|A|, |B|, |A \cdot B|$ and $|A| \cdot |B|$. Comment on the results you obtained. (05 Marks)

Question 07

(a) Use integration by parts to find the value of $\int_1^3 x^2 \ln x \, dx$. (04 Marks)

(b) Consider the function $f(x) = 2x^2 - 11x + 12$.

(i) Determine the nature of the roots by calculating the discriminant. (03 Marks)

(ii) Find the roots of $f(x)$. (02 Marks)

(iii) Sketch the graph of $f(x)$, by using the result of b(ii), and calculating y-intercept and the vertex. (07 Marks)

(c) Find the limit $\lim_{x \to 2} \frac{x^2 - 4}{x^2 + x - 6}$. (02 Marks)

(d) Find the integrating factor of the First Order Linear Differential Equation

$$y' + \frac{2}{t}y = t - 1 + \frac{1}{t}$$ (02 Marks)

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Question 08

(a) Use Cramer's rule to solve the given system.

$$3x + y \quad = -1$$

$$2x - y + z = -1$$

$$5x + 5y - 7z = -16$$

(08 Marks)

(b) Integrate $f(x) = 5e^x - 4\sin x + 2x^3$ with respect to x. (03 Marks)

(c) List out the elements in the following sets. (04 Marks)

  (i) $A = \{6n| -2 \le n \le 4 \ and \ n \in \mathbb{Z}\}$

  (ii) $B = \{t \ is \ an \ even \ integer \ in \ between \ 9 \ and \ 16\}$

(d) Find $\frac{dA}{dx}$ where $A = x(10 - x)$. (03 Marks)

(e) Simplify the expression, $\frac{x+1}{2} \times \frac{3}{x^2-1}$. (02 Marks)

--------------------END OF THE QUESTION PAPER-----------------

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Year 1 Semester I

SEMESTER END EXAMINATION

IT for Business – ITBU0376

- This paper consists of EIGHT questions on TEN (10) pages.
- Answer FIVE Questions including Question 01.
- Only non-programmable calculators are allowed.
- You may use appropriate graphs, diagrams, equation/s to prove or justify the answers.
- If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it on the script.
- Write legibly

Date: 2022.03.09   Pass mark: 50%   Time: 03 Hours

Question 01 (Compulsory)

a) A microwave oven can be considered as a general model of computer. Apply your knowledge on computers and answer the following questions.

(8 Marks)

I. Mention two inputs of the microwave oven

II. Mention two outputs of the microwave oven

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III.   Mention two processes of the microwave oven

| |
| |
| |

IV.   Mention two information to be stored in the microwave oven

| |
| |
| |

b)   Explain 03 types of computer networks with examples.

(06 Marks)

| |
| |

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c)   What is the purpose of having a good password for your accounts?   (02 Marks)

d)   Convert 5 GB (Giga Bytes) to each of the following. Show your calculations.

(04 Marks)

   I.   TB (Tera Bytes)

   II. Bits

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Question 02

Write HTML code segments for following situation.

a) Title of the page should be 'My Shop'   (02 Marks)
b) The first heading "WELCOME TO MY SHOP" should be heading 1

(02 Marks)

c) Insert a list with following details   (04 Marks)
    1. T - Shirts
    2. Polo T-Shirts
    3. Slim Fit
    4. Trousers
        a. Shorts
        b. Pants
        c. Denims

d) Page should have link to www.slpromotion.lk website.   (03 Marks)
e) Insert a picture "cloth.jpg" located in the folder where 'coffee shop.html' file is
   saved.   (03 Marks)

f) Insert following table.

(06 Marks)

T – Shirt Type	Price	Promo Code
Polo T- Shirt	Rs: 1890/=	Promocloth
Slim Fit	Rs: 1750/=	

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Question 03

a)   Read the following case and answer the questions given below.

Case: US travel company's bitcoin ransom

In August 2020, CWT, one of the biggest business travel management firms in the US, was reported to have paid $4.5 million Bitcoin as ransom to a hacker group. The threat actors accessed the company's systems and stole two terabytes of sensitive corporate information including financial reports, security documents, and employees' email addresses and salary information. The attack rendered 30,000 computers offline.

The attackers used a strain of ransomware virus called Ragnar Locker to infect the systems, which was injected via a phishing email. The attack was investigated and the negotiations with the hacker group were carried out with the help of a third-party cybersecurity firm. The hackers initially demanded a payment of $10 million to restore CWT's files and delete all the stolen data. The CWT representative in the negotiations, who said they were acting on behalf of the firm's chief financial officer, said the company had been badly hit by the COVID-19 pandemic and agreed to pay $4.5 million in the digital currency bitcoin.

