CINEC
CAMPUS
Beyond A Graduate

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

PAST PAPERS

Faculty	Department / Section/Division
Not Applicable	Learning Resource Centre

Past Papers

Faculty of Management, Humanities & social Sciences
Department of Logistics & Transport

BMgt. (Hons) in Supply Chain Management
(Year 1 – Semester I)
2019 - 2022

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I

REPEAT EXAMINATION

English for Business I – BSCM1202

- This paper consists of FIVE (05) questions on EIGHT (08) pages.
- Answer ALL questions including question 01.
- 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: 2022.06.10   Pass mark: 40%   Time: 02 Hours

Section A – Business Vocabulary/ Structures

Question 1

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

(i). Scientists are looking for (soil, evidence, information) of life on other planets.

(ii). According to official (data, witness, statistics) the disease killed over 500 people.

(iii). We chose the hotel on their (recommendation, testimonial, verdict)

(iv). The man lost his (employee, employer, employment) when the company closed.

(v). Tax and insurance are (added, deducted, doubled) from your wages.

B. Complete sentences putting words in the correct order. (10 marks)

(i). Ruwan ....

....

CINEC CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(entrepreneur/ leading/ a/ in/ Sri Lanka/ is)

(ii). The government...

....

(employment/ aiming/ at/ full/ is)

(iii). The company ....

....

(this year/ not/ decided/ dividends/ has/ its/ for)

(iv). A stable company ....

....

(likely/ investors/ attract/ potential/ is/ to/ more)

(v). Some managers ....

....

(subordinates/ delegate/their/ to/ work/ reluctant/ are/ their/

Section B – English in Pragmatic/ Realistic Settings

Question 2

A. Writers sometimes use non-standard contractions in order to reflect informal speech. Match each of the contractions below with a full form. (10 marks)

(i). dunno   -   ....

(ii). nother   -   ....

(iii). ain't   -   ....

(iv). doncha -   ....

(v). gonna   -   ....

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(vi). gotcha   -   ....

(vii). Innit   -   ....

(viii). Wanna   -   ....

(ix). ya   -   ....

(x). yer   -   ....

[I've got you/ isn't it/ want to/you/ your/ don't know/ another/ aren't/ don't you/ am-is-are going to]

B. The following spelling patterns and expressions are common in texts and speech. If they refer to British English, write BrE and American English AmE in the given space. (10 marks)

(i). The book is lavishly illustrated in full *color*. [...................]

(ii). Radius is a straight line between the *centre* and outer edge of a circle. [.........]

(iii). Managers are willing to hold a *dialogue* with union leaders. [...................]

(iv). *Have you got* a computer? [.................]

(v). *Do you have* a computer? [.................]

(vi). Your English *has gotten* better? [..........]

(vii). Hello, *is this* David? [.............]

(viii). Hello, *is that* David? [.............]

(ix). *Shall I open* the window? [..............]

(x). He looked at me *really strangely*. [...................]

Section C – Comprehension

Question 3

A. Read the following definitions and underline the wrong statement. (20 marks)

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

I. Economies of scale is an important issue for companies both large and small. The term has been around for hundreds of years and has fueled the development and profit potential of entire economies especially with the concept of mass production. Economists say that economies of scale were a significant driving force behind the industrial revolution. Economies of scale cuts production unit costs and creates stronger consumer demand by offering products with lower costs to customers.

(a). Small and large companies can benefit from economies of scale.

(b)Economies of scale is relatively a modern term.

(c). Economies of scale can reduce unit production.

(d). Economies of scale had a strong influence in industrial revolution.

II. A rationale for research is a set of reasons offered by a researcher for conducting more research into a particular subject. Explaining the purpose of a research study and providing a compelling rationale is an important part of any research project enabling the work to be set in the context of both existing theory, evidence and its practical applications. This necessitates formulating a clear research question, deriving specific research objectives and thereby justify contextualizing the study.

(a). The rationale explains the reasons for carrying out a study.

(b). The rationale answers the need for choosing one specific study than another.

(c). The rationale also takes into consideration the situation in which research is carried out.

(d). The rationale doesn't help to form a clear research problem

Section D – Presenting Information

Question 4

A. Present the following information in a table. (10 marks)

Prepare a table of four columns and six rows. Insert the following titles in the first row: name, age, sex and favourite game.

![CINEC CAMPUS logo]

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Now include the following data in the above table and calculate the relevant percentages as well in the third column.

The three boys interviewed were Ashen, Rehan and Shane. Shen and Ahen were of the same age 12 years and Rehan was two years older than them. Rehan and Shane liked soccer and Ashen's favourite game was rugger. Nuwani who is of 11 years preferred chess while 14 years aged Anne liked netball.

....
....
....
....
....
....
....
....
....

B. Present the following information in a pie chart. (10 marks)

A student received 360 replies for the questionnaire he sent regarding the most popular mobile phone brand. A quarter of them preferred Nokia. 180 respondents liked Samsung. An equal number liked Apple and Huawei Brands.

You must also indicate the keys used to display the data.

....
....
....
....
....
....
....
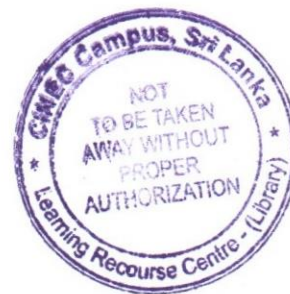
CINEC CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

<u>Section E – Business Writing</u>

Question 5

A. Imagine you are the manager of a company. Write a memo to all the employees about a Pirith Ceremony you have organized. Include:

- time and date

- venue

- what should employees bring (10 marks)

....
....
....
....
....
....
....
....

B. Write a short report to the Business Communication lecturer explaining the reasons why students are weak in English and make at least five recommendations to improve the situation. (10 marks)

Use the following format: Title – Introduction – Body – Conclusions – Recommendations

....
....
....
....
....
....
....
....
....
....
....

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....

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

CINEC CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester II

REPEAT EXAMINATION

Financial and Cost Accounting – BSCM 1210

- This paper consists of SEVEN questions on EIGHT (08) pages.
- Answer FOUR 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: 40%   Time: 02 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

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

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

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

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.

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 01- COMPULSORY

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

Prepare **Income statement** for the financial year 2020/2021.   (25 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.   (25 Marks)

Note: 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)   (25 Marks)

Question 04

Define the below terms with examples.

(a) Non-Current assets

(b) Useful economic life time

(c) Depreciation

(d) Accrual basis

(e) Going Concern Assumption   (25 Marks)

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

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).   (25 Marks)

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 06

(a) List the importance of cost and management accounting information for a

business. (5 marks)

(b) Explain the cost classification for a supermarket both in nature and based on

behavior. (10 marks)

(c) 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**

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Net Profit before Interest	603 500	841 500
Interest Paid	(21 250)	(18 700)
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

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(b) quick asset ratio

(c) net profit margin

(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)

(25 marks)

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

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
REPEAT EXAMINATION
ICT Applications – BSCM1205

- This paper consists of SEVEN (07) questions on FIVE (05) pages.
- Answer <u>FOUR (04)</u> 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: 2021.01.16   Pass mark: 40%   Time: 02 Hours

Question 01: (Compulsory)

(a)	What is Information Technology? Explain.	(04 Marks)
(b)	What is CPU? Explain.	(04 Marks)
(c)	Explain the terms "Shareware" and "Freeware"	(06 Marks)
(d)	What is file compression? Briefly explain the importance of file compression.	(05 Marks)
(d)	Write two (02) types of operating system interfaces with an example for each.	(06 Marks)

Question 02

(a)	Explain WWW with use of it.	(03 Marks)
(b)	What is an ISP? Name 4 ISPs available in Sri Lanka.	(05 Marks)
(c)	Differentiate the two terms Intranet and Extranet	(04 Marks)
(d)	Briefly explain 3 main computer network types	(06 Marks)
(e)	Explain how electronic mail works by use of a diagram. Define which protocols associate with it when sending from one place to another place. Use a diagram on explaining.	(07 Marks)

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 03

(a)   What is a HTML page?   (03 Marks)
(b)   Write HTML code segments for following situation.
   (i)   To insert the title "ABC Books" to web page   (02 Marks)
   (ii)   To insert the heading "Book Details"   (02 Marks)
   (iii)   To insert a list with following details   (04 Marks)
            1.   Children Books
            2.   Novels
            3.   Educational Books
   (iv)   To link to another web page "https://www.reading.com/"   (03 Marks)
   (v)   To insert the following paragraph. Font should be **Bolded**.   (03 Marks)
           "ABC have an extensive collection of books to purchase online and in
           store"
   (vi)   To insert following table.

Exercise Book	Price
20 pages single rule	Rs. 60
40 pages single rule	Rs. 120

(08 Marks)

Question 04

Mahela Jayawardana

Denagamage Praboth Mahela de Silva Jayawardana (born 27 May 1977), known as
Mahela Jayawardana, is a former Sri Lankan cricketer and captain of the Sri Lankan
cricket team. He is regarded as one of the modern greats of batsmanship, specially due to
his mastery of playing spin bowling. Jayawardana's highest test score, 374 against South
Africa is the highest test score by a right-handed batsman in the history of test cricket. It
is also regarded as the highest absolutely chance-less innings by a batsman in test cricket
history.

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Jayawardana made his Test cricket debut in 1997 and his One Day International (ODI) debut the following season. In 2006 he made the highest ever score by a Sri Lankan in Test cricket, scoring 374 in the second Test of Sri Lanka's home series against South Africa. He has a test cricket average of just under 50 and a One Day average in the 30s. He is the first player in the history of Sri Lankan cricket to score over 10,000 Test runs. Despite his relatively low ODI average, Jayawardana is considered to be one of the best batsmen produced by Sri Lanka.

(a)   Name the way that can be used to achieve following changes to the above text.
    (i)   Fully justify the text.   (03 Marks)
    (ii)   Capitalized the heading.   (03 Marks)
    (iii)   Find the word **debut** and replace it with the word **entrance**.   (03 Marks)
    (iv)   Check for the grammar and spelling errors.   (03 Marks)
    (v)   Short cut for **undo** the change.   (03 Marks)

(b)   Explain the purpose of followings.
    (i)   Charts.   (02 Marks)
    (ii)   Comments.   (02 Marks)
    (iii)   References.   (02 Marks)
    (iv)   Water Mark.   (02 Marks)
    (v)   Mail merge.   (02 Marks)

Question 05

(a)   Define the terms "Data" and "Information" with examples.   (06 Marks)
(b)   Explain the term s "Primary Key" & "Foreign Key" in database with examples.
                                                                                        (06 Marks)
(c)   List five (05) difficulties of traditional file environment when handling large volume of data in an organization.   (05 Marks)
(d)   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   (08 Marks)

Question 06

	A	B	C
1	Student	Marks	Status
2	L.M.Perera	78	Pass
3	T.S.Gunathilake	84	
4	R.Rathnasiri	43	
5	K.Dharmadasa	70	
6	K.D.Gunarathne	32	
7	Total		
8	Average		
9	Maximum		
10	Count		
11			
12			

(a)   Refer to the spreadsheet given below and write down formulas to calculate followings.
    (i)   Obtain the **Status** column based on the Marks. If the mark is 50 or above mark it as "Pass" otherwise "Fail".   (02 Marks)
    (ii)   Calculate the Total Mark in cell B7.   (02 Marks)
    (iii)   Calculate the Average Mark in cell B8.   (02 Marks)
    (iv)   Calculate the Maximum Marks in cell B9.   (02 Marks)
    (v)   Calculate the Count of the Students in cell B10.   (02 Marks)

(b)   Write down the features use to perform following tasks on excel sheets
    (i)   To compare marks easily.   (03 Marks)
    (ii)   Organize students' names in alphabetic order.   (03 Marks)

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(iii)	Automate tasks	(03 Marks)

(c)   Briefly explain the following error messages in excel.
    (i)   #######   (03 Marks)
    (ii)   #DIV/0!   (03 Marks)

Question 07

Write short notes on following   (5*5 Marks)

(a)   RAM
(b)   Computer Viruses
(c)   Internet
(d)   Primary Key
(e)   Search Engine

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

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
REPEAT EXAMINATION
Business Mathematics I – BSCM1203

- This paper consists of SEVEN (07) questions on FIVE (05) pages.
- Answer <u>FOUR (04)</u> 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: 2021.01.15   Pass mark: 40%   Time: 02 Hours

Question 01: <u>Compulsory</u>

(a) Evaluate $(3\frac{1}{16})^{\frac{3}{2}}$

(b) Factorise $2x^2 + x - 1$

(c) Differentiate $y = (3x + 7)(8x - 4)$

(d) Rationalize the denominator of $\frac{4}{2+\sqrt{2}}$

(e) Find the derivative of $3x^2 - e^{2x} + \log|2x|$

(f) Solve . $\log_2 [2x / (3x - 3)] = 2$

(g) Simplify. $(2x^2+3x + 7)(8x - 4)$

(h) Determine the following definite integral (a is constant).

CINEC
CAMPUS
Beyond A Graduate

$$\int_{-2}^{6} ax \, dx$$

(5 Marks * 8)

Question 02

(a) (i) Show that $log_a b = {}^1/log_b a$.

(ii) Further above result to show that $log_y x = \dfrac{log_a x}{log_a y}$

(06 Marks)

(b) The formulae for the amount of energy E (in joules) released

by an earthquake is $E = 3.21 * 10^{19} * 10^{1.44M}$, Where M is the magnitude

of the earth quake on the Richter scale.

(i) The Newcastle earthquake in 1989 had a magnitude of 4 on the Richter

Scale. How many Joules were released?

(ii) In an earth quake in San Francisco in the 1900's the amount of energy

released was doubled that of the Newcastle earth quake. Find the Richter

Scale.

(06 Marks)

(c) Solve the following equations for x.

i. $Log_2 [4x / (x - 3)] = 2$

ii. $7 - 8 \ln (3x) = -57$

(04 Marks)

(d) Write the following expressions as a single term.

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

$Log_4(16) - Log_4(4) + Log_4(64) - Log_4(4)$

(04 Marks)

Question 03

(a) Determine the following finite and infinite limit values.
(Where a,b and c are constants)

(i) $\lim_{x \to 2}(x^2 - x + 4)$

(iii) $\lim_{x \to -3} \frac{(x^5 + 3^5)}{(x+3)}$

(ii) $\lim_{\theta \to 0} \frac{[(sina\theta * sinb\theta)]}{2ac\theta^2}$

(iv) $\lim_{x \to -\infty} \left(\frac{-x^3 + x + 5}{x^3 + x + 1}\right)$

(12 Marks)

(b) Find the First Derivative at $x = (\pi/4)$ for the following functions.

(i) $f(x) = 3x^2 + 2x + 8$

(ii) $g(x) = sinx . cos\ 3x$

(08 Marks)

Question 04

(a) Find the following indefinite integrals (where a,b and c are constants)

(i) $\int (x^{(1/4)} + cos\ cx + e^{bx})\ dx$

(iii) $\int bc\ tan\ ax\ dx$

(ii) $\int 2x^2 e^{2x}\ dx$

(iv) $\int 3\ bc\ sin\ 2x\ dx$

(12 Marks)

(b) Find the following definite integrals. (Where a,b and c are constants)

(i) $\int_0^{\frac{\pi}{4}} [2\ cos(x)]dx$

(ii) $\int_0^3 |-x^2|dx$

(08 Marks)

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 05

(a) Find the limits of the following functions.

(i) $\quad \lim_{\theta \to 0} \dfrac{[1 - \cos 4\theta + \sin^2 2\theta]}{\theta^2}$

(ii) $\quad \lim_{x \to 6} \dfrac{(x^2 - 36)}{\sqrt{x-5} - 1}$ (06 Marks)

(b) Use first principal of derivatives to find the slope of function $f(x) = x^2 + x + 1$ at (1,0)

(04 Marks)

(c) Find the first derivative of the followings.

(i) $\quad f(x) = \dfrac{e^x}{x^2 + 3}$ (ii) $\quad g(x) = \log(\sin x)$

(06 Marks)

(d) Find A, B two matrices on $\mathbb{N}$ such that, $A \neq 0$, $B \neq 0$, But $AB = 0$
(0 is zero matrix)

(04 Marks)

Question 06

(a) Solve the following system

$$\log_y(x) = 7$$
$$x\,y = 256$$

(08 Marks)

(a) Solve following equations for X in terms of Y

$$Y = b\,e^{(3x+a)} \quad \text{(a, b are constants.)}$$ (04 Marks)

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(d) Find A, B two matrices on $\mathbb{Z}$ such that $|A| = 0, |B| = 0$ But $|A + B| \neq 0$

(08 Marks)

Question 07

a) Simplify following exponential functions.

$$Y = e^{(-3x + 1)}.(e^2)/ e^{(2x +2)}$$ (05 Marks)

b) Solve following equations for X in terms of Y

$$Y = a e^{(x+b)} \quad \text{(a, b are constants.)}$$ (05 Marks)

c) Solve the following System

(i) $\log_y (2x) = 3$
(ii) $x y = 8$ (05 Marks)

d) Solve the simultaneous equations;
$$4x + y = 46$$
$$x + 3y = 14$$

(05 Marks)

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

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
REPEAT EXAMINATION
Microeconomics – BSCM1204

- This paper consists of SEVEN questions on FIVE (05) pages.
- Answer <u>FOUR</u> 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: 2021.01.13   Pass mark: 40%   Time: 02 Hours

Question 01 (Compulsory)

(a) "Economic resources are the factors used in producing goods or providing services". Briefly explain the statement.   (04 Marks)

(b) "Economics study to what extent should the government intervene in the economy." Briefly explain the statement.   (04 Marks)

(c) Briefly explain the factors affecting to Supply.   (04 Marks)

(d) Identify the characteristics of **Non-Renewable Resources**.   (04 Marks)

(e) Identify the characteristics of a **"Planned Economy"**   (04 Marks)

(f) Find the Point Elasticity of Supply at price of **Rs: 2.0** using the following Demand and Supply functions.

$Q_d = 550 - 12p$

$Q_s = 450 + 18p$ (05 Marks)

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 02

In 2014 Cuban doctors were given pay rises that significantly increased their salaries. This made doctors' pay more than twice that received by nurses. Cuba is devoting more resources to both medical care and tourism, altering the country's production possibility curve. Living standards are increasing in the country but at a slower rate than some other nearby countries.

(a) What is meant by a Production Possibility Curve ?.   (03 Marks)

(b) "The production possibility frontier represents the economic efficiency of a
   particular country". Briefly Explain the statement.   (04 Marks)

(c) Explain, giving examples, two factors of production used in the transport industry.

                                                                          (06 Marks)

(d) Analyze why doctors are paid more than nurses.   (06 Marks)

(e) Discuss whether living standards are always lower in developing countries than in
   developed countries.   (06 Marks)

Question 03

Countries have to decide how to use their scarce resources. A number of countries are devoting more of their resources to tourism. Some of the jobs in the industry are, however, low-paid and offer little job security. The average age of workers employed, for example, in hotels is relatively young although some older workers have spent their working life in the hotel industry.

![CINEC CAMPUS logo — Beyond A Graduate]

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(a) What is meant by 'scarce resources'? (05 Marks)

(b) Explain two reasons why someone may be willing to do a low-paid job with little
job security. (06 Marks)

(c) Analyze how the spending, saving and borrowing patterns of young workers may
differ from older workers. (06 marks)

(d) Discuss whether developing countries should encourage Foreign Direct
Investments to develop the country. (08 Marks)

Question 04

Consider the following Demand and Supply equations of a commodity in the market.

$Q_{dx} = 800 - 6P_x$
$Q_s = -150 + 4P_x$

(a) Find the equilibrium Price and the Quantity. (06 Marks)

(b) Illustrate the demand and supply curves in a diagram with the help of demand and
supply schedules. (08 Marks)

(c) Find the excess demand and excess supply at the price of 55 and 100. (04 Marks)

(d) Find the Consumer Surplus and Producer Surplus. (04 Marks)

(e) Briefly Explain the Maximum Price Control Method (03 Marks)

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 05

Singapore is usually ranked as one of the best countries in which to do business. It is an open economy engaging in free trade. It has a history of strong entrepreneurship, low unemployment, low average costs and relatively low tax rates. Its example may encourage other countries to remove trade restrictions.

(a) Define 'Average Variable Costs' with the aid of an example   (05 Marks)

(b) Briefly describe the return of "Entrepreneurship".   (04 Marks)

(c) "No government intervention in the Open Economy". Briefly explain the statement
     with the aid of an example.   (05 Marks)

(d) Briefly explain the "Purchasing Economies of Scale" with the help of a diagram
                                                                                    (06 Marks)

(e) Analyze how the market for a product would be affected by reduction of tax on
     product combined with a fall in the price of a complement.   (05 Marks)

Question 06

(a) Identify the factors affecting to Cross Price Elasticity.   (04 Marks)

(b) Briefly explain the terms of "Public Goods and Excludability" with the aid
     of an example.   (06 Marks)

(c) A Demerit Good is "a good or service whose consumption is considered unhealthy,
     degrading, or otherwise socially undesirable due to the perceived negative effects on
     the consumers themselves". Beefily explain the statement.   (05 Marks)

(d) "An inferior good is one whose demand drops when people's incomes rise." Briefly
     explain the statement with the aid of an example.   (05 Marks)

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(e) Assume your income is increased from Rs: 100,000 to Rs:155,000 and the demand for transportation is increased from 10 to 20 (Number of trips). Calculate the income elasticity of demand (YED) and interpret the results. (05 Marks)

Question 07

Part – A

(a) Identify the characteristics of a Monopoly Market. (04 Marks)

(b) Briefly explain the factors of a production function with the aid of an example.

(04 Marks)

(c) Copy the following table and fill the blanks. Illustrate the Total Cost and Total Revenue curves in a diagram and find the Break Even Point. (08 Marks)

No of Workers	TP	MPL	TFC	TVC	TC	MC	TR	MR	PROFIT
0	0	0	70	0	70	0	0	2	-70
1	14	14	70	46	116	3.29	28	2	-88
2	42	28	70	92	162	1.64	84	2	-78
3	75		70	138			150	2	
4	112		70	184			224	2	
5	150		70	230			300	2	

Part – B

Briefly describe the following Terms/Concepts with the aid of an example.

Answer any **Three (03) Questions.**

(a) Economies of Scale

(b) Price Elasticity Demand

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(c) Essential Goods

(d) Inferior Goods

(e) Complementary Goods   (03*03 Marks)

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

Lilma

![CINEC CAMPUS logo]

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I

REPEAT EXAMINATION

Principles of Management – BSCM1206

- This paper consists of SEVEN (07) questions on THREE (03) pages.
- Answer <u>FOUR (04)</u> 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: 2021.01.12   Pass mark: 40%   Time: 02 Hours

Question 01 (Compulsory)

In today's world, managers are dealing with global economic and political uncertainties, changing workplaces, ethical issues, security threats, and changing technology. Discuss these and other changes and how they affect the way managers plan, organize, lead, and control.   **(Total Marks 25)**

Question 02

    (a) Explain why studying management history is important.   (05 marks)

    (b) Explain Henry Fayol's 14 Principles of Management   (14 marks)

    (c) Why were the Hawthorne Studies so critical to management history? (06 marks)

                                         (Total Marks 25)

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 03

(a) Define the nature and purpose of planning?   (12 marks)

(b) What are the elements of planning? Discuss the link between elements.

(08 marks)

(c) List characteristics of well-designed goals.   (05 marks)

(Total Marks 25)

Question 04

(a) What is the purpose of organizing?   (05 marks)

(b) Describe five key elements in organizational design.   (10 marks)

(c) Many organizations are finding that traditional organizational designs often aren't appropriate for today's increasingly dynamic and complex environment. So, managers are finding creative ways to structure and organize work. Briefly explain three contemporary organizational designs you have learnt.

(10 marks)

(Total Marks 25)

Question 05

(a) "Whether or not a human resource manager, every manager is involved with human resource management activities." Briefly explain the importance of knowledge in Human Resource Management to all managers.   (10 marks)

(b) Discuss how human resource management practices can be a source of competitive advantage for a company.   (5 marks)

(c) Discuss contemporary issues in managing human resource in an organization.

(10 marks)

(Total Marks 25)

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 06

(a) What is mean by Communication?   (05 marks)

(b) Information overload, language difficulties are barriers to communication. Briefly explain some other barriers to effective communication   (10 marks)

(c) Why do people choose one channel of communication over another – say, a phone call instead of a face-to-face talk? A model of channel richness helps to explain channel selection among managers. Explain the model of channel richness.   (10 marks)

(Total Marks 25)

Question 07

Select any **five** and write down short notes.

(a) Types of power in leadership

(b) Maslow's hierarchy of needs motivation theory

(c) Characteristics of effective teams

(d) Porter's five forces

(e) BCG Matrix

(f) Management skills

(05× 5= Total Marks 25)

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

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
Microeconomics – BSCM1204

- This paper consists of SEVEN (07) questions on SIX (06) pages.
- Answer <u>FOUR (04)</u> 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: 2020.09.30   Pass mark: 40%   Time: 02 Hours

Question 01 (Compulsory)

(a) Define the term of **Economic models** and explain the purpose of using Economic models in Economics.   (04 Marks)

(b) "Economics study to what extent should the government intervene in the economy." Briefly explain the statement.   (04 Marks)

(c) Briefly explain the factors affecting to Transport Demand   (04 Marks)

(d) Identify the difference between **Renewable Resources** and **Non-Renewable Resources**.   (04 Marks)

(e) Identify the characteristics of an underdeveloped country.   (04 Marks)

(f) Find the Point Elasticity of Demand at price of **Rs: 4.0** using the following Demand and Supply functions.

$Q_d = 200 - 10p$

$Q_s = 100 + 15p$ (05 Marks)

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 02

There is a smaller proportion of large firms in Africa than in Asia. The two African countries with the largest firms are Nigeria and South Africa. These two countries' firms have more capital goods than most other African countries' firms. Firms in South Africa produce a range of products including gold and petrochemicals. In recent years, a number of African firms have developed into Multinational Companies (MNCs), producing mainly in other African countries.

(a) Define a capital good with aid of an example. (03 Marks)

(b) Briefly explain two challenges faced by the small firms at the long run of their production. (04 Marks)

(c) Define the terms of Short Run and the Long Run of a firm with the aid of an example. (04 Marks)

(d) Analyze, using a demand and supply diagram, how a rise in income may affect the market for gold. (06 Marks)

(e) Discuss whether or not MNCs increase production and productivity in their host countries. (08 Marks)

Question 03

In 2017, the Japanese government announced improvements to its tax system. The amount of tax raised is influenced by the size and age distribution of a country's population.
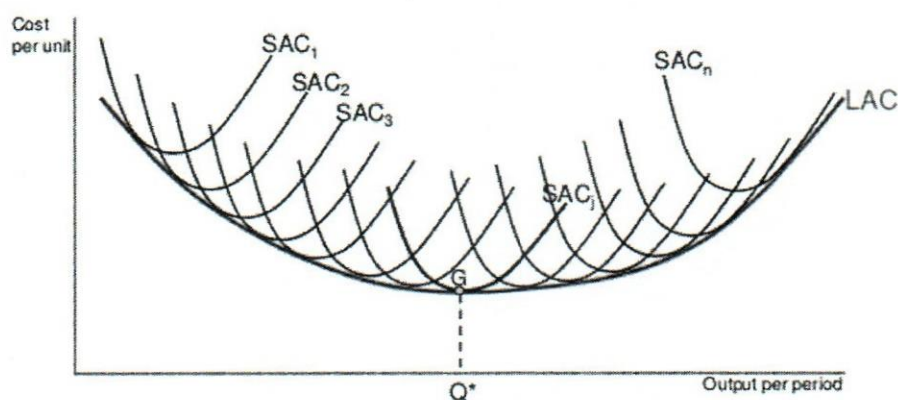
CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Japan's birth and death rates are falling, its population is ageing, and it has low immigration. Overall, Japan's population is decreasing.

(a) Define the term of "Tax" and identify the types of taxes related to Transport
   Industry. (04 Marks)

(b) State two qualities of a good tax. (02 Marks)

(c) Analyze how tax increase affects the market economy. (05 Marks)

(d) Analyze, using a production possibility curve (PPC) diagram, the effect of
   decrease in population size on an economy. (06 Marks)

(e) Suppose the Japanese government expect to increase the fuel tax by 10%.
   Analyze the impact of fuel taxes on public transport. You may use suitable diagrams
   to quote your answer. (08 Marks)

Question 04

Consider the following Demand and Supply equations of an ARS Airline.

$Q_{dx} = 350 - 8P_x$
$Q_s = 150 + 12P_x$

(a) Find the equilibrium Price and the Quantity. (04 Marks)

(b) Illustrate the demand and supply curves in a diagram with the help of demand and
   supply schedules. (04 Marks)

(c) Find the excess demand and excess supply at the price of Rs: 05 and Rs: 20

(04 Marks)

(d) Find the Consumer Surplus and Producer Surplus. (04 Marks)

(e) Calculate the Deadweight Loss. (03 Marks)

(f) Suppose government impose a unit tax of Rs: 50 for a trip for the entire airlines which landed in Sri Lanka. Calculate the new equilibrium price and the quantity after imposing a unit tax. (04 Marks)

(e) Calculate the total government revenue after imposing a unit tax.

(02 Marks)

Question 05

Singapore is usually ranked as one of the best countries in which to do business. It is an open economy engaging in free trade. It has a history of strong entrepreneurship, low unemployment, low average costs and relatively low tax rates. Its example may encourage other countries to remove trade restrictions.

(a) Define 'Average Costs' with the aid of an example (05 Marks)

(b) Briefly describe the term "Entrepreneurship". (03 Marks)

(c) "No government intervention in the Open Economy". Briefly explain the statement with the aid of an example. (04 Marks)

(d) Briefly explain the Economies of Scale with the help of a diagram (06 Marks)

(e) Analyze how the market for a product would be affected by reduction of tax on product combined with a fall in the price of a complement. (07 Marks)

Question 06

(a) Identify the factors affecting to price Elasticity of Supply. (04 Marks)

(b) Briefly explain the terms of "De-Merit Goods and Necessary Goods" with the aid of an example. (06 Marks)

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(c) Briefly explain the terms of "Cross Price elasticity of Demand" and interpret the coefficient sign of the results. (06 Marks)

(d) Assume, the price of petrol increases from Rs:100 to Rs:110 and demand fall from 8,000 units to 6,000. Calculate the PED of the above commodity. (04 Marks)

(e) Assume your income is increased from Rs: 125,000 to Rs:135,000 and the demand for transportation is decreased from 10 to 20 (Number of trips). Calculate the income elasticity of demand (YED) and interpret the results. (05 Marks)

Question 07
Part - A

(a) Identify **02 (Two)** characteristics of a Perfectly Competitive Market. (02 Marks)

(b) Based on the above diagram, briefly explain the significance of the long run average cost with the aid of an example. (03 Marks)

Part – B

Briefly describe the following Terms/Concepts with the aid of an example.

Answer any **Four (04) Questions**

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(a) Diseconomies of Scale

(b) Direct Taxes

(c) Subsidies

(d) Inferior Goods

(e) Sunk Cost

(f) Derived Demand

(g) Perfectly Inelastic Supply

(h) Cross Price Elasticity of Demand   (04*05 Marks)

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

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
ICT Applications – BSCM1205

- This paper consists of SEVEN (07) questions on FOUR (04) pages.
- Answer <u>FOUR (04)</u> 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: 2020.09.28   Pass mark: 40%   Time: 02 Hours

Question 01: (Compulsory)

(a)	Write four (04) industries which use ICT	(04 Marks)
(b)	What are the main 3 types of computer network.	(03 Marks)
(c)	Write 2 advantages and 2 disadvantages of Email.	(04 Marks)
(d)	What are the main 3 types of hardware components of the computer. Provide two (2) examples for each component.	(09 Marks)
(e)	What are the 2 types of software components of the computer. Provide two (2) examples for each component.	(05 Marks)

Question 02

(a)	Explain four functions of an operating system.	(04 Marks)
(b)	Write two (02) types of operating system interfaces with an example for each.	(06 Marks)
(c)	Differentiate Files and Folders.	(06 Marks)
(d)	What is file compression? Briefly explain the importance of file compression.	(05 Marks)
(e)	List four items you can find out on a Desktop environment.	(04 Marks)

Question 03

(a)	Define the difference between "Intranet" and "Extranet"	(04 Marks)
(b)	What is an ISP? Name 4 ISPs available in Sri Lanka.	(06 Marks)
(c)	What is a Search Engine?	(03 Marks)
(d)	What are the risks associated with online activities? Explain	(04 Marks)
(e)	Explain how electronic mail works by use of a diagram. Define which protocols associate with it when sending from one place to another place. Use a diagram on explaining.	(08 Marks)

Question 04

(a) What is a HTML page? (03 Marks)

(b) Write HTML code segments for following situation.
   (i) To insert the title "Our Library" to web page (02 Marks)
   (ii) To insert the heading "The Book World" (02 Marks)
   (iii) To insert a list with following details (04 Marks)
      - Children Books
      - Novels
      - Educational Books
   (iv) To link to another web page "https://www.yahoo.com/" (03 Marks)
   (v) To insert the following paragraph. Font should be **Bolded**. (03 Marks)
   "Welcome home to Book land online bookstore for an extensive collection of books and magazines in Sri Lanka"
   (vi) To insert following table.

Book Name	Author
Fangirl	Rainbow Rowell
The book of American Martyrs	Joyce Carol Oates

(08 Marks)

CINEC CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 05

(a) Define the terms "Data" and "Information" with examples.   (06 Marks)

(b) Explain the difference between datasheet view and design view of a table in MS Access Database.   (04 Marks)

(c) What do you mean by a "Field" & a "Record" in a database environment. Describe using example.

(06 Marks)

(d) 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
  (ix) Age of the student   (09 Marks)

Question 06

	A	B	C	D
1	**Student**	**Marks**	**Status**	
2	L.M.Perera	78	Pass	
3	T.S.Gunathilake	84		
4	R.Rathnasiri	43		
5	K.Dharmadasa	70		
6	K.D.Gunarathne	32		
7	Total			
8	Average			
9	Minimum			
10	Count			
11				
12				

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(a)   Refer to the spreadsheet given below and write down formulas to calculate followings.
   (i)   Obtain the **Status** column based on the Marks. If the mark is 50 or above mark it as "Pass" otherwise "Fail".   (03 Marks)
   (ii)   Calculate the Total Mark in cell B7.   (03 Marks)
   (iii) Calculate the Average Mark in cell B8.   (03 Marks)
   (iv)   Calculate the Minimum Marks in cell B9.   (03 Marks)
   (v)   Calculate the Count of the Students in cell B10.   (03 Marks)

(b)   Write down the features use to perform following tasks on excel sheets
   (i)   To compare marks easily.   (02 Marks)
   (ii)   Organize students' names in alphabetic order.   (02 Marks)
   (iii) Automate tasks   (02 Marks)

(c)   Briefly explain the following error messages in excel.
   (i)   #######   (02 Marks)
   (ii)   #REF!   (02 Marks)

Question 07

Write short notes on following   (5*5 Marks)

(a)   WWW
(b)   Computer Viruses
(c)   Internet
(d)   Database
(e)   HTTP

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

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I

SEMESTER END EXAMINATION

English for Business I – BSCM1202

- This paper consists of FIVE (05) questions on NINE (09) pages.
- Answer ALL questions including question 01.
- 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: 2020.09.25   Pass mark: 40%   Time: 02 Hours

Section A – Business Vocabulary/ Structures

Question 1

A. Complete the paragraph with the most appropriate word given below. (10 marks)

In order to manage your warehouse effectively, you need to have (i)...........................
control over all the goings-on within the (ii)........................... Basically, if you've found
that doing x, y and z will lead to more (iii)........................... , you need to know that
your (iv)........................... is going to get x, y and z done and done well. An essential
part of warehouse (v)........................... is the creation of systematic workflows,
processes and (vi)........................... for your teams to follow throughout their daily
operations. With proper (vii)........................... in place, your individual team members
will always know what they are (viii)........................... for at any given time. While
control is essential, it is also important to (ix)........................... flexible. It's because
(x)........................... operations do not take place in a vacuum.

[warehouse/ protocols/ building/ team/ remain/ responsible/ management/
complete/ productivity/ workflows]

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

B. Complete sentences putting the words in the correct order. (10 marks)

(i). The inventory ....

....

(twelve/over/ disposed/ be/weeks/ will/ of/ next/ the)

(ii). Labour ....

....

(not/demand/did/increase/meet/to/meet/supply)

(iii). Inflation ....

....

(living/pushing/beyond/ of/up/reach/ is /the / reach/cost/ our)

(iv). Lack ....

....

(investing/ resources/has prevented/of/ the company/ technology/ in / new/

from)

(v). Giving employees ....

....

(efficiency /flexible/ to/ working/ more/ leads/ enhanced/ hours/ usually)

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Section B – English in Pragmatic/ Realistic Settings

Question 2

A. Form the appropriate questions that match the replies in the given situations.

Look at the example. (10 marks)

Example: *How much* did you pay for the carton of milk?

I paid Rs.150/- for the carton of milk.

(i). At what time .... ?

The manager will return to office at 11.30 a.m.

(ii). How often .... ?

The company audits accounts twice a year.

(iii). Why .... ?

She was sacked for refusing to work on Sundays.

(iv). What .... ?

They have exported cinnamon for 15 years.

(v). Whom .... ?

The manager requested Mrs. Anne to be punctual.

B. Report the following ideas expressed, questions raised and requests made at a meeting. Look at the example. (10marks)

Example: The manager said, "I am in fact happy about the company's overall performance last year."

The manager said that he was happy about the company's overall performance the year before.

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(i). The warehouse manager said, "I have some issues with minor employees."

....

(ii). The secretary asked, "Are the minutes of previous meeting in order?"

....

(iii). HR manager implored, "Don't discontinue the service of probationers."

....

(iv). Mrs. Ruvini inquired, "When shall I organize the annual get-together?"

....

(v). Mr. Damith informed, "I am not available next week."

....

Section C – Comprehension

Question 3

A. Read the following definitions and underline <u>the wrong statement</u>. (12 marks)

I. A country's GDP or gross domestic product is calculated by taking into account the monetary worth of a nation's goods and services after a certain period of time, usually one year. It's a measure of economic activity. Then, this amount of wealth is divided among a given country's population to solve for its GDP per capita.

(a). GDP per capita gives a figure of the income earned by one person.

(b). GDP usually refers to particular period of time.

(c). GDP includes both monetary and non-monetary worth of a nation's goods.

(d). GDP is a measure of a country's economic output.

II. The history of ecommerce begins with the first ever online sale: on the August 11, 1994 a man sold a CD by the band Sting to his friend through his website NetMarket, an American retail platform. This is the first example of a consumer purchasing a product

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

from a business through the World Wide Web or ecommerce as we commonly know today.

(a). Ecommerce began just 26 years ago.

(b). The man who sold the CD is called Sting.

(c). You can even order one item from NetMarket.

(d). Buying and selling of products using internet is ecommerce.

III. Travelling is a great way of exploring the world. However, it comes with its costs and drawbacks. Hence, the role of ecotourism is to trim the negative aspects of mass tourism. Costs are not limited to plane tickets and accommodation. However, there is a subtle bill paid by the environment and the visited cultures, especially when tourists do not adhere to rules and guidelines. Ecotourism is not simply the mere experience of visiting a place. On the contrary, it happens when we are socially responsible and emotionally caring for the culture and the nature of the visited location. Some areas are fragile by nature and any form of littering might cause huge consequences. Sadly enough, only the environment will pay the high bills.

(a). Ecotourism aims to reduce bad effects of mass tourism.

(b). When tourists do not follow rules of the visiting places, they harm environment.

(c). Ecotourism emphasizes responsible travelling and respect for cultures.

(d). Littering doesn't affect the environment very much.

B. Think logically and underline the letter of the correct answer. (08 marks)

I. A public limited company issues 100 000 shares to the public at Rs.100 per share to raise its capital. The company pays annual dividends of Rs.10 per share. Suresh has invested Rs.50 000 in this company.

(a). The company raised a capital of 500 000 selling its shares.

(b). Suresh has bought 1000 shares in this company.

(c). Suresh got Rs.5000 as dividends.

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(d). The company paid Rs.10 000 as dividends.

II. When a car is imported from India 40% of its value has to be paid as customs duty and if a car is imported from Japan 60% of its value has to be paid as customs duty. How much does it cost a buyer to import a car worth Rs.2 000 000 from Japan including the duty?

(i). Rs. 2 600 000   (iii). Rs. 2 400 000

(ii). Rs.3 200 000   (iv). Rs. 3 600 000

Section D – Presenting Information

Question 4

A. The information gathered from the employees of a certain factory with the aim of

providing transport is given below. (10 marks)

The mode of transport	Number of employees
By car	72
By motor bike	144
By bus	360
On bicycle	108
On foot	36

Represent this information in a pie chart.

....
....
....
....
....
....
....
....
....

![CINEC CAMPUS logo]

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

....
....

B. Study the information given in the following table and write within brackets whether the given statements are 'true', 'false' or 'not given'. (10 marks)

The frequency distribution prepared from the data on the daily consumption of water provided from a rural water project to 60 houses is given below.

Home usage of water (Litres)	8 - 12	13 – 17	18 - 22	23 - 27	28 - 32	33 - 37	38 - 42
Number of houses	4	6	15	15	10	7	3

(i). The maximum amount of water used in a household is 42 litres. [..........................]

(ii). The number of houses using less than 18 litres is 10. [..........................]

(iii). Twelve houses use more than 45 litres. [..........................]

(iv). Fifteen houses use from twenty-eight to thirty-two litres. [.......................]

(v). The minimum amount of water used in a house is thirteen litres. [...................]

(vi). 50% of the households use more than 18 litres but less than 28 litres. [...................]

(vii). The rural water project provided water to fifty houses. [.......................]

(viii). There is an increase of 15 houses in the project from last year. [.....................]

(ix). Only twelve houses use more than thirty-two litres. [.......................]

(x). The percentage of houses that use less than 28 litres of water in the rural water project is approximately 66.6. [.........................]

CINEC CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

<u>Section E – Business Writing</u>

Question 5

A. The annual turnover of 12 branches of RELIANCE, a leading electrical appliances company in 2019 is given in million rupees.

Colombo- 95	Matale- 40	Kalutara- 45	Jaela – 40
Galle – 80	Jaffna- 65	Kegalle – 60	Homagama- 65
Kandy -90	Matara – 55	Negombo – 85	Kekirawa- 36

Write a paragraph of the sales performance of RELIANCE company answering the following sentences in complete sentences. (20 marks)

(i). What does the above information show?

(ii). What was the highest and the lowest sales recorded?

(iii). What is the median of sales?

(iv). What is the average sales of a branch?

(v). How many branches had an annual turnover of more than 75 million?

(vi). How many branches had sales below average?

(vii). Which branches have recorded equal sales amounts?

(viii). What is the difference between the highest and lowest sales?

(ix). What can you conclude about the sales performance?

(x). What do you recommend to improve sales next year?

....
....
....
....
....

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

....
....
....
....
....
....
....
....
....
....
....

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

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
Introduction to Logistics – BSCM1307

- This paper consists of EIGHT (08) questions on SIX (06) pages.
- Answer <u>FIVE (05)</u> 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.
- Required supporting documents are attached.

Date: 2020.09.21   Pass mark: 40%   Time: 03 Hours

Question 01: (Compulsory)

(a) The emergence of the concept of Logistics goes back to the early centuries where it was originated from the Greek word 'Logistikos' and the Latin word 'Logisticus', which meant the science and skill of calculation. Now it has become a vital point in every business. Briefly explain on several milestones in the history of logistics and the status that logistics has gained today in business world   (05 Marks)

Answer the following questions by referring to the hypothetical case study below

A hypothetical case study on 'Printerest'- Print your Interests
Printerest is famously known for their high quality, multipurpose, large-scale printing solutions given at the high-end customers. It has three branches established in Colombo metropolitan area and one branch in Kandy. The Raw Material like ink, general purpose paper and printing boards are supplied from Sri Lankan suppliers whereas printing machines, special purpose paper and all other customized raw material requirements are purchased from foreign suppliers. As they ae specialized in customized printing, many raw materials that are required will be purchased from many suppliers throughout the world. On the other hand, they will serve a few, target set of customers.

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(b) List down the 7Rs in logistics and briefly explain two (02) of them applying to Printerest (05 Marks)

(c) List down and explain the four (04) Business Logistics Systems.
Which business logistics system is mostly applicable for Printerest (06 Marks)

(d) The Head of Logistics in Printerest suggests operating a private warehouse to store their Raw Material. Give your comments on this suggestion (04 Marks)

Question 02

(a) Explain the four (04) types of demand patterns in a time series analysis, using appropriate graphs/diagrams (04 Marks)

Note: Refer the attachment to answer part (b) and part (c) where necessary

(b) Ms. Shwetha, the Logistics Planning Manager at AWIKSHA pharmaceuticals is planning the logistics operations for the coming months in 2020. The actual demand data for the 'Ventolin Syrup' production is given in the table below.

Table 2.1 : Actual Demand/Sales Data for the months of September, October, November 2020 in '000

Month	Week	Actual Demand/Sales '000
September	Week 01	93.5
	Week 02	94
	Week 03	93.5
	Week 04	92
October	Week 01	91.5
	Week 02	92
	Week 03	91.5
	Week 04	89
November	Week 01	87.5
	Week 02	90

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

With reference to the data given in the above table, forecast the demand by answering the following questions

(i) The Naïve forecast for Week 7 and Week 10
(ii) The one week simple moving average forecast for Week 9
(iii) The five-week Simple Moving Average forecast for November week 3
(iv) The Weighted Moving Average forecast for November week 3 using the weights 0.24 , 0.33 , 0.12
(v) The Exponential Smoothing forecast for November week 3 with a smoothing constant of 0.42 (Assume the forecast for November week 1 is 89,000 units)   (08 Marks)

(c) Using the data given below, calculate:
(i) Forecasting Error
(ii) Running Sum of Forecast Error
(iii) Mean Absolute Deviation
(iv) Mean Squared Error
(v) Mean Absolute Percentage Error
(vi) Tracking Signal   (08 Marks)

Table 2.2: Daily Forecast and Actual sales (D=Day)

Day	D1	D2	D3	D4	D5	D6	D7
Forecast	518	511	519	513	518	512	516
Actual	519	514	519	516	512	510	517

Question 03

(a) List down and explain the four (04) types of inventory classifications   (05 Marks)

(b) Consider the demand/cost data for 'Printerest' general paper printing (considering as only one product) at Colombo 01 outlet given below, and answer the following questions

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

The monthly demand for the year 2021 (in average for each month) is forecasted as 1000 units. The ordering cost is calculated to be 150 LKR per order and the order will be received after one week of placing through the procurement system. The printing shop is scheduled to run for 345 days in the year. It is the shop policy to maintain the holding cost per unit per annum at 12 LKR. The procurement department currently places the orders of 500 units

Note : refer the attachment to answer the questions where necessary
(i)   State the assumptions of a basic EOQ model
(ii)   Calculate the optimum order quantity
(iii)   Calculate the total annual inventory cost for optimal order quantity and the current order quantity
(iv)   Determine the ROP   (15 Marks)

Question 04

(a) List down the activities of Order processing. Explain all the activities   (10 Marks)

(b) Briefly explain the concepts of different types of logistical organizations (1PL, 2PL, 3PL and 4PL with the role in Supply Chain Management and the relevant processes performed   (10 Marks)

Question 05

(a)
(i) List down four (04) advantages of global logistics   (02 Marks)
(ii)The Macroenvironmental influences on Global Logistics and Trade involves Political Factors, Economical Factors and Cultural Factors. Chose one (01) factor of your own and explain its influence on Global Logistics.   (08 Marks)

(b)
(i) List down six (06) types of purchases   (03 Marks)
(ii) Discuss the reasons for purchasing materials/components from external parties rather than making those in-house   (07 Marks)

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 06

Warehouses can play a key role in integrated logistics strategy and in building and maintaining good relationships between supply chain partners. Warehousing affects customer service, stock-out rates, and a firm's sales and marketing success.

(a) What is meant by the term 'Warehousing'? (02 Marks)
(b) List down all the activities of warehousing (05 Marks)
(c) List down the four types of warehousing? Discuss in detail with appropriate examples (07 Marks)
(d) Decision to acquire or lease a warehouse will be affected by: location decisions, setting up decisions and design considerations.
Explain two (02) considerations that needs to be looked upon in designing a warehouse. Write appropriate examples where necessary (06 Marks)

Question 07

(a) Mr. Shripathi, the Logistics Planning Manager of Toyota Lanka Pvt. Ltd., suggests on shifting some of the logistics activities that are currently performed inside, to a 3rd party logistics service provider. The activities suggested to shift are:
- Spare-parts inventory control
- Brand New Vehicle Field warehousing
- Brand New Vehicle distribution and Transportation from Hambantota Port to Colombo Yard premises

Assuming that you are Mr. Shripathi, write a brief report to be submitted to the CEO, giving comments on the decision.
The description of the report should include the relevant reasons, risks and challenges of shifting towards a 3rd party logistics company (12 Marks)

(b) Draw the perceptual map of the five (05) dominant transport modes considering any two (02) of the below combinations of characteristics
  (i) Price of Freight and Accessibility
  (ii) Price of Freight and Safety

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(iii)   Price of Freight and Transit Time

(08 Marks)

Question 08

Write short notes on <u>four (04)</u> of the following

(a) Benefits of e-procurement
(b) Independent Demand vs. Derived Demand
(c) Inbound, Process and Outbound Logistics
(d) Warehouse Racking Types and their applications
(e) Advantages and disadvantages of JIT
(f) Applications of RFID in a Logistics System

(5*4 Marks)

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

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
Introduction to Logistics BSCM1307

Equations for Calculations

$C_{(T)} = (Q/2) * H + (D/Q) * S$ ['Q' can be replaced with 'Qo' depending on the purpose of the calculations]

$C_{(H)} = (Q/2) * H$ ['Q' can be replaced with 'Qo' depending on the purpose of the calculations]

$C_{(O)} = (D/Q) * S$ ['Q' can be replaced with 'Qo' depending on the purpose of the calculations]

$Q_0 = \sqrt{(2DS/H)}$

$ROP = (d * L) + SS$

....

$F_t = F_{(t-1)} + \alpha [A_{(t-1)} - F_{(t-1)}]$

$e_t = A_t - F_t$

$RSFE = \sum e_t$

$MAD = \dfrac{\sum | A_t - F_t |}{n}$

$MSE = \dfrac{\sum [A_t - F_t]^2}{(n-1)}$

$MAPE = \dfrac{\sum \left[\dfrac{| A_t - F_t |}{A_t} * 100 \right] \%}{n}$

$TS = (RSFE / MAD)$

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I

SEMESTER END EXAMINATION

Introduction to Transportation – BSCM1301

- This paper consists of EIGHT (08) questions on TWO (02) pages.
- Answer <u>FIVE (05)</u> 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: 2020.09.16   Pass mark: 40%   Time: 03 Hours

Question 01 (Compulsory)

(a) What is meant by "Transportation"?   (02 Marks)
(b) What is a mode?   (02 Marks)
(c) Why people move from one place to another?   (04 Marks)

(d) Name TWO advantages and TWO disadvantages of Maritime Transportation
                                                                (04 Marks)
(e) Briefly explain the Evaluation of Transportation   (08 Marks)

Question 02

(a) Transport cost can be categorized in to TWO main components.
   What are they?   (04 Marks)
(b) Write 3 components of a Transport system and briefly explain one of them
                                                                (06 Marks)
(c) What do you mean by Transportation as derived Demand?   (10 Marks)

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 03

(a) Name THREE functional classification of Roads   (03 Marks)
(b) What is meant by Intermodal Freight Transport?   (07 Marks)
(c) Define the terms Mobility and Accessibility?   (10 Marks)

Question 04

"While Transportation plays a vital role in development of the economy, the environmental impacts of transport is very significant" Justify the statement with suitable examples   (20 Marks)

Question 05

(a) Define the terms Intermodal Transportation, Multimodal Transportation and Trans modal Transportation with diagrams   (10 Marks)
(b) **"Pipeline is the unique mode of transport when compared with other modes"** Justify the statement with suitable examples   (10 Marks)

Question 06

(a) What is meant by Intelligent Transportation System (ITS)?   (03 Marks)
(b) What are the benefits of Intelligent Transportation System (ITS)?(07 Marks)
(c) Define what is meant by sustainable transport?   (10 Marks)

Question 07

(a) Name 3 types of Maritime Hazards and Explain in briefly?   (10 Marks)
(b) What is meant by Piracy and how it impacts on Maritime trade   (10 Marks)

Question 08

Write a short essay on **"How to improve Rail Transport system in Sri Lanka for both passenger and cargo movement"**   (20 Marks)

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

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
Business Mathematics‐ BSCM1203

- This paper consists of SEVEN (07) questions on SEVEN (07) pages.
- Answer <u>FOUR (04)</u> 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: 2020.09.13   Pass mark: 40%   Time: 02 Hours

Question 01: (Compulsory)

1. Choose the answer when you simplify,

$$\frac{\left(2\frac{7}{9}\right)^{\frac{3}{2}}}{\left(\frac{5}{3}\right)^{3}}$$

a) $\frac{5}{3}$ b) $\frac{3}{5}$ c) 27   d) $\frac{1}{27}$

2. $2x^2 + 6x - 2$ is,

a) A polynomial

b) An equation

c) An identity

d) All of the above

3. Which is not a polynomial function?

    a) $f(x) = -x^3 + 2x + 8$

    b) $f(x) = 11x^{1/3} + 2x^{-1} + 5x^{-2} - 10x + 8$

    c) $f(x) = \frac{1}{3}x^5 - \frac{4}{2}x^3 + \frac{1}{3}x^2 + x$

    d) $f(x) = (x + 1)(x^2 + 3x - 1)$

4. What are the factors of $3x^2 - 2x - 1$,

    a) $(x - 1)(3x + 1)$

    b) $(3x - 1)(x + 1)$

    c) $(x^2 - 1)(3x + 1)$

    d) $(3x - 1)(x - 1)$

5. Rationalize the denominator of $\frac{5+\sqrt{2}}{2\sqrt{3}}$.

    a) $\frac{5\sqrt{3}+\sqrt{6}}{6}$
    b) $\frac{(5+\sqrt{2})\times2}{2\sqrt{3}\times2}$
    c) $\frac{23}{2\sqrt{3}(5-\sqrt{2})}$
    d) $\frac{(5+\sqrt{2})\sqrt{3}}{1}$

6. Which of the following is the derivative of $3x^2 - 5e^x$?

    a) $6x - 5e^x$
              b) $6 - 5e^x$

    c) $6x - 5e^x$
              d) $6x + 5e^x$

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

7. Simplify. $(2x + 3)(x - 4)$

   a) $2x^2 - 5x - 12$

   b) $2x^2 + 7x - 7$

   c) $x^2 - 6x - 12$

   d) $2x^2 + 5x + 12$

8. Which of the following is,

   $\lim\limits_{x \to 1}(x^2 + 5x + 2)$?

   a) 8   b) 7   c) 10   d) 0

9. Which of the following is, $\frac{d}{dx}(xe^x)$.

   a) xe^x b) $(x + 1)e^x$ c) $x + e^x$ d) e^x

10. Which of the following is incorrect?

    a) $\lim\limits_{\theta \to 0} \frac{\sin \theta}{\theta} = 1$

    b) $\begin{pmatrix} 8 & 5 \\ 2 & -1 \end{pmatrix} + \begin{pmatrix} 1 & 0 \\ 3 & -5 \end{pmatrix} = \begin{pmatrix} 9 & 5 \\ 5 & -6 \end{pmatrix}$

    c) $\frac{d}{dx}(\cos x^2) = -\sin x^2 \cdot 2x$

    d) $\int \tan x \, dx = \cot x + C \ (C - arbitrary\ constant)$

(25 Marks)

CINEC CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

....
....

B. Study the information given in the following table and write within brackets whether the given statements are 'true', 'false' or 'not given'. (10 marks)

The frequency distribution prepared from the data on the daily consumption of water provided from a rural water project to 60 houses is given below.

Home usage of water (Litres)	8 - 12	13 – 17	18 - 22	23 - 27	28 - 32	33 - 37	38 - 42
Number of houses	4	6	15	15	10	7	3

(i). The maximum amount of water used in a household is 42 litres. [..........................]

(ii). The number of houses using less than 18 litres is 10. [..........................]

(iii). Twelve houses use more than 45 litres. [..........................]

(iv). Fifteen houses use from twenty-eight to thirty-two litres. [.......................]

(v). The minimum amount of water used in a house is thirteen litres. [....................]

(vi). 50% of the households use more than 18 litres but less than 28 litres. [....................]

(vii). The rural water project provided water to fifty houses. [.......................]

(viii). There is an increase of 15 houses in the project from last year. [.....................]

(ix). Only twelve houses use more than thirty-two litres. [.......................]

(x). The percentage of houses that use less than 28 litres of water in the rural water project is approximately 66.6. [.........................]

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Section E – Business Writing

Question 5

A. The annual turnover of 12 branches of RELIANCE, a leading electrical appliances company in 2019 is given in million rupees.

Colombo- 95	Matale- 40	Kalutara- 45	Jaela – 40
Galle – 80	Jaffna- 65	Kegalle – 60	Homagama- 65
Kandy -90	Matara – 55	Negombo – 85	Kekirawa- 36

Write a paragraph of the sales performance of RELIANCE company answering the following sentences in complete sentences. (20 marks)

(i). What does the above information show?

(ii). What was the highest and the lowest sales recorded?

(iii). What is the median of sales?

(iv). What is the average sales of a branch?

(v). How many branches had an annual turnover of more than 75 million?

(vi). How many branches had sales below average?

(vii). Which branches have recorded equal sales amounts?

(viii). What is the difference between the highest and lowest sales?

(ix). What can you conclude about the sales performance?

(x). What do you recommend to improve sales next year?

....
....
....
....
....

CINEC CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

....
....
....
....
....
....
....
....
....
....
....
....

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

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
Introduction to Logistics – BSCM1307

- This paper consists of EIGHT (08) questions on SIX (06) pages.
- Answer <u>FIVE (05)</u> 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.
- Required supporting documents are attached.

Date: 2020.09.21   Pass mark: 40%   Time: 03 Hours

Question 01: (Compulsory)

(a) The emergence of the concept of Logistics goes back to the early centuries where it was originated from the Greek word 'Logistikos' and the Latin word 'Logisticus', which meant the science and skill of calculation. Now it has become a vital point in every business. Briefly explain on several milestones in the history of logistics and the status that logistics has gained today in business world   (05 Marks)

Answer the following questions by referring to the hypothetical case study below

A hypothetical case study on 'Printerest'- Print your Interests
Printerest is famously known for their high quality, multipurpose, large-scale printing solutions given at the high-end customers. It has three branches established in Colombo metropolitan area and one branch in Kandy. The Raw Material like ink, general purpose paper and printing boards are supplied from Sri Lankan suppliers whereas printing machines, special purpose paper and all other customized raw material requirements are purchased from foreign suppliers. As they ae specialized in customized printing, many raw materials that are required will be purchased from many suppliers throughout the world. On the other hand, they will serve a few, target set of customers.

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(b) List down the 7Rs in logistics and briefly explain two (02) of them applying to Printerest (05 Marks)

(c) List down and explain the four (04) Business Logistics Systems.
Which business logistics system is mostly applicable for Printerest (06 Marks)

(d) The Head of Logistics in Printerest suggests operating a private warehouse to store their Raw Material. Give your comments on this suggestion (04 Marks)

Question 02

(a) Explain the four (04) types of demand patterns in a time series analysis, using appropriate graphs/diagrams (04 Marks)

Note: Refer the attachment to answer part (b) and part (c) where necessary

(b) Ms. Shwetha, the Logistics Planning Manager at AWIKSHA pharmaceuticals is planning the logistics operations for the coming months in 2020. The actual demand data for the 'Ventolin Syrup' production is given in the table below.

Table 2.1 : Actual Demand/Sales Data for the months of September, October, November 2020 in '000

Month	Week	Actual Demand/Sales '000
September	Week 01	93.5
	Week 02	94
	Week 03	93.5
	Week 04	92
October	Week 01	91.5
	Week 02	92
	Week 03	91.5
	Week 04	89
November	Week 01	87.5
	Week 02	90

With reference to the data given in the above table, forecast the demand by answering the following questions

(i)   The Naïve forecast for Week 7 and Week 10

(ii)   The one week simple moving average forecast for Week 9

(iii)   The five-week Simple Moving Average forecast for November week 3

(iv)   The Weighted Moving Average forecast for November week 3 using the weights 0.24 , 0.33 , 0.12

(v)   The Exponential Smoothing forecast for November week 3 with a smoothing constant of 0.42 (Assume the forecast for November week 1 is 89,000 units)   (08 Marks)

(c) Using the data given below, calculate:

(i)   Forecasting Error

(ii)   Running Sum of Forecast Error

(iii)   Mean Absolute Deviation

(iv)   Mean Squared Error

(v)   Mean Absolute Percentage Error

(vi)   Tracking Signal   (08 Marks)

Table 2.2: Daily Forecast and Actual sales (D=Day)

Day	D1	D2	D3	D4	D5	D6	D7
Forecast	518	511	519	513	518	512	516
Actual	519	514	519	516	512	510	517

Question 03

(a) List down and explain the four (04) types of inventory classifications   (05 Marks)

(b) Consider the demand/cost data for 'Printerest' general paper printing (considering as only one product) at Colombo 01 outlet given below, and answer the following questions

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

The monthly demand for the year 2021 (in average for each month) is forecasted as 1000 units. The ordering cost is calculated to be 150 LKR per order and the order will be received after one week of placing through the procurement system. The printing shop is scheduled to run for 345 days in the year. It is the shop policy to maintain the holding cost per unit per annum at 12 LKR. The procurement department currently places the orders of 500 units

Note : refer the attachment to answer the questions where necessary
(i)   State the assumptions of a basic EOQ model
(ii)   Calculate the optimum order quantity
(iii)   Calculate the total annual inventory cost for optimal order quantity and the current order quantity
(iv)   Determine the ROP   (15 Marks)

Question 04

(a) List down the activities of Order processing. Explain all the activities   (10 Marks)

(b) Briefly explain the concepts of different types of logistical organizations (1PL, 2PL, 3PL and 4PL with the role in Supply Chain Management and the relevant processes performed   (10 Marks)

Question 05

(a)
(i) List down four (04) advantages of global logistics   (02 Marks)
(ii)The Macroenvironmental influences on Global Logistics and Trade involves Political Factors, Economical Factors and Cultural Factors. Chose one (01) factor of your own and explain its influence on Global Logistics.   (08 Marks)

(b)
(i) List down six (06) types of purchases   (03 Marks)
(ii) Discuss the reasons for purchasing materials/components from external parties rather than making those in-house   (07 Marks)

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 06

Warehouses can play a key role in integrated logistics strategy and in building and maintaining good relationships between supply chain partners. Warehousing affects customer service, stock-out rates, and a firm's sales and marketing success.

(a) What is meant by the term 'Warehousing'? (02 Marks)
(b) List down all the activities of warehousing (05 Marks)
(c) List down the four types of warehousing? Discuss in detail with appropriate examples (07 Marks)
(d) Decision to acquire or lease a warehouse will be affected by: location decisions, setting up decisions and design considerations.
Explain two (02) considerations that needs to be looked upon in designing a warehouse. Write appropriate examples where necessary (06 Marks)

Question 07

(a) Mr. Shripathi, the Logistics Planning Manager of Toyota Lanka Pvt. Ltd., suggests on shifting some of the logistics activities that are currently performed inside, to a 3rd party logistics service provider. The activities suggested to shift are:
- Spare-parts inventory control
- Brand New Vehicle Field warehousing
- Brand New Vehicle distribution and Transportation from Hambantota Port to Colombo Yard premises

Assuming that you are Mr. Shripathi, write a brief report to be submitted to the CEO, giving comments on the decision.
The description of the report should include the relevant reasons, risks and challenges of shifting towards a 3rd party logistics company (12 Marks)

(b) Draw the perceptual map of the five (05) dominant transport modes considering any two (02) of the below combinations of characteristics
   (i) Price of Freight and Accessibility
   (ii) Price of Freight and Safety

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

(iii) Price of Freight and Transit Time

(08 Marks)

Question 08

Write short notes on <u>four (04)</u> of the following

(a) Benefits of e-procurement
(b) Independent Demand vs. Derived Demand
(c) Inbound, Process and Outbound Logistics
(d) Warehouse Racking Types and their applications
(e) Advantages and disadvantages of JIT
(f) Applications of RFID in a Logistics System

(5*4 Marks)

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

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
Introduction to Logistics BSCM1307

<u>Equations for Calculations</u>

$C_{(T)} = (Q/2) * H + (D/Q) * S$ ['Q' can be replaced with 'Qo' depending on the purpose of the calculations]

$C_{(H)} = (Q/2) * H$ ['Q' can be replaced with 'Qo' depending on the purpose of the calculations]

$C_{(O)} = (D/Q) * S$ ['Q' can be replaced with 'Qo' depending on the purpose of the calculations]

$Q_0 = \sqrt{(2DS/H)}$

$ROP = (d * L) + SS$

....

$F_t = F_{(t-1)} + \alpha [A_{(t-1)} - F_{(t-1)}]$

$e_t = A_t - F_t$

$RSFE = \sum e_t$

$$MAD = \frac{\sum |A_t - F_t|}{n}$$

$$MSE = \frac{\sum [A_t - F_t]^2}{(n-1)}$$

$$MAPE = \frac{\sum \left[\frac{|A_t - F_t|}{A_t} * 100 \right] \%}{n}$$

$TS = (RSFE / MAD)$

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I

SEMESTER END EXAMINATION

Introduction to Transportation – BSCM1301

- This paper consists of EIGHT (08) questions on TWO (02) pages.
- Answer <u>FIVE (05)</u> 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: 2020.09.16   Pass mark: 40%   Time: 03 Hours

Question 01 (Compulsory)

(a) What is meant by "Transportation"?   (02 Marks)
(b) What is a mode?   (02 Marks)
(c) Why people move from one place to another?   (04 Marks)

(d) Name TWO advantages and TWO disadvantages of Maritime Transportation
                                                          (04 Marks)
(e) Briefly explain the Evaluation of Transportation   (08 Marks)

Question 02

(a) Transport cost can be categorized in to TWO main components.
    What are they?   (04 Marks)
(b) Write 3 components of a Transport system and briefly explain one of them
                                                          (06 Marks)
(c) What do you mean by Transportation as derived Demand? (10 Marks)

CINEC CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 03

(a) Name THREE functional classification of Roads   (03 Marks)
(b) What is meant by Intermodal Freight Transport?   (07 Marks)
(c) Define the terms Mobility and Accessibility?   (10 Marks)

Question 04

"While Transportation plays a vital role in development of the economy, the environmental impacts of transport is very significant" Justify the statement with suitable examples   (20 Marks)

Question 05

(a) Define the terms Intermodal Transportation, Multimodal Transportation and Trans modal Transportation with diagrams   (10 Marks)
(b) **"Pipeline is the unique mode of transport when compared with other modes"** Justify the statement with suitable examples   (10 Marks)

Question 06

(a) What is meant by Intelligent Transportation System (ITS)?   (03 Marks)
(b) What are the benefits of Intelligent Transportation System (ITS)?(07 Marks)
(c) Define what is meant by sustainable transport?   (10 Marks)

Question 07

(a) Name 3 types of Maritime Hazards and Explain in briefly?   (10 Marks)
(b) What is meant by Piracy and how it impacts on Maritime trade   (10 Marks)

Question 08

Write a short essay on **"How to improve Rail Transport system in Sri Lanka for both passenger and cargo movement"**   (20 Marks)

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

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
Business Mathematics - BSCM1203

- This paper consists of SEVEN (07) questions on SEVEN (07) pages.
- Answer <u>FOUR (04)</u> 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: 2020.09.13   Pass mark: 40%   Time: 02 Hours

Question 01: (Compulsory)

1. Choose the answer when you simplify,

$$\frac{\left(2\frac{7}{9}\right)^{\frac{3}{2}}}{\left(\frac{5}{3}\right)^{3}}$$

a) $\frac{5}{3}$ b) $\frac{3}{5}$ c) 27   d) $\frac{1}{27}$

2. $2x^2 + 6x - 2$ is,

a) A polynomial
b) An equation

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

c) An identity

d) All of the above

3. Which is not a polynomial function?

    a) $f(x) = -x^3 + 2x + 8$

    b) $f(x) = 11x^{1/3} + 2x^{-1} + 5x^{-2} - 10x + 8$

    c) $f(x) = \frac{1}{3}x^5 - \frac{4}{2}x^3 + \frac{1}{3}x^2 + x$

    d) $f(x) = (x + 1)(x^2 + 3x - 1)$

4. What are the factors of $3x^2 - 2x - 1$,

    a) $(x - 1)(3x + 1)$

    b) $(3x - 1)(x + 1)$

    c) $(x^2 - 1)(3x + 1)$

    d) $(3x - 1)(x - 1)$

5. Rationalize the denominator of $\frac{5+\sqrt{2}}{2\sqrt{3}}$.

    a) $\frac{5\sqrt{3}+\sqrt{6}}{6}$
    b) $\frac{(5+\sqrt{2})\times 2}{2\sqrt{3}\times 2}$
    c) $\frac{23}{2\sqrt{3}(5-\sqrt{2})}$
    d) $\frac{(5+\sqrt{2})\sqrt{3}}{1}$

6. Which of the following is the derivative of $3x^2 - 5e^x$?

    a) $6x - 5e^x$ b) $6 - 5e^x$

    c) $6x - 5e^x$ d) $6x + 5e^x$

7. Simplify. $(2x + 3)(x - 4)$

    a) $2x^2 - 5x - 12$

    b) $2x^2 + 7x - 7$

    c) $x^2 - 6x - 12$

    d) $2x^2 + 5x + 12$

8. Which of the following is,

    $\lim_{x \to 1}(x^2 + 5x + 2)$?

    a) 8   b) 7   c) 10   d) 0

9. Which of the following is, $\frac{d}{dx}(xe^x)$.

    a) xe^x b)$(x + 1)e^x$ c)$x + e^x$ d) e^x

10. Which of the following is incorrect?

    a) $\lim_{\theta \to 0} \frac{\sin \theta}{\theta} = 1$

    b) $\begin{pmatrix} 8 & 5 \\ 2 & -1 \end{pmatrix} + \begin{pmatrix} 1 & 0 \\ 3 & -5 \end{pmatrix} = \begin{pmatrix} 9 & 5 \\ 5 & -6 \end{pmatrix}$

    c) $\frac{d}{dx}(\cos x^2) = -\sin x^2 \cdot 2x$

    d) $\int \tan x \, dx = \cot x + C \ (C - arbitrary \ constant)$

(25 Marks)

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 02

(a) Evaluate the following.

(i) $\left(\frac{1}{2} + \frac{3^3}{5} \times \frac{1}{81}\right) + \frac{2}{5}$

(ii) $(729)^{1/6}$

(iii) $32^{2/5} + \left(2\frac{4}{3} \div \frac{5}{3}\right)^2 - \frac{2}{3}$ 　　　　　　　　　　　　　(09 Marks)

(b) Determine whether $(x - 2)$ is a factor of $f(x) = x^2 + x - 6$, using the Factor theorem. 　　　　　　　　　　　　　(05 Marks)

(c) Simplify the following.

(i) $(3x^2 - 6x + xy) + (2x^3 - 5x^2 - 3y) + (7x + 8y)$

(ii) $(5x^4 - 2x^2 + 4x - 3) - (5x^4 + 3x^3 - 4x + 3)$ 　　　　　(06 Marks)

(d) Factorize.

(i) $2x^2 + x - 3$

(ii) $x^2 + 7x + 12$ 　　　　　　　　　　　　　(05 Marks)

Question 03

(a) Find the quotient and the remainder for $(18x^2 - 3x - 6) \div (3x - 2)$ by the method of long division. 　　　　　　　　　　　　　(06 Marks)

(b) Simplify the following functions.

i. $y = e^{(3x+1)} \cdot e^{(-x+5)}$

ii. $y = \frac{3^{(x+1)} \cdot 3^{-x}}{3^{(3x+1)}}$ 　　　　　　　　　　　　　(06 Marks)

(c) Find the partial fractions of,

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

$$\frac{3x-1}{(x-1)(x+2)}$$ (07 Marks)

(d) Solve the following equation for x in terms of y.

$$y = \frac{a}{b+c}e^{x+b}$$ (06 Marks)

Question 04

(a) Solve for the values of x,

   i. $3x^2 + 5x - 2 = 0$

   ii. $x^2 + 4x - 5 = 0$ (08 Marks)

(b) Solve the following systems of simultaneous equations,

$$x - 3y = 1$$
$$x + 5y = 35 - x$$ (07 Marks)

(c) Show that the ratio between two complex numbers z_1 and z_2 is also a complex number. (Hint: Take $z_1 = x_1 + iy_1, z_2 = x_2 + iy_2$ and show that $\frac{z_1}{z_2}$ is also a complex number). (10 Marks)

Question 05

(a) Evaluate the following limits.

   i. $\lim_{x \to -1} (x^3 - 3x^2 + x + 8)$

   ii. $\lim_{x \to 0} \frac{\sin 4x}{2x}$ (09 Marks)

(b) Differentiate.

   i. $y = x^4 + x^{\frac{1}{3}} + 3$

Page 5 of 7

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

ii. $y = \sin(2x) + e^{(x+1)}$

iii. $y = x^3 - \ln(\sin x)$

iv. $y = xe^x$

(16 Marks)

Question 06

Integrate the following functions.

a) $\int x^2 e^x \, dx$

b) $\int (x^3 + 4\cos 3x) \, dx$

c) $\int (x^4 - 3e^x + 2) \, dx$

d) $\int_0^{\pi} \sin 2x \, dx$

e) $\int_0^1 e^{(3x+2)} \, dx$ (5 × 5 Marks)

Question 07

(a) Determine whether each of the following matrix is a,

Square matrix, column matrix, row matrix, zero matrix, symmetric matrix, identity matrix.

i. $\begin{pmatrix} 1 & -1 & 1 & 2 \\ 3 & 2 & 8 & 1 \\ 0 & 2 & 3 & 6 \\ 11 & 7 & 4 & 4 \end{pmatrix}$

ii. $\begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$

iii. $(0 \quad 1 \quad -5 \quad 1 \quad 4 \quad 2)$

Mention the dimension of each of the matrix as well. (13 Marks)

(b) Let,

$$A = \begin{pmatrix} -3 & -2 & 1 \\ 1 & 4 & 4 \\ 0 & 3 & 1 \end{pmatrix}, B = \begin{pmatrix} 2 & -1 & 5 \\ 3 & 2 & 1 \\ 1 & 1 & 3 \end{pmatrix}, C = \begin{pmatrix} 1 & 0 & 2 \\ 1 & 1 & 0 \\ 1 & 0 & 1 \end{pmatrix}$$

i. $A - 2B + 2C$

ii. $B - 3C$

(12 Marks)

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

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Year 1 Semester I

SEMESTER END EXAMINATION

Principles of Management – BSCM1206

- This paper consists of SEVEN (07) questions on FIVE (05) pages.
- Answer <u>FOUR (04)</u> 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: 2020.09.11   Pass mark: 40%   Time: 02 Hours

Question 01 (Compulsory)

George David has been CEO of **United Technologies Corporation** (UTC) for more than a decade. During that time, he has received numerous compliments and awards for his performance as a CEO. According to David, a key to United Technologies' success has been sustained improvements in productivity and product quality. David met a Japanese engineer, Jacky Chuan and impressed with Jacky's methods for identifying quality problems and improving performance. When he was promoted to CEO, David realized that he had to lower the costs and improve the quality of UTC's products. One of the first things he did was persuade Jacky to work for him at UTC. Under David, Jacky developed a program for improving product quality and productivity, known as Achieving Competitive Excellence (ACE), which was subsequently introduced across UTC. He dramatically cut the size of the head office and decentralized decision making to business

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

divisions. He also directed his accounting staff to develop a new financial reporting system that would give him good information about how well each division was doing and make it easier to hold divisional general managers accountable for the performance of the units under them. He then gave them demanding goals for earnings and sales growth and pushed them to improve processes within their units by implementing the ACE program.

At the same time David has always stressed that management is about more than goal setting and holding people accountable. Values are also important. David has claimed that UTC employees adhere to the highest ethical standards, that the company produce goods that have minimal environmental impact, and that employee safety remain the top consideration in the workplace. When asked what his greatest achievement as a manager has been, David refers to UTC's worldwide employee scholarship program. Implemented in 1996 and considered the trademark of UTC's commitment to employee development, the program pays the entire cost of an employee's college or graduate school education, allows employees to pursue any subject at qualified school, provides paid study time, and awards for completing degrees. Explaining the program, David states, "One of the obligations that an employer has is to give employees opportunities to better themselves. And we feel it's also very good business for us because it generates a better workforce that stays longer." David states that one of his central tasks has been to build a management team that functions smoothly over the long term. "People come to rely upon each other," he says. "You have to have the same trusting relationships. You know people; they know you. You can predict them; they can predict you".

CINEC
C A M P U S
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

According to Sandy Weill, a UTC board member, David has the right mix of toughness and sensitivity. "When somebody can't do the job, he'll try to help; but if that person is not going to make it work, that person won't be on the job forever." At the same time Weill says, "He does a lot of things that employees respect him for. I think he is a very good manager. Even though David is demanding, he can also listen—he has a receive mode as well as a send mode.

 (a) What makes George David regarded as such a good manager?   (10 Marks)

 (b) How does David get things done through people?   (05 Marks)

 (c) Which managerial skills does David seem to have? Does he seem to lack any?

(10 Marks)

Question 02

"Success of a business depends upon adapting itself to the environment within which it operates"

 (a) Justify the above statement highlighting the importance of studying business
   environment.   (15 marks)

 (b) Discuss the challenges that managers confront in assessing the business
   environment providing examples.   (05 marks)

 (c) Provide suggestions to overcome the challenges mentioned in above (b).

(05 marks)

CINEC
CAMPUS
Beyond A Graduate

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 03

(a) Define the nature and purpose of planning?   (12 marks)

(b) What are the elements of planning? Discuss the link between elements.

(08 marks)

(c) List characteristics of well-designed goals.   (05 marks)

Question 04

(a) Describe five key elements in organizational design.   (10 marks)

(b) "Many of today's organizations are finding that the traditional hierarchical organizational designs aren't appropriate for the increasingly dynamic and complex environments they face" Do you agree with this statement? Elaborate your answer considering contemporary organizational designs. (15 marks)

Question 05

(a) Discuss how human resource management practices can be a source of competitive advantage for a company.   (5 marks)

(b) Discuss about the key components of an organization's human resources management process.   (10 marks)

(c) Discuss contemporary issues in managing human resource in an organization.

(10 marks)

Faculty of Management and Social Sciences
Department of Logistics & Transport
BMgt Hons in Supply Chain Management
Course CODE: COM552

Question 06

(a) List down internal and external forces for change (02 marks)

(b) Explain why people resist change and how to manage change (08 marks)

(c) Distinguish between positive stress and negative stress (05 marks)

(d) "Organizational change can cause employees to experience stress". In order to reduce stress what are the job-related factors that managers can address?

(10 marks)

Question 07

Select any **five** and write down short notes.

(a) Types of power in leadership

(b) Maslow's hierarchy of needs motivation theory

(c) Characteristics of effective teams

(d) Porter's five forces

(e) BCG Matrix

(f) Types of controls

(g) Channel richness

(h) Henry Fayol's 14 principles of management

(5× 5 Marks)

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

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I

REPEAT EXAMINATION

Microeconomics – BSCM1204

- This paper consists of SEVEN (07) questions on FIVE (05) pages.
- Answer <u>FOUR (04)</u> 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: 2019.12.10   Pass mark: 40%   Time: 02 Hours

Question 01: (Compulsory)

(a) "Microeconomics looks at the smaller picture and focuses more on the individual interactions made in particular markets". Briefly explain the statement.

(04 Marks)

(b) Explain the terms of Scarcity with the aid of an example   (04 Marks)

(c) Briefly explain the factors affecting to Income Elasticity of Demand (04 Marks)

(d) What causes shift in the Production Possibilities Frontier inward.   (04 Marks)

(e) Identify the characteristics of "Planned Economy"   (04 Marks)

(f) Briefly explain two methods of government intervention in Market Price Controls.   (05 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 02:

Productivity has fallen recently in Finland particularly in the public sector. The country has a relatively high number of small firms. In recent years the price elasticity of demand and the price elasticity of supply of the products made by Finnish firms have changed.

(a) What is the difference between the private sector and the public sector? (02 Marks)

(b) Explain two reasons why productivity may fall and provide steps to increase the productivity of small firms. (06 Marks)

(c) Identify the factors affecting to Price elasticity of Demand (03 Marks)

(d) Analyse how an increase in the price elasticity of demand (PED) and the price elasticity of supply (PES) of its products could benefit a firm. (06 Marks)

(e) Discuss whether or not small firms are likely to survive in the long run.(08 Marks)

Question 03:

Sales of bottled water in China doubled between 2010 and 2015. In 2013 China overtook the USA as the biggest market for water by volume, but not value as the price of a bottle was higher in the USA. The increase in global consumption of bottled water has increased the size of firms producing bottled water but has also increased pollution.

(a) Define the size of firms based on its production. (02 Marks)

(b) Explain two causes of a shift of a supply curve to the right. (04 Marks)

(c) Briefly explain how the term of elasticity affects to revenue of a firm (05 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

(d) Analyse why the price of a product may be higher in the USA than China.

(06 Marks)

(e) Discuss whether large firms or small firms benefit consumers more.   (08 Marks)

Question 04:

Consider the following Demand and Supply equations of a service market.

$Q_{dx} = 450 - 10P_x$
$Q_s = 150 + 5P_x$

(a) Find the equilibrium Price and the Quantity.   (06 Marks)

(b) Illustrate the demand and supply curves in a diagram with the help of demand

and supply schedules.   (08 Marks)

(c) Government impose a unit tax of Rs: 2 for the above market,

Find the new equilibrium of the market.   (04 Marks)

(d) Find the Consumer Surplus and Producer Surplus. (Before Tax)   (04 Marks)

(e) Find the division of a tax burden between buyers and sellers of this market

(03 Marks)

Question 05:

The price elasticity of demand (PED) for sugar in most countries is less than 1. In 2017, the price of sugar fell. However, the price of specialized, higher quality sugar grown in countries such as Mauritius fell by less than the average global price. Efficient producers, such as some farmers in Brazil that have a low fixed cost of production, were also less affected by the fall in price.

(a) State the formula used to calculate PED.   (02 Marks)

(b) Explain two reasons why the price of sugar may fall.   (04 Marks)

(c) Analyse the possible reasons why a producer's fixed cost may increase. (05 Marks)

(d) Briefly explain the term of Efficient Producer with the aid of an example (06 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

(e) Discuss whether or not a country will benefit from specializing in an agricultural

product such as sugar. (08 Marks)

Question 06:

(a) Identify the factors affecting to supply of a firm (04 Marks)

(b) Briefly explain the term of "Normal goods" and "Geffen goods". (06 Marks)

(c) Briefly explain the term of Income elasticity of Demand and interpret the

results of the sign of the co-efficient. (06 Marks)

(d) Assume, If the price of petrol increased from Rs:120 to Rs:150 and demand fell from

22,000 units to 5,700. Calculate the PED of the above commodity. (04 Marks)

(e) Assume your income is increased from Rs:30,000 to Rs:55,000 and the demand for

transportation is increased from 20 to 55 (Number of trips). Calculate the income elasticity

of demand (YED) and interpret the results. (05 Marks)

Question 07:

Briefly explain following with the aid of an example. Explain only **05 Terms.**
(a) Opportunity Cost

(b) Cardinal Utility Theory

(c) Law of Diminishing Marginal Utility

(d) Perfectly Competitive Market

(e) Marginal Cost

(f) Average Cost

(g) Cross Price Elasticity of Demand

(h) Law of Demand

(5x5 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

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

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
REPEAT EXAMINATION
Introduction to Transportation – BSCM1301

- This paper consists of EIGHT (08) questions on THREE (03) pages.
- Answer <u>FIVE (05)</u> 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: 2019.12.09   Pass mark: 40%   Time: 03 Hours

Question 01: (Compulsory)

(a) Define "Sustainable transportation". Identify 4(four) sustainable transport options.
(06 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 the difference between transport cost and rate using examples. (05 Marks)
(d) List 6(six) significant conditions affecting transport cost. (03 Marks)

Question 02

(a) The first form of transportation was walking. Transportation has undergone an evolution and has resulted in man traveling beyond the earth. Explain the milestones in the history of transportation. (10 Marks)
(b) Graphically explain the difference between intermodal transportation and multimodal transportation. (06 Marks)
(c) List down advantages and disadvantages of transport hubs in a transport system.

(04 Marks)

Colombo International Nautical and Engineering College 00011
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 03

(a) Explain ways in which rail transportation issues of Sri Lanka can be mitigated.

(10 Marks)

(b) Mass Rapid Transit (MRT) is fully grade separated from other traffic.
Explain above with examples. (06 Marks)

(c) List 4(four) types of rail freight cars with examples for cargo carried in each rail
car. (04 Marks)

Question 04

(a) Differentiate between Charter services and Liner Shipping services. (06 Marks)

(b) "Maritime transport is the backbone of global trade" Explain (10 Marks)

(c) Identify 4(four) types of ships with examples of cargo carried in each ship type.

(04 Marks)

Question 05

(a) Pipelines are limited in the markets they serve and very limited in the commodities
they can transport and a unique mode of transport. Discuss (09 Marks)

(b) Briefly describe the direct, indirect and cumulative impacts of transportation on
the environment with examples. (06Marks)

(c) List down 5(five) environmental concerns of pipeline transportation. (05 Marks)

Question 06

(a) What are the disadvantages of air cargo transportation? (04 Marks)

(b) Explain the airside and landside components of an airport with examples.

(08 Marks)

(c) Briefly explain the 2(two) types of aircraft based on aircraft structure. (06 Marks)

(d) List down 4(four) examples of General Aviation. (02 Marks)

Question 07

(a) Explain the term 'Accessibility'. Give your suggestions to mitigate the road
transport issues of Sri Lanka by improving accessibility. (08 Marks)

(b) Explain the functional classification of roads with examples. (08 Marks)

Colombo International Nautical and Engineering College 00011
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

(c) List down the 4(four) advantages of road freight transportation. (04 Marks)

Question 08

(a) Piracy can be defined as plundering, hijacking or detention of a ship in international waters. Identify methods taken to reduce the risk of maritime piracy.
(06 Marks)
(b) Briefly explain factors affecting cargo insurance premiums. (05 Marks)
(c) Explain the 3(three) types of maritime hazards with examples and list down measures to avoid them. (09 Marks)

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

Colombo International Nautical and Engineering College

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
REPEAT EXAMINATION
Principles of Management – BSCM1206

- This paper consists of SEVEN (07) questions on TWO (02) pages.
- Answer <u>FOUR (04)</u> 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: 2019.12.06   Pass mark: 40%   Time: 02 Hours

Question 01: (Compulsory)

Write short notes on the below topics;
   (a) Work specialization
   (b) Departmentalization
   (c) Span of control
   (d) Chain of command
   (e) Centralization vs Decentralization

(5*5 Marks= 25 Marks)

Question 02

(a) "Planning is looking ahead, and control is looking back". Explain this statement. (10 Marks)
(b) Compare and contrast main approaches for planning. (15 Mark)

Question 03

(a) List three essential skills of a manager and explain two out of them. (05 Marks)

00009
Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

(b) "Early theories of motivation are useful as they represent the foundation from which contemporary theories grew". Compare and contrast two such early motivation theories.   (20 Marks)

Question 04

(a) Briefly explain what managers do during the six steps of the strategic management process   (13 Marks)
(b) The control process is a three-step process. Explain this process using examples.
                                                                                            (12 Marks)

Question 05

List five factors/ forces in the macro environment. Explain how four of the listed factors/ forces impact a business using examples.   (25 Marks)

Question 06

"History is important because it can put current activities in perspective". Identify and explain five land mark eras in the management history.   (25 Marks)

Question 07

(a) Classify decisions and decision-making condition.   (15 Marks)
(b) Briefly explain the elements of the communication process.   (10 Marks)

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

Colombo International Nautical and Engineering College 00004

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
REPEAT EXAMINATION
Introduction to Logistics – BSCM1307

- This paper consists of EIGHT (08) questions on FIVE (05) pages.
- Answer <u>FIVE (05)</u> 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.
- Supporting documents are attached.

Date: 2019.12.05   Pass mark: 40%   Time: 03 Hours

Question 01: (Compulsory)

(a) Briefly explain how Logistics and Transportation aspects are used in day-to-day life scenarios   (05 Marks)

Answer the following questions referring to the hypothetical case study below

A hypothetical case study on 'PURE' Mineral Water Pvt. Ltd.
Refreshed with a taste of purity

PURE Mineral Water Pvt. Ltd. is famously known for their high quality and gently purified water through earth's ancient natural minerals and specially packaged in glass bottles. It is a large-scale mineral water sourcing, bottling and distributing business, which mainly has two sources and two bottling plants located at Kotagala and Ambathale. And there are over 1500 distributors and over 25,000 retailers located all over the island. PURE is operating a separate distribution for all 19 liter water cans, that operates as multiple pickups and deliveries.

(b) Briefly explain the Inbound, Process and Outbound Logistics activities of PURE Mineral Water Pvt. Ltd.   (05 Marks)

(c) List down and explain the four (04) Business Logistics Systems.

Colombo International Nautical and Engineering College 00004
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Which business logistics systems are mostly applicable for PURE ? (06 Marks)

(d) The Logistics Manager of PURE Mineral water Pvt. Ltd. suggests operating a private warehouse to store their finished goods. Give your comments on this suggestion (04 Marks)

Question 02

(a) Distinguish between the independent demand and derived demand with an appropriate example. (04 Marks)

Note: Refer the attachment to answer part (b) and part (c) where necessary

(b) Ms. Shrimali, the Logistics Planning Manager at PURE Mineral Water Pvt. Ltd. is planning the logistics operations for the last quarter in 2019. The actual sales data for the '500 ml water bottles' is given in the table below.

Table 2.1 : Actual Demand/Sales Data for the months of October 2019

Month	October			
Week	1	2	3	4
Actual Demand / Sales	93,500	94,500	93,000	92,000

Table 2.2 : Actual Demand/Sales Data for the months of November 2019

Month	November			
Week	1	2	3	4
Actual Demand / Sales	91,500	92,000	91,500	89,000

Table 2.3 : Actual Demand/Sales Data for the months of December 2019

Month	December	
Week	1	2
Actual Demand / Sales	89,000	90,000

With reference to the data given in the above tables, forecast the demand by answering the following questions

(i) The Naïve forecast for October Week 04 and December Week 01
(ii) The one week simple moving average forecast for December week 03

Colombo International Nautical and Engineering College 00004
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

(iii)   The four-week Simple Moving Average forecast for December week 03

(iv)   The Weighted Moving Average forecast for December week 03 using the weights 0.25 , 0.36 , 0.12

(v)   The Exponential Smoothing forecast for December week 03 with a smoothing constant of 0.36 (Assume the forecast for December week 01 is 89,500 units)

(08 Marks)

(c) Using the data given below, calculate:
   (i)   Forecasting Error
   (ii)   Running Sum of Forecast Error
   (iii)   Mean Absolute Deviation
   (iv)   Mean Squared Error
   (v)   Mean Absolute Percentage Error
   (vi)   Tracking Signal

(08 Marks)

Table 2.4: Daily Forecast and Actual sales (D=Day)

Day	D1	D2	D3	D4	D5	D6	D7
Forecast	1018	1011	1019	1013	1018	1012	1016
Actual	1019	1014	1019	1016	1012	1010	1017

Question 03

(a) List down and explain the four (04) types of inventory classifications   (05 Marks)

(b) Consider the demand/cost data for '1 liter water bottles' at PURE Mineral Water Pvt. Ltd. (Kotagala Bottling Factory) given below, and answer the following questions

The monthly demand for the year 2020 (in average for each month) is forecasted as 1000 units. The ordering cost is calculated to be 150 LKR per order and the order will be received after one week of placing through the procurement system. The factory is scheduled to run for 350 days in the year. It is the factory policy to maintain the holding cost per unit per annum at 12 LKR. Currently the procurement department places orders of 500 units.

Note : refer the attachment to answer the questions where necessary

Colombo International Nautical and Engineering College 00004
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

(i)   Sate the assumptions of a Basic EOQ model
(ii)   Calculate the total annual inventory cost for the current order quantity
(iii)   Calculate the optimum order quantity
(iv)   Calculate the total annual inventory cost for optimal order quantity
(v)   Determine the difference of total inventory costs between current and optimal order quantities
(vi)   Determine the ROP   (15 Marks)

Question 04

(a)
   (i)   What is meant by an 'Order Cycle'   (02 Marks)
   (ii)   Draw the 'Oder Cycle' in the perspective of customers with an appropriate example   (05 Marks)
   (iii) Order Processing is the activities that take place in the period between the time a firm receives an order and the time a warehouse is notified to ship the goods to fill that order.
          List down the activities of order processing and explain any two (02) of them   (05 marks)

(b) Discuss the evolution of the logistical organizations and those hierarchies in relation to the 'stages of evolution'   (08 Marks)

Question 05

(a)
(i) Explain with five (05) relevant factors how domestics logistics differ from global logistics.   (05 Marks)
(ii) Select one (01) of the macroenvironmental factors among Political, Economic and Cultural and explain the influence of it towards the International Logistics. Use real examples were necessary   (07 Marks)

(b)
(i) List down six (06) types of purchases   (03 Marks)
(ii) Discuss the reasons for purchasing materials/components from external suppliers rather than making those in-house   (05 Marks)

Colombo International Nautical and Engineering College 90004
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Question 06

(a) What is meant by the term 'Warehousing'? (02 Marks)

(b) List down all the activities of warehousing (05 Marks)

(c) List down the four types of warehousing? Discuss in detail with appropriate examples (07 Marks)

(d) Decision to acquire or lease a warehouse will be affected by: location decisions, setting up decisions and design considerations.

Explain two (02) such design considerations that needs to be looked upon in designing a warehouse. Write appropriate examples where necessary (06 Marks)

Question 07

(a) Ms. Shrimali, the Logistics Planning Manager of PURE Mineral Water Pvt. Ltd. suggests on shifting some of the logistics activities (finished goods inventory control, finished goods field warehousing and distribution) that are currently operated by the company, to a 3rd party logistics service provider.

Assuming that you are Ms. Shrimal, write a brief report to be submitted to the Head of Logistic, giving comments on the above decision.

The description of the report should include the relevant reasons, risks and challenges of shifting towards a 3rd party logistics company (12 Marks)

(c) Discuss in detail on the transport modal characteristics and modal selection criteria (08 Marks)

Question 08

Write short notes on <u>four (04)</u> of the following

(a) Inbound, Process and Outbound Logistics

(b) The building block concept of packaging in a warehouse

(c) Intermediary parties in global logistics systems

(d) How RFID works in a Warehouse?

(e) Advantages and disadvantages of JIT

(f) Functions performed by LIS (5*4 Marks)

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

CINEC Campus
Faculty of Management Humanities and Social Sciences
Department of Logistics & Transport
BMgt.(Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
REPEAT EXAMINATION
Introduction to Logistics BSCM1307

Attachment

Equations for Calculations

$C_{(T)} = (Q/2) * H + (D/Q) * S$ ['Q' can be replaced with 'Qo' depending on the purpose of the calculations]

$C_{(H)} = (Q/2) * H$ ['Q' can be replaced with 'Qo' depending on the purpose of the calculations]

$C_{(O)} = (D/Q) * S$ ['Q' can be replaced with 'Qo' depending on the purpose of the calculations]

$Q_0 = \sqrt{(2DS/H)}$

$ROP = (d * L) + SS$

....

$F_t = F_{(t-1)} + \alpha [A_{(t-1)} - F_{(t-1)}]$

$e_t = A_t - F_t$

$RSFE = \sum e_t$

$MAD = \dfrac{\sum |A_t - F_t|}{n}$

$MSE = \dfrac{\sum [A_t - F_t]^2}{(n-1)}$

$MAPE = \dfrac{\sum \left\{ \dfrac{|A_t - F_t| * 100}{A_t} \right\} \%}{n}$

$TS = (RSFE / MAD)$

1

00004

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
REPEAT EXAMINATION
ICT Applications – BSCM1205

- This paper consists of SEVEN (07) questions on SEVEN (07) pages.
- Answer <u>FOUR (04)</u> 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: 2019.12.04   Pass mark: 40%   Time: 02 Hours

Question 01: (Compulsory)

A security policy is a written document in an organization outlining how to protect the organization from threats.

(a) What are the things may include in a company's security policy? Briefly describe your answer.   (05 Marks)

(b) Write five (05) criteria you must use when choosing a password or setting up password guidelines.   (05 Marks)

(c) What is the importance of taking backups? How do you take backups? Briefly explain your answer.   (10 Marks)

(d) List some common health problems associated with using a computer. (05 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Question 02

(a) What is a computer? Briefly describe the answer. (04 Marks)

(b) Write three (03) input devices and three output devices of a computer.
(06 Marks)

(c) Briefly describe following factors.
1) RAM
2) ROM
3) CPU (09 Marks)

(d) Explain the differences between "Hardware" and "Software". Give examples for each. (06 Marks)

Question 03

(a) What is an operating system? Describe your answer with three (03) examples for operating systems. (06 Marks)

(b) What is file management? Why file management is important for computer users?
(06 Marks)

(c) Why do we need file compression? (05 Marks)

(d) Write three (03) types of file compressors. (03 Marks)

(e) Write the file type for following extensions. (05 Marks)
1) .txt
2) .html
3) .gif

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

4) .mp3
5) .avi

Question 04

(a)   Briefly describe what is HTML.   (06 Marks)

(b)   Write the purpose of following HTML formatting tags.   (09 Marks)
1. <body>
2. <title>
3.
4.
5. <sub>
6. <sup>
7. <b>
8. <i>
9. <big>

(c)   What is the output of following code?   (10 Marks)
        <html>

            <body>

                <p>This is my first paragraph. </p>
                <form>
                I have a bike:
                <input type="checkbox" name="vehicle" value="Bike" />

                I have a car:
                <input type="checkbox" name="vehicle" value="Car" />

                I have an airplane:
                <input type="checkbox" name="vehicle" value="Airplane" />

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

```
            </form>
        </body>
    </html>
```

Question 05

(a)   What is a "computer virus"?   (06 Marks)

(b)   Briefly describe about following computer viruses.   (06 Marks)
        1) Overwrite virus
        2) Boot virus
        3) Network virus

(c)   How does virus enter to your computer? Write three (03) ways. (03 Marks)

(d)   How can you identify if your computer has been attacked by a virus? Write five
        (05) ways.   (05 Marks)

(e)   What is a firewall? Briefly explain with the purpose of using a firewall.
                                                                       (05 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Question 06

(a)   What is a Database Management System? Give three (03) examples for DBMS.
(06 Marks)

(b)   List down five (05) advantages of databases.   (05 Marks)

(c)   What is the purpose of using a 'Primary Key' for a table?   (05 Marks)

(d)   List down four (04) Database objects.   (04 Marks)

(e)   Consider following table 'Items'. Write a query to select the Price of item where Item_Code is 3.   (05 Marks)

Item_Code	Item_Name	Price	Country
1	Refrigerator	75000	Sri Lanka
2	Air Condition	125000	India
3	Gas Cooker	8900	Sri Lanka
4	Washing Machine	54000	Sri Lanka

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Question 07

Write the formulas for following questions. These questions are based on the excel sheet bellow.

(a)   Find the total amount earned by Bromley   (05 Marks)

(b)   Calculate total amount during the first two days (1/1/2019 and 2/1/2019).
                                                                                  (05 Marks)

(c)   Calculate the total amount during the given time period?   (03 Marks)

(d)   What is the average amount of given time period?   (05 Marks)

(e)   Display the profit of Gloucester on 1/1/2019 as 'High' if amont is more than 1500.
        Else display as 'Low'.   (07 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

	A	B	C	D	E	F
1	Country	SalesPerson	Order_Date	Order_ID	Units	Amount
2	USA	Gloucester	1/1/2019	10111	5	7000
3	UK	Bromley	1/1/2019	10236	1	1448
4	UK	Finssry	1/1/2019	10289	2	1500
5	USA	Gloucester	1/1/2019	10389	5	5000
6	UK	Finssry	2/1/2019	10397	1	750
7	UK	Fuller	2/1/2019	10456	3	1063
8	USA	Callahan	5/1/2019	10478	5	8000
9	USA	Ben	5/1/2019	10487	9	10000
10	USA	Callahan	8/1/2019	10598	10	6852
11	USA	Gloucester	10/1/2019	10654	4	456
12	USA	Ben	10/1/2019	10678	6	7700
13	USA	Callahan	10/1/2019	10687	8	4563
14	USA	Callahan	15/1/2019	10699	9	2558
15	UK	Bromley	15/1/2019	10712	7	9000
16	UK	Raylet	16/1/2019	10723	8	10000
17	UK	Raylet	18/1/2019	10756	5	6400
18	UK	Bromley	18/1/2019	10798	2	45200
19	USA	Gloucester	20/1/2019	10852	2	2000
20	UK	Finssry	21/1/2019	10863	1	1500
21	USA	Callahan	22/1/2019	10874	3	3000
22						

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

Colombo International Nautical and Engineering College

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I

REPEAT EXAMINATION

English for Business I – BSCM1202

- This paper consists of EIGHT questions on ELEVEN (11) pages.
- Answer <u>ALL</u> 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: 2019.12.02   Pass mark: 40%   Time: 02 Hours

Question 01

Read the following article about the ways in which the climate affects business and answer the given questions.   **(20 Marks)**

What is achievement?

Achievement is an important competency given that the more you can achieve, the better your prospects will be when it comes to looking for a new job. Achievement is what you have done of significance at work which has benefited your company or organization. Think about your work achievements. Or even your life achievements - these are the successes that you have had so far. Perhaps you have just passed your driving test, or maybe after many years of trying, you have learnt to swim. This is an achievement as it is something you have worked hard for, and in the end the results have been successful.

Why is it important?

In our lives it is important to have objectives so when you have reached them you can say you have some achievements. Think about when you were younger, and your ambitions. Maybe you wanted to become a doctor, so you studied hard, and

Colombo International Nautical and Engineering College

00009

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

you finally became a doctor. Perhaps you wanted to have a house with a big garden. Can you remember the day you fulfilled this dream? These are personal achievements and they give you the feeling of self-satisfaction, confidence, and happiness. Let us now take a look at your work achievements. When you have achievement at work it means that you are working towards goals normally set by others, but they can be set by yourself, too. Perhaps you have to reach a sales target, or you need to complete a project within a deadline, or perhaps you need to see clients or customers and help them in some way. If you succeed in helping them, or you reach your sales target, or you complete your project by the deadline, you have examples of achievements. Striving for achievements shows determination and tenacity.

How can you show it?

If you have a job interview and you want to demonstrate your achievements you need to think about different situations you have been in, the actions you have taken, and the results of these actions. Perhaps you have had a difficult customer, how have you dealt with that person? Did your action benefit your organization? In what way? If your results were successful, state this either in your job application, or in your interview. Think about the skills which you have which make you attractive and valuable as an employee. Remember the more achievement you can give as examples, the more you can sell and market yourself for the job.

(a)   Find an adequate definition to describe achievement.   (02 Marks)

....

....

(b)   What gives you the feeling of self-satisfaction, confidence, and happiness?
                                                                              (02 Marks)

....

(c)   Who sets goals?   (02 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

....

(d) According to the passage, how can one become successful in marketing field?

(02 Marks)

....

....

(e) Give two examples of achievement as explained in the passage? (02 Marks)

....

....
....

....

(f) Explain the meaning of the following five words as used in the text: (05 Marks)
competency, benefit, deadline, determination, demonstrate

....

....

....

....

....

....

(g) Write a summary of the above article using less than 50 words. Do not exceed the
word limit.   (05 Marks)

Colombo International Nautical and Engineering College

00009

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

....

....

....

....

....

....

....

Question 02

Complete the paragraph underlining the correct word given within brackets.

(10 marks)

Research is a very general *(i).* [*item/ term/ idea]* for an activity that involves finding out, in a more or *(ii).* *[fewer/ a little/ less]* systematic way, things you did not *(iii).* *[know/ experience/ declare]*. A more academic *(iv).* *[synonym/ anticipation/interpretation]* is that research involves finding out about things that no-one else knew *(v).* *[neither/either/ never]*. It is about advancing the frontiers of knowledge. Research (vi). [patterns/ topics/ methods] are the techniques you use to do research. They represent the *(vii).* *[tools/ weapons/ aids]* of the trade, and provide you with ways to collect, sort and (viii). *[analyze/ negotiate/ eliminate]* information so that you can come to some conclusions. If you use the right sort of methods for your *(ix).* *[special/ particular/ unique]*, then you should be able to convince other people that your *(x).* *[conclusions/ hypotheses/ criteria]* have some validity, and that the new knowledge you have created is soundly based.

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

Question 03

Fill in the blanks with the most suitable word formed from the word given within brackets. (10 marks)

> **Example:** Many countries place restrictions on the *remittance* of currency abroad. [remit]

(i). The terms of employment are …………………………….. [negotiate]

(ii). Electronic payment methods have provided a great ……………………….… to customers. [convenient]

(iii). Central Bank is responsible for conducting a ………………………. policy in Sri Lanka. [money]

(iv). The country is now enjoying a period of relative ………………………… and prosperity. [stable]

(v). The government's …………………….. policy has been broadly successful. [economy]

(vi). Some economists give very sound …………………. advice. [finance]

(vii). The sudden resignation of the financial director put the company in a very …………………… position. [vulnerability]

(viii). The training given should be ……………………….. to meet the future needs of the industry. [adequacy]

(ix). Access is controlled so that only …………………. people can use it. [authority]

(x). The ………………… report will be submitted at the end of the financial year. [audit]

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

Question 04

Form the question that matches the given replies in the following conversation. Look at the example. (10 marks)

Example: *How often does the CEO visit the company?*
The CEO visits the company once in two weeks.

(i). ....

The company was established in 1912.

(ii). ....

The bank has fifteen branches all over the country.

(iii). ....

The undergraduates did the research in Ampara.

(iv). ....

Ruwan took three months to complete his dissertation.

(v). ....

Interviews and questionnaires are the most important tools in the market research.

Question 05

Complete the blanks in the following paragraph with the most appropriate phrase given in the box. (10 marks)

ground level/ well-rounded/big-picture mindset/ leadership role / most sought after/ industry segments/ business matters/ back-office/ finance professionals/ business operations

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

The Chief Financial Officer's responsibility has become more complex nowadays. A CFO with a (i)..................................... and the ability to contribute beyond the functional area is the (ii).................................... talent by organizations across (iii).......................... The reality however is that while demand continues to grow, professionals with (iv)..........................capabilities are in short supply. It is therefore important for (v)................................. to take the initiative to develop interest in (vi)................................. and get a first-hand feel of business at the (vii)................................ With CFO's now playing a critical (viii)............................. in a company's strategy and (ix)............................. The transition in the CFO's role from a (x)...................... support function to that of a strategic partner has also resulted in restructuring of their compensation packages.

Question 06

Read the following extract of the minutes written by the secretary of the ScreenLine Group of companies. **(10 marks)**

The minutes of June meeting of ScreenLine Group

Date: 15th June 2019, 09.00 a.m. to 11.30 a.m.
Location: Main Boardroom
Chairperson: Gamini Silva, General Manager
Secretary: Himashi Perera
In Attendance: Arun Diaz, Anne Gomez, Ruwan Perera, Nuwan Fernando,
    Shiron Clifford, Shehan Peiris, Ajith Rodrigo, Nisha Alwis
    Absent: Deepthi Silva

(i) Review of Previous minutes
    Ajith Rodrigo proposed a change to the wording of the second sentence of item.6 to read '..... on completion of the final report, Committee Members will each receive their own personal copy." Members accepted the proposed change and the revised minutes were adopted unanimously.

(ii) Review of Agenda – Chairperson

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

Items 6 and 7 on the agenda, both dealing with the development of the marketing strategy and plan for next year, will be deferred until the following meeting when Heshan Pathirana will be present.
Action: *Heshan Pathirana*

(iii) Status of upcoming operational review
Arun Diaz passed out copies of his latest status report stating that progress was excellent and that preparation for the review is actually ahead of schedule.
Action: *Arun Diaz*

(iv) Employee Assistance Program
Shiron Clifford tabled this item explaining that the contract with the current service provider will be coming to an end on 30th June. He stated that the costs for this service have been quite high over the last three years with the current contractor. Therefore, he is proposing that we go ahead and solicit proposals to see if we can find a more cost-effective service provider.

(v) Year-End Projections

(vi) Marketing Plan – 2020
Deferred to next meeting.

(vii) Implementation of 2019 August Business Plan
Deferred to next meting.

(viii) Closing Remarks
The Chairperson stated that he was very pleased with the obvious positive impact of the new marketing strategy on the bottom line. Members were asked to continue with the urgent implementation of the new CRM Campaign.

(ix) Next Meeting
The next meeting will be held in the Boardroom at 2.00 p.m. on 17th July 2019.

Now answer the following questions

(a). What did Ajith Rodrigo propose? ....
....
(b). Why were Items 6 and 7 postponed? ....
....

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

(c). Who stated that the costs of employment assist program was quite high? ....

(d). How many items were deferred to next meeting? ....

(e). What did the Chairperson request from members? ....

....

Question 07

Write sentences to bring out the meaning of five words given below. (10 marks)

entrepreneur	investment	interpretation
communicate	recommend	conclude
viable	competitive	negotiable
strategically	approximately	vertically

....
....
....
....
....
....
....
....

Question 08

You want to find out the reasons for non-attending General English lectures in your class and propose the lecturer a few innovative plans to improve teaching of the general English subject. Use the following format to write your report. (20marks)

(i). Title – Your title should tell the reader what the report is about

(ii). Aim – Explain what you were trying to find out

(iii). Method – Describe in detail the research you carried out

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

00009

(iv). Conclusions – Draw conclusions from the research and results

(v). Suggestions – Base these on your conclusions

Use about 150 words

....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....

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

Colombo International Nautical and Engineering College

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
REPEAT EXAMINATION
Introduction to Logistics – BSCM1307

100000

- This paper consists of EIGHT (08) questions on FOUR (04) pages.
- Answer <u>FIVE (05)</u> 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.
- Supporting documents are attached.

Date: 2018.10.31   Pass mark: 40%   Time: 03 Hours

Question 01: (Compulsory)

Logistics can be viewed as a logical extension of transportation and related areas to achieve as efficient and effective goods distribution system. Further, this is an integrated view of a number of different activities or functions. From a firm's point of view, these activities are represented as a part of value chain, called the generic value chain by Porter: every firm is viewed as a collection of primary and supportive activities.

Source: Logistics and Supply Chain Management Cases and Concepts

Answer the following questions

(a) Briefly explain on several mile stones in the history that expresses Logistics existed

(05 Marks)

(b) List down and explain the four (04) systems of logistics with examples   (05 Marks)

(c) Select a product and a company of your own, and graphically illustrate the supply chain, mentioning the tiers of suppliers and customers, consumers, initial suppliers, and the three (03) flows of a supply chain

(10 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 02

(a) (i) List down six (06) types of purchases   (03 Marks)

(ii) Discuss the reasons for purchasing materials/components from external parties rather than making those in-house   (07 Marks)

(b) (i) Discuss how global logistics differ from domestic logistics   (04 Marks)

(ii) Briefly explain the benefits of global logistics   (06 Marks)

Question 03

(a) List down and explain the four (04) types of Inventory classifications (05 Marks)

(b) "Saffrons" is a world-renowned brand name for women consumer care products and it operates a production plant in Sri Lanka to cater it's demand. The sales and marketing department of "Saffrons Consumer Brands Sri Lanka" has forecasted the annual demand for "Women hair shampoo" as 1,000,000 units and accordingly the production plan runs all days in the year. The ordering cost is calculated to be $ 860 per order and the supplier agrees to make the shipment available at the plant 02 weeks and 02 days after placing the order by Saffrons' procurement team. The company policy is to maintain 1125 units as the safety stock and has decided to maintain the holding cost per unit per annum at $ 165

Answer the following questions with the data given above
- (i)   Calculate the Economic Order Quantity
- (ii)   How many times that the order must be placed?
- (iii)   Calculate the Total Annual Ordering Cost
- (iv)   Calculate the Total Annual Holding Cost
- (v)   Calculate the Total Annual Inventory Cost
- (vi)   Determine the Re-Order Point   (15 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

100000

Question 04

(a) List down the activities of Order processing. Explain all the activities   (10 Marks)

(b) Discuss the evolution of the logistical organizations and those hierarchies in relation to the 'stages of evolution'   (10 Marks)

Question 05

(a) The Logistics Planning Manager at St. Jonathans Ltd. which is a large-scale manufacturer of consumer care products, is planning the logistics operations for the month of November 2018. Considering the "Fragranced Soap" production and sales data given in the table below, prepare the forecasts by answering the following questions.

Table 5.01: Actual production and sales in 2018 (in '000)

Year	2018							
Month	February	March	April	May	June	July	September	October
Sales	946	926	945	960.5	920	955.5	938	953.5

(i)   The Naïve Forecast for November 2018
(ii)   The Four - month Simple Moving Average forecast for November 2018
(iii)   The Weighted Moving Average forecast for November 2018 using the weights 0.25 , 0.39 , 0.15
(iv)   The Exponential Smoothing forecast for November 2018 with a smoothing constant of 0.42 (Assume the forecast for September 2018 is 950,000 units)

(10 Marks)

(b) Using the data given below, calculate :
(i)   Forecasting Error
(ii)   RSFE
(iii)   MAD
(iv)   MSE
(v)   MAPE
(vi)   TS

(10 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Table 5.02: Weekly Forecast and Actual sales (W=Week)

Week	W1	W2	W3	W4	W5	W6	W7
Forecast	1018	1011	1019	1013	1018	1012	1016
Actual	1019	1014	1019	1016	1012	1010	1017

(note : refer the attachment where necessary)

Question 06

(a) Define the term 'Warehousing'? (03 Marks)

(b) List down all the activities of warehousing (05 Marks)

(c) Warehousing plays a major and an extensive role in the logistics system. Briefly describe, the warehouse's role in logistics (05 Marks)

(d) List down the four (04) types of warehousing. Discuss with examples. (05 Marks)

(e) State four (04) advantages of "Cross-Docking" (02 Marks)

Question 07

(a) Mr. Pramitha, the Logistics Planning Manager of Coca-Cola Sri Lanka, suggests on shifting some of the logistics activities that are traditionally performed inside, to a 3rd party logistics provider. Assuming that you are Mr. Pramitha, write a brief report to be submitted to the Head of Logistics and Supply Chain, explaining on the **advantages and disadvantages** moving for a 3rd party company

(10 Marks)

(b) Discuss in detail on the transport modal characteristics and selection criteria

(10 Marks)

Question 08

Write short notes on **FOUR (04)** of the following

(a) The challenges to global logistics

(b) Double Deep Pallet Racks

(c) Transportation networks

(d) E-procurement

(e) Packaging used in warehouses

(f) The purchasing process (5*4 Marks)

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

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management Humanities and Social Sciences
Department of Logistics & Transport
BMgt.(Hons) in Supply Chain Management
Course CODE: COM552

Year I Semester I
SEMESTER END EXAMINATION
Introduction to Logistics BSCM 1307

Attachment

Equations for Calculations

$$C_{(T)} = (Q/2) * H + (D/Q) * S$$

$$C_{(H)} = (Q/2) * H$$

$$C_{(O)} = (D/Q) * S$$

$$Q_0 = \sqrt{(2DS/H)}$$

$$ROP = (d * L) + SS$$

$$F_t = F_{(t-1)} + \alpha [A_{(t-1)} - F_{(t-1)}]$$

$$E_t = A_t - F_t$$

$$RSFE = \sum E_t$$

$$MAD = \frac{\sum |A_t - F_t|}{n}$$

$$MSE = \frac{\sum [A_t - F_t]^2}{(n-1)}$$

$$MAPE = \frac{\sum \left[\frac{|A_t - F_t| * 100}{A_t} \right] \%}{n}$$

$$TS = (RSFE / MAD)$$

Colombo International Nautical and Engineering College

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

000003

Year 1 Semester I
REPEAT EXAMINATION
Introduction to Transportation – BSCM1301

- This paper consists of EIGHT (08) questions on THREE (03) pages.
- Answer <u>FIVE (05)</u> 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: 2018.10.30   Pass mark: 40%   Time: 03 Hours

Question 01 (Compulsory)

(a) Write a report on National Highways classifications of Sri Lanka.   (10 Marks)

(b) Explain the actions that you can take to mitigate the road transport issues of Sri Lanka by using intelligent transport systems.   (10 Marks)

Question 02

(a) List down the type of ships used in Freight transportation?   (05 Marks)

(b) Draw a diagram of a ship and name following terms and explain two of them in brief.

    (i).   LOA

    (ii).   BEAM

    (iii).   DEPTH

    (iv).   FREEBOARD

    (v).   DRAFT   (15 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Question 03

(a) Explain the characteristic of air transport. (10 Marks)

(b) Explain the characteristics of Commodities transported by air. (10 Marks)

Question 04

(a) Explain the types of cargo transported by rail. (05 Marks)

(b) Draw and name the layout of an Intermodal Rail Terminal. (05 Marks)

(c) Briefly explain the future aspects of Sri Lankan railway. (10 Marks)

Question 05

(a) Explain the categories of pipeline transportation. (05 Marks)

(b) Elaborate the Typical advantages and disadvantages of Pipelines pipeline transportation with justifications. (15 Marks)

Question 06

(a) Write a report explain the differences between Piracy and Armed Robbery.

(10 Marks)

(b) Explain the decision of the insurer for the following situations, assuming yourself as a Cargo insurance consultant.

(i). "Mr. Red took a cargo insurance policy for his shipment of Bee Honey to England from his Farm. At the time of taking policy, he sent some boxes of Tropical Oranges in that shipment and he didn't disclose this fact to the insurer. The ship met with an ocean peril and was unable to arrive the port on given date. Once the cargo was released Mr Reds' Buyer noticed that cargo has been damaged. Mr Red claims for the insurance".

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

000003

(ii). Mr Blue insured her house for Rs 200000. His house got destroyed due to a fire and she was managed to salvage his furniture and electrical components amounting Rs. 45000. He is claiming for the compensation of Rs. 200000. (10 Marks)

Question 07

(a) Explain the term "pollution" and explain the types of pollutions that can happen as a result of transport activities. (05 Marks)

(b) Write a very brief description about following topics.

    (i). Territorial dispute

    (ii). Climate and Weather

    (iii). Renewable resources (15 Marks)

Question 08

(a) Explain the concept of Globalization in your own words (05 Marks)

(b) What are the two components of Globalization? Explain (07 Marks)

(c) Describe forces driving Globalization (08 Marks)

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

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
REPEAT EXAMINATION
Microeconomics – BSCM1204

- This paper consists of SEVEN (07) questions on FIVE (05) pages.
- Answer <u>FOUR (04)</u> 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: 2018.10.29   Pass mark: 40%   Time: 02 Hours

Question 01: (Compulsory)

(a) "Microeconomics is a branch of economics that studies the behavior of individuals" Explain this statement.   (4 Marks)

(b) Explain the basic economic problems of a society.   (4 Marks)

(c) Briefly explain Cost of Production of Manufacturing Firm.   (4 Marks)

(d)   What causes shift in the production possibilities frontier inward.   (4 Marks)

(e) Briefly explain the economic benefits of distributions of cargo   (4 Marks)

(f) Construct the **Supply Function** using the following table and illustrate it on a suitable diagram   (5 Marks)

Price (x)	Supply (Qs)
5	100
10	120

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

15	140
20	160

Question 02:

Production involves the use of the four factors of production. The use of these resources involves an opportunity cost.

(a) Briefly explain the returns on factors of production of a selected firm   (4 Marks)

(b) Using appropriate examples, describe the four factors of production.   (6 Marks)

(c) Using a production possibility curve, explain what is meant by opportunity cost.

(7 Marks)

(d) Discuss whether more factors of production should be used to build houses.

(8 Marks)

Question 03:

Despite more cars being sold, world demand for bicycles is increasing. It has been estimated that the world price elasticity of demand for bicycles is –0.18 but this does vary between countries. The indirect taxes imposed on bicycles also differ between countries.

(a) Briefly explain the term of 'Contraction in Demand'.   (3 Marks)

(b) Briefly explain the Price Elasticity of Demand with aid of an example. (4 Marks)

(c) Explain three likely causes of an increase in demand for bicycles.   (6 Marks)

(d) Analyse why the demand for a product may be more price elastic in one country than in another country.   (6 Marks)

(e) Discuss whether a government should impose indirect taxes only on products with inelastic demand.   (6 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 04:

Consider the following Demand and Supply equations of a commodity in the market.

$Q_{dx} = 400 - 4P_x$
$Q_s = -50 + 5P_x$

    (a) Find the equilibrium Price and the Quantity. (6 Marks)

    (b) Illustrate the demand and supply curves in a diagram with the help of demand and supply schedules. (6 Marks)

    (c) Find the excess demand and excess supply at the price of 30 and 80 (4 Marks)

    (d) Find the Consumer Surplus and Producer Surplus. (4 Marks)

    (e) Briefly Explain the Minimum Price Control Method with the aid of an example (5 Marks)

Question 05:

Both the private sector and the public sector are involved in building houses. In one country a private firm has built an extra 100 000 houses but, at the same time, its government has increased income tax significantly.

(a) Briefly explain the Direct and Indirect taxes that government charge from the public

(5 Marks)

(b) Explain, using a demand and supply diagram, how these two actions would have affected the equilibrium price and the equilibrium quantity of houses. (6 Marks)

(c) Explain what determines the demand for houses. (4 Marks)

(d) Discuss whether it is better for the public sector to build houses rather than the private sector. (10 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 06:

(a) Identify the factors affecting to price elasticity of Supply   (4 Marks)

(b) Briefly explain the term of "Normal goods" and "Luxurious goods".   (6 Marks)

(c) Briefly explain the term of Income elasticity of Demand and interpret the

    results of the sign of the co-efficient.   (6 Marks)

(d)Assume, If the price of petrol increased from Rs:120 to Rs:140 and demand fell from

10,000 units to 8,000. Calculate the PED of the above commodity.   (4 Marks)

(e) Assume your income is increased from Rs: 25,000 to Rs:30,000 and the demand for

transportation is increased from 30 to 60 (Number of trips). Calculate the income elasticity

of demand (YED) and interpret the results.   (5 Marks)

Question 07:

(a) Identify the characteristics of a Monopoly Market.   (4 Marks)

(b) Explain the "Super Normal Profits" in the Monopoly market with

    aid of a diagram.   (6Marks)

(c) Explain the Law of Diminishing Marginal Utility with the aid of a diagram

     (5 Marks)

(e) Copy the following table and fill the blanks. Illustrate the Total Cost and Total

    Revenue curves in a diagram and find the Break Even Point.   (10 Marks)

No of Workers	TP	MPL	TFC	TVC	TC	MC	TR	MR	PROFIT

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

0	0	0	70	0	70	0	0	2	-70
1	14	14	70	46	116	3.29	28	2	-88
2	42	28	70	92	162	1.64	84	2	-78
3	75		70	138			150	2	
4	112		70	184			224	2	
5	150		70	230			300	2	

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

Colombo International Nautical and Engineering College 00017

CINEC Campus

Faculty of Management, Humanities and Social Sciences

Department of Logistics & Transport

B.Mgt. (Hons) in Supply Chain Management

Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
Microeconomics – BSCM1204

- This paper consists of SEVEN (07) questions on FIVE (05) pages.
- Answer <u>FOUR (04)</u> 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: 2019.09.10   Pass mark: 40%   Time: 02 Hours

Question 01: (Compulsory)

(a) "The fundamental economic problem is the issue of scarcity"

   Briefly explain the statement with the aid of an example.   (04 Marks)

(b) Explain the difference between Open Economy and Closed Economy.

                                                                      (04 Marks)

(c) Briefly explain the factors affecting to transport demand of a country.

                                                                      (04 Marks)

(d) Briefly explain the economic surplus with the aid of a diagram.   (04 Marks)

(e) Briefly explain the term of Contraction in Demand and Extension in Demand.

                                                                      (04 Marks)

(f) Explain the black-market condition with the aid of a diagram.   (05 Marks)

Colombo International Nautical and Engineering College 00017
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 02:

Traffic congestion is a problem in many cities. Among the possible ways of reducing congestion are allocating more resources to building roads, taxing petrol and subsidizing bus travel.

(a) Describe how resources are allocated in a market economy.   (04 Marks)

(b) Briefly describe the difference between Direct Tax and Indirect Tax with the aid of an example.   (05 Marks)

(c) Using a demand and supply diagram, analyses the effect of unit tax on petrol.

(08 Marks)

(d) Discuss the economic impact of traffic congestion affect to a mixed economies like Sri Lanka.   (08 Marks)

Question 03:

India and Ecuador are two major producers of bananas. India is the world's largest producer of bananas while Ecuador is the world's largest exporter. Multinational companies (MNCs) produce some of the bananas in both countries. The World Health Organization (WHO) recommends that each person should eat 400 grams of fruit and vegetables a day. To encourage people to eat more fruit and vegetables governments may use policy measures such as maximum prices and subsidies.

(a) Briefly explain the term of "Maximum Price".   (03 Marks)

(b) Explain two reasons why the supply of bananas may decrease.   (04 Marks)

(c) Analyze the advantages and disadvantages of implementing a maximum price to Banana farmers of a country.   (08 Marks)

(d) Discuss whether or not a government subsidy given to fruit producers will benefit consumers.   (10 Marks)

Colombo International Nautical and Engineering College 00017
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 04:

Consider a transport market and assume that it is characterized by the following equations:

Demand : $Qd = 100 - 8P$

Supply : $Qs = -20 + 2p$

Where Q is measured in quantity of number trips and P is for the price of a trip
Use suitable curves and tables to explain your answers on following:

(a) Find the equilibrium of the market. (05 Marks)

(b) Suppose the government levies a unit tax on a firm of **Rs 10,** Construct the new supply function after imposing a unit tax. (02 Marks)

(c) Calculate new the equilibrium price and quantity after the tax (04 Marks)

(d) How much tax revenue is collected by the government when it implements the tax ?. (04 Marks)

(e) Calculate the total incidence or burden of the tax on consumer and on Producer. (05 Marks)

(f) What is the deadweight loss created by the tax? (05 Marks)

Colombo International Nautical and Engineering College 00017
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 05:

Increasing demand from China has made New Zealand the world's biggest exporter of dairy products. Its exports of milk to China increased by 45% in 2013. More than 300 000 hectares of land in New Zealand have been transferred to dairy use from other forms of farming and forestry use since 2000. The increase in milk production has caused the average cost of its production to fall and changes in production methods have affected the price elasticity of supply of milk.

(a) Why may less wheat be the opportunity cost of producing more milk? (03 Marks)

(b) Explain two reasons why the supply of a product may be price-inelastic.

(04 Marks)

(c) Discuss whether the average cost of production always decreases when a firm increases the total output that it produces. (08 Marks)

(d) Briefly explain the stages of production with the aid of a diagram (10 Marks)

Question 06:

(a) Identify the factors affecting to price elasticity of demand (04 Marks)

(b) Briefly explain the Income Elasticity Demand with the aid of an example and interpret the co-efficient values. (06 Marks)

(c) Briefly explain Cross Price Elasticity Demand with the aid of an example and interpret the co-efficient values. (06 Marks)

(d) Assume, If the price of Kerosene increased from Rs:100 to Rs:120 and demand fell from 8,000 units to 7500. Calculate the PED of the above commodity and interpret the results. (04 Marks)

Colombo International Nautical and Engineering College 00017
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

(e) Assume your income is increased from Rs: 25,000 to Rs:35,000 and the demand for three-wheeler transportation increased from 50 to 80 (Number of trips). Calculate the income elasticity of demand (YED) and interpret the results. (05 Marks)

Question 07 :

(a) Identify the characteristics of a Monopoly Market. (04 Marks)

(b) "A firm making normal profits will remain in the industry in the perfectly competitive market". Briefly explain the statement. (06 Marks)

(c) Briefly explain the Ordinal Utility Theory. (03 Marks)

(d) Copy the following table and fill the blanks. Illustrate the Marginal Cost and Marginal Revenue curve in a diagram and find the Break Even Point. (12 Marks)

Output (Number of units produced)	Price	Variable Cost	Fixed Cost	Total Cost	Average Cost	Marginal Cost	Total Revenue	Profit
1	5	06	10					
2	5	08	10					
3	5	12	10					
4	5	17	10					
5	5	23	10					
6	5	31	11					

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

Colombo International Nautical and Engineering College 00027

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
Principles of Management – BSCM1206

- This paper consists of SEVEN (07) questions on THREE (03) pages.
- Answer <u>FOUR (04)</u> 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: 2019.09.07   Pass mark: 40%   Time: 02 Hours

Question 01: (Compulsory)

(a) What is organizational structure?   (03 Marks)
(b) Discuss two types of Contemporary Organizational Designs using examples.
          (10 Marks)

(c) Explain following terms;
     (i) Authority
     (ii) Responsibility
     (iii) Unity of command
     (iv) Span of control   (3*4 Marks)

Question 02

(a) Differentiate the two terms "Vision" and "Mission"   (06 Marks)
(b) What is meant by "Goal"? Explain two approaches for setting goals   (10 Marks)
(c) Why do some managers choose not to plan? Would you agree with their decisions?
          (09 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 03

(a) Explain the concept of motivation   (05 Marks)
(b) Compare and contrast learnings under two selected theories of motivation.
                                                                                          (20 Marks)

Question 04

(a) What is the role of controlling?   (05 Marks)
(b) Explain the below types of controls with examples
        (i) Feedforward controlling
        (ii) Feedback controlling
        (iii) Concurrent controlling   (4*3 Marks)

(c) Explain two measures that could be used to measure the performance of an organization?   (08 Marks)

Question 05

(a) List three major components of an organization's task (Micro) environment. Discuss how each element can impact the performance of an organization using examples.
                                                                                          (15 Marks)
(b) What are demographic forces? Discuss how demographic forces can affect the organizational performance using examples   (10 Marks)

Question 06

(a) Identify one major contributor to scientific management theory and discuss his/ her idea of management.   (10 Marks)
(b) Differentiate the two terms efficiency and effectiveness   (04 Marks)
(c) Describe types of corporate strategies using examples.   (11 Marks)

Colombo International Nautical and Engineering College 00027
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 07

(a) Explain the types of problems and decisions often faced by a manager. (12 Marks)
(b) List 07 key methods of interpersonal communication commonly used in an organization. (07 Marks)
(c) Explain the three common communication networks (06 Marks)

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

Colombo International Nautical and Engineering College 00027
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
Introduction to Logistics – BSCM1307

- This paper consists of EIGHT (08) questions on FIVE (05) pages.
- Answer <u>FIVE (05)</u> 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.
- Supporting documents are attached.

Date: 2019.09.05   Pass mark: 40%   Time: 03 Hours

Question 01: (Compulsory)

(a) The emergence of the concept of Logistics goes back to the early centuries where it was originated from the Greek word 'Logistikos' and the Latin word 'Logisticus', which meant the science and skill of calculation. Now it has become a vital point in every business. Briefly explain on several milestones in the history of logistics and the status that logistics has gained today in business world   (05 Marks)

Answer the following questions referring to the hypothetical case study below

A hypothetical case study on 'DIGI Electronics'– where all electronic solutions are made

DIGI Electronics is famously known for their highly complex, high quality, customized electronic solutions given at the high-end customers. Operated as a multinational business, it has its main assembly plants located in China and India also a sub assembly plant in Vietnam. Many of their Raw Material suppliers, components and parts suppliers are located all over the world whereas they serve a very few tiers of customers.

Colombo International Nautical and Engineering College 00027
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

(b) List down the 7Rs in logistics and briefly explain two (02) of them applying to DIGI electronics
(05 Marks)

(c) List down and explain the four (04) Business Logistics Systems.
Which business logistics system is mostly applicable for DIGI Electronics
(06 Marks)

(d) The Logistics Manager of DIGI electronics suggests operating a private warehouse to store their finished goods. Give your comments on this suggestion
(04 Marks)

Question 02

(a) Explain the four (04) types of demand patterns in a time series analysis, using appropriate graphs/diagrams
(04 Marks)

Note: Refer the attachment to answer part (b) and part (c) where necessary

(b) Mr. Nirmal, the Logistics Planning Manager at Orange Electricals Pvt. Ltd. is planning the logistics operations for the coming months in 2019. The actual demand data for the '3-pin plugs' production is given in the table below.

Table 2.1 : Actual Demand/Sales Data for the months of June, July and August 2019

Month	Week	Actual Demand/Sales
June	Week 01	93,500
	Week 02	94,000
	Week 03	93,000
	Week 04	92,000
July	Week 01	91,500
	Week 02	92,000
	Week 03	91,500
	Week 04	89,000
August	Week 01	87,000
	Week 02	90,000

With reference to the data given in the above tables, forecast the demand by answering the following questions

(i)   The Naïve forecast for June Week 04 and August Week 01
(ii)   The one week simple moving average forecast for August week 03

Colombo International Nautical and Engineering College 00027
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

(iii) The five-week Simple Moving Average forecast for August week 03

(iv) The Weighted Moving Average forecast for August week 03 using the weights 0.24 , 0.33 , 0.12

(v) The Exponential Smoothing forecast for August week 03 with a smoothing constant of 0.39 (Assume the forecast for August week 01 is 89,000 units)

(08 Marks)

(c) Using the data given below, calculate:

(i) Forecasting Error

(ii) Running Sum of Forecast Error

(iii) Mean Absolute Deviation

(iv) Mean Squared Error

(v) Mean Absolute Percentage Error

(vi) Tracking Signal

(08 Marks)

Table 2.2: Daily Forecast and Actual sales (D=Day)

Day	D1	D2	D3	D4	D5	D6	D7
Forecast	618	611	619	613	618	612	616
Actual	619	614	619	616	612	610	617

Question 03

(a) List down and explain the four (04) types of inventory classifications   (05 Marks)

(b) State the assumptions of a Basic EOQ model   (03 Marks)

(c) Consider the demand/cost data for 'Microchips' at DIGI electronics (Indian factory) given below, and answer the following questions

The monthly demand for the year 2020 (in average for each month) is forecasted as 1000 units. The ordering cost is calculated to be 150 LKR per order and the order will be received after one week of placing through the procurement system. The factory is scheduled to run for 355 days in the year. It is the factory policy to maintain the holding cost per unit per annum at 12 LKR. Currently the procurement department places orders of 500 units.

Note : refer the attachment to answer the questions where necessary

Colombo International Nautical and Engineering College 00027
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
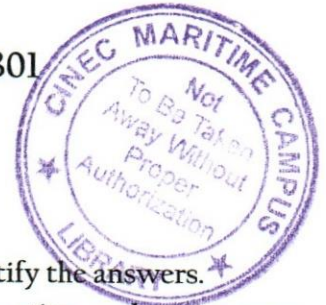BMgt (Hons) in Supply Chain Management
Course CODE: COM552

(i) Calculate the total annual inventory cost for the current order quantity
(ii) Calculate the optimum order quantity
(iii) Calculate the total annual inventory cost for optimal order quantity
(iv) Determine the difference of total inventory costs between current and optimal order quantities
(v) Determine the ROP   (12 Marks)

Question 04

(a) List down the activities of Order processing. Explain all the activities   (10 Marks)

(b) Discuss the evolution of the logistical organizations and those hierarchies in relation to the 'stages of evolution'   (10 Marks)

Question 05

(a)
   (i)   What is meant by Global Logistics?   (03 Marks)
   (ii)   Explain with six (06) factors how domestic logistics differ from global logistics   (06 Marks)
(b)
(i) List down six (06) types of purchases   (03 Marks)
(ii) Discuss the reasons for purchasing materials/components from external suppliers rather than making those in-house   (08 Marks)

Question 06

Warehouses can play a key role in integrated logistics strategy and in building and maintaining good relationships between supply chain partners. Warehousing affects customer service, stock-out rates, and a firm's sales and marketing success.

Answer the following questions
(a) What is meant by the term 'Warehousing'?   (03 Marks)
(b) List down all the activities of warehousing   (05 Marks)
(c) Warehousing plays a major and an extensive role in the logistics system. Briefly describe, the warehouse's role in logistics   (05 Marks)

Colombo International Nautical and Engineering College 00027
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

(d) List down the four types of warehousing? Discuss in detail with appropriate examples (07 Marks)

Question 07

(a) Mr. Nirmal, the Logistics Planning Manager of Orange Electricals Pvt. Ltd., suggests on shifting some of the logistics activities (finished goods inventory control, finished goods field warehousing and distribution) that are currently performed inside, to a 3rd party logistics service provider.

Assuming that you are Mr. Nirmal, write a brief report to be submitted to the Head of Logistic, giving comments on the decision.
The description of the report should include the relevant reasons, risks and challenges of shifting towards a 3rd party logistics company (12 Marks)

(b) Discuss in detail on the transport modal characteristics and modal selection criteria (08 Marks)

Question 08

Write short notes on <u>four (04)</u> of the following

- (a) Inbound, Process and Outbound Logistics
- (b) The building block concept of packaging in a warehouse
- (c) Independent Demand vs. Derived Demand
- (d) Benefits of e-procurement
- (e) Advantages and disadvantages of JIT
- (f) Functions performed by LIS (5*4 Marks)

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

Year 1 Semester I
SEMESTER END EXAMINATION
Introduction to Logistics BSCM1307

Attachment

<u>Equations for Calculations</u>

$C_{(T)} = (Q/2) * H + (D/Q) * S$ ['Q' can be replaced with 'Qo' depending on the purpose of the calculations]

$C_{(H)} = (Q/2) * H$ ['Q' can be replaced with 'Qo' depending on the purpose of the calculations]

$C_{(O)} = (D/Q) * S$ ['Q' can be replaced with 'Qo' depending on the purpose of the calculations]

$Q_0 = \sqrt{(2DS/H)}$

$ROP = (d * L) + SS$

....

$F_t = F_{(t-1)} + \alpha [A_{(t-1)} - F_{(t-1)}]$

$e_t = A_t - F_t$

$RSFE = \sum e_t$

$MAD = \dfrac{\sum |A_t - F_t|}{n}$

$MSE = \dfrac{\sum [A_t - F_t]^2}{(n-1)}$

$MAPE = \dfrac{\sum \left\{ \dfrac{|A_t - F_t|}{A_t} * 100 \right\} \%}{n}$

$TS = (RSFE / MAD)$

1

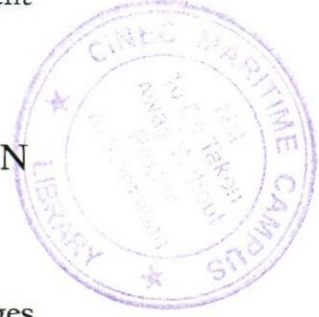# Colombo International Nautical and Engineering College 00057
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
Introduction to Transportation – BSCM1301

- This paper consists of EIGHT (08) questions on THREE (03) pages.
- Answer <u>FIVE (05)</u> 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: 2019.09.03   Pass mark: 40%   Time: 03 Hours

Question 01: (Compulsory)

(a) What is meant by a transport **mode**?   (02 Marks)

(b) Briefly explain the difference between intermodal transportation, multimodal transportation and transmodal transportation.   (06 Marks)

(c) Explain the history of road development from naturally created road paths to the roads we use today.   (05 Marks)

(d) List down why people move from one place to another (Travel purposes) with examples.   (03 Marks)

(e) Identify 4(four) advantages of containerization.   (04 Marks)

Question 02

(a) Differentiate between Conventional rail transport and Mass Rapid Transit (MRT)

(08 Marks)

Colombo International Nautical and Engineering College 00057
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

(b) Fundamental principle of rail transport is efficiency, with economies of scale and low energy consumption. Give your recommendations on how to make a shift in passenger transportation from road to rail in Sri Lanka. (07 Marks)

(c) Briefly explain on 'High speed rail' (05 Marks)

Question 03

(a) Discuss the importance of maritime transport for global trade. (10 Marks)

(b) List 4 types of cargo moved by maritime transport with examples. (04 Marks)

(c) Explain the 3(three) types of maritime routes. (06 Marks)

Question 04

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

(07 Marks)

(b) Define sustainable transportation. Identify 4(four) sustainable transport options.

(06 Marks)

(c) Explain the difference between transport cost and rate with an example.

(07 Marks)

Question 05

(a) Pipelines are limited in the markets they serve and very limited in the commodities they can transport and a unique mode of transport. Discuss (08 Marks)

(b) Briefly describe the 4(four) types of pipelines. (08Marks)

(c) List down 4(four) environmental concerns of pipeline transportation. (04 Marks)

Colombo International Nautical and Engineering College 00057
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Question 06

(a) What are the advantages of air cargo transportation?   (04 Marks)

(b) Explain the airside and landside components of an airport with examples.

(08 Marks)

(c) Briefly explain the 2(two) types of aircraft based on the commercial purpose.

(06 Marks)

(d) List down 4(four) examples of General Aviation.   (02 Marks)

Question 07

(a) Explain the term 'Accessibility'. Give your suggestions to mitigate the road transport issues of Sri Lanka by improving accessibility.   (08 Marks)

(b) Explain the functional classification of roads with examples.   (08 Marks)

(c) List down the 4 categories of international road freight transport.   (04 Marks)

Question 08

(a) Piracy can be defined as plundering, hijacking or detention of a ship in international waters. Identify threats imposed by maritime piracy.   (05 Marks)

(b) Briefly explain factors affecting cargo insurance premiums.   (05 Marks)

(c) Select one transport mode of your choice and explain how transportation activities of that mode affects the environment.   (10 Marks)

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

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
ICT Applications – BSCM1205

- This paper consists of SEVEN (07) questions on SIX (06) pages.
- Answer <u>FOUR (04)</u> 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: 2019.08.31   Pass mark: 40%   Time: 02 Hours

Question 01: (Compulsory)

Information is one of the most important organization assets. For an organization, information is valuable and should be appropriately protected.

(a)   Why a company should have security policy? Describe your answer with two (02) examples that a company's security policy may include.   (05 Marks)

(b)   Write five (05) criteria you must use when choosing a password or setting up password guidelines.   (05 Marks)

(c)   Briefly explain the purpose of having backups of computer files.   (05 Marks)

(d)   How do you take backups?   (02 Marks)

(e)   Briefly explain the term "copyright"?   (03 Marks)

(f)   Write five (05) types of works which are protected by copyright?   (05 Marks)

Colombo International Nautical and Engineering College 00028
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Question 02

(a)   What is file management? Why file management is important for computer users?

(06 Marks)

(b)   Define the following terms.   (06 Marks)
1) File
2) Folder
3) Control Panel

(c)   Write two (02) types of file compressors.   (02 Marks)

(d)   Write the file type for following extensions.   (07 Marks)
1) .txt
2) .doc
3) .htm
4) .ppt
5) .gif
6) .pdf
7) .xls

(e)   List down four (04) main functions of an operating system?   (04 Marks)

Question 03

(a)   What is a "computer virus"? How does computer virus damage to your computer?

(10 Marks)

(b)   List down two (02) computer viruses.   (02 Marks)

(c)   How does virus enter to your computer? Write three (03) ways.   (03 Marks)

(d)   How can you identify if your computer has been attacked by a virus? (04 Marks)

(e)   Briefly describe three (03) ways to protect your computer from viruses.

(06 Marks)

Colombo International Nautical and Engineering College 00028
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Question 04

Internet is a global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols.

(a)   Consider the following web address.   (04 Marks)
http://www.abcbank.org

Mention the following parts of the web address.
1. http
2. www
3. abcbank
4. org

(b)   What is a search engine? Write three examples for search engine.   (05 Marks)

(c)   What is an email? Briefly describe your answer with purpose of using emails.
                                                                    (05 Marks)

(d)   How does E-mail work. Explain with a diagram.   (05 Marks)

(e)   Compare the advantages and disadvantages of using emails.   (06 Marks)

Question 05

(a)   What is a database?   (05 Marks)

(b)   List down five (05) advantages of databases.   (05 Marks)

(c)   Differentiate 'Primary key' and 'Foreign key'   (05 Marks)

(d)   Differentiate 'Form' and 'Report'   (05 Marks)

(e)   List down four (04) Database objects   (02 Marks)

Colombo International Nautical and Engineering College 00028
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

(f) Consider following table 'Employee'. Write a query to select the name of employee whose id is 3. (03 Marks)

Employee_Id	Name	Gender	Contact_Number	Country
1	Asith	Male	715552223	Sri Lanka
2	Arya	Female	826489624	India
3	Shani	Female	775682123	Sri Lanka
4	Nadee	Female	768991220	Sri Lanka

Question 06

(a) Briefly describe what is HTML. (06 Marks)

(b) Write the purpose of following HTML formatting tags. (06 Marks)
1. <b>
2. <i>
3. <big>
4. <small>
5. <sub>
6. <sup>

(c) How to use an image (size of 300 × 300) to your website. Define the code segment. Use the image name as apple and type as .jpg . (08 Marks)

(d) What is the output of following code? (05 Marks)
```
<html>
    <form>
            First name:
            <input type="text"  name="firstname" />
            <br />
```

Colombo International Nautical and Engineering College00028
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Last name:
```
<input type="text" name="lastname"/>
    </form>
</html>
```

Question 07

Write the formulas for bellow questions. These questions are based on the excel sheet in next page.

(a)   Find the total amount Buxton has earn during given time period   (05 Marks)

(b)   Calculate total amount of Alex on first two days.   (03 Marks)

(c)   Calculate the total amount on 29/05/2017.   (05 Marks)

(d)   What is the average amount of for given time period?   (05 Marks)

(e)   Display the profit of Buxton on 29/06/2017 as 'High' if amount is more than $500. Else display as 'Low'.   (07 Marks)

Colombo International Nautical and Engineering College 00028
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

1	ABC			
2	Order date	Sales_Person	Amount - $	Profit
3	29/05/2017	Buxton	400	
4	29/05/2017	Laura	500	
5	29/05/2017	Sally	512	
6	29/05/2017	Alex	595	
7	29/05/2017	Mark	488	
8	30/05/2017	Buxton	498	
9	30/05/2017	Laura	489	
10	30/05/2017	Peter	532	
11	30/05/2017	Alex	450	
12	30/05/2017	Mark	500	
13	31/05/2017	Buxton	512	
14	31/05/2017	Melly	595	
15	31/05/2017	Peter	488	
16	31/05/2017	Alex	498	
17	31/05/2017	Mark	489	
18	1/6/2017	Buxton	532	
19	1/6/2017	Laura	498	
20	1/6/2017	Peter	489	
21	1/6/2017	David	532	
22	1/6/2017	Mark	450	
23	2/6/2017	Buxton	500	
24	2/6/2017	Laura	512	
25	2/6/2017	David	595	
26	2/6/2017	Alex	488	
27	2/6/2017	Mark	500	

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

Colombo International Nautical and Engineering College

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I

SEMESTER END EXAMINATION

Business Mathematics I – BSCM1203

- This paper consists of SEVEN questions on EIGHT (08) pages.
- Answer <u>FOUR (04)</u> questions including question 01.
- Calculators are NOT 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.
- Use MCQ answer sheet to answer Question 01

Date: 2019.08.29   Pass mark: 40%   Time: 02 Hours

Question 01 (Compulsory)

Select the correct answer (Use MCQ answer sheet provided)

1. Solution of a quadratic equation $x^2 + 5x - 6 = 0$
   - (A) $x = -1, x = 6$
   - (B) $x = 1, x = -6$
   - (C) $x = 6$
   - (D) $x = 1$

2. $X^2 + 4x + 4$ is
   - (A) A polynomial
   - (B) an equation
   - (C) an identity
   - (D) all of the above

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

3. Which of the following are polynomial functions?

    (A) $f(x) = \dfrac{3x^5 - 6x^2}{5x}$

    (B) $f(x) = 0.5\, x^6 + 1.2x^{-3} + 7x + 2.5$

    (C) $f(x) = (5x^2 + 2x)^3 - \dfrac{1}{2}x^4$

    (D) $f(x) = (1 + \sqrt{x}) - (1 - \sqrt{x})^2$

4. Degree of a polynomial is the

    (A) largest coefficients of x

    (B) smallest coefficient of x

    (C) lowest power of x

    (D) highest power of x

5. Which of the following is the derivative of $f(x) = \sqrt[3]{x}$?

    (A) $f'(x) = \sqrt[3]{1}$.

    (B) $f'(x) = \dfrac{3}{4}\sqrt[3]{x^4}$.

    (C) $f'(x) = \dfrac{2}{3}\sqrt[3]{x^2}$.

    (D) $f'(x) = \dfrac{1}{3\sqrt[3]{x^2}}$.

6. Which of the following is the second derivative of $f(x) = 4x^3 - 11x^2 - 14x + 19$?

    (A) $f''(x) = 12x^2 - 22x - 14$.

    (B) $f''(x) = 12x - 22$.

    (C) $