I.   What is the cybersecurity threat mentioned in this case?   (02 Marks)

II. How did CWT get suffer from the threat?   (04 Marks)

III. Briefly explain two (2) technological safeguard mechanisms CWT can implement
     to avoid cyber attacks in the future.   (04 Marks)

b)   Write short notes on following   (10 Marks)

   • E - learning
   • E – mail

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Question 04

a) Refer to the spreadsheet given below and write down formulas/functions to calculate followings.

	A	B	C	D	E
1					
2		Subject	Marks	Grade	
3		Maths	75		
4		English	80		
5		Sceince	65		
6		IT	90		
7		History	40		
8		Art	55		
9		Health	44		
10			Total Marks		
11			Avearge Marks		
12			Maximum Marks		
13			Count of "F" graded Students		
14					

    I. Obtain the **Grade** column based on the Marks. If the mark is 75 or above mark it as "A" if the mark is 65 or above mark it as "B" if the mark is 55 or above mark it as "C" otherwise "F". (03 Marks)

    II. Calculate the Total Mark in cell D10. (02 Marks)

    III. Calculate the Average Mark in cell D11. (02 Marks)

    IV. Calculate the Maximum Mark in cell D12. (02 Marks)

    V. Calculate the Count of the "F" graded Students. (03 Marks)

b) Write down the features use to perform following tasks on excel sheets
    I. Organize subjects' names in alphabetic order. (02 Marks)
    II. Automate tasks (02 Marks)

c) Briefly explain the following error messages in excel.

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I.	#######	(02 Marks)
II.	#DIV/0!	(02 Marks)

Question 05

a) Discuss three (03) difficulties of traditional file environment when handling large volume of data in an organization. (06 Marks)

b) Identify which data types would be suitable for storing following information in MS Access databases.
   (i) Name of the student
   (ii) Salary amount
   (iii) Contact Number
   (iv) NIC Number
   (v) An email address
   (vi) Data and Time of the meeting
   (vii) A detailed student description
   (viii) Whether the payment is paid or not (04 Marks)

c) Briefly describe the steps that should be followed when designing a database. (06Marks)

d) Explain the terms "Primary Key" & "Foreign Key" in database with an example. (04 Marks)

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Question 06

a) What is WWW? (02 Marks)

b) What is ISP? Name four (4) ISPs available in Sri Lanka. (04 Marks)

c) Read the below mini case and answer the questions given.

Federal Express, FedEx
Federal Express, FedEx is a global express transportation and logistics company that offers customers a single source for global shipping, logistics, and supply chain solutions. In the late 1970s, FedEx saw a great benefit in using IT to simplify its business processes. Smith had very early on understood that speed, reliability and customer service was an essential factor for success in the global transportation industry. They have developed internet technologies that work simply and efficiently to enable customers and sellers to use FedEx as a go between. This has enabled many companies to integrate FedEx technology into their own web sites for customers to use.

The system was set up so that suppliers could maintain a database of catalogs that could be accessed by any FedEx employee. The company website hosts more than 6.3 million unique visitors per month and handles on an average over 2.4 million package tracking requests daily.

I. According to the above case, what is the type of network FedEx uses to connect with its customers and suppliers? (02 Marks)
Hint: Intranet, extranet, internet

II. According to your knowledge briefly explain two (2) characteristics of the type of the network that you have mentioned above. (04 Marks)

III. According to the above case, what are the advantages of that network solution to FedEx? (04 Marks)

IV. List down two strategies for increasing the security of the network of FedEx.
(04 Marks)

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Question 07

a) List four (4) items you can find out on a Desktop environment.   (02 Marks)

b) Propose the most suitable application software for the following situations.
                                                                        (04 Marks)

  I. You are required to submit a report on Evolution of Computer.
  II. A library needs to keep records of all information about books and its members.
  III. A marketing manager is required to deliver a speech to the board of directors on the research he carried out.
  IV. A Finance Manager wants to compare last 5 years profit/loss

c) Write two (02) types of operating system interfaces with an example for each.
                                                                        (04 Marks)

d) Read the following list and answer the questions.

   A person's phone number (071)123-7798, each individual homework and assignment mark of a student in one class, typing the words "COVIID 19" in your computer search engine, 100, 212, 0, 32, the freezing and boiling points of water in Fahrenheit and Celsius, the student's average grade for each class.   (06 Marks)

e) Discuss two (2) duties of the operating system.   (04 Marks)

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Question 08

Write short notes on following   (4*5 Marks)

a)   Computer Networks
b)   Major three components of a computer
c)   Database
d)   HTTP

--------------------END OF THE QUESTION PAPER-----------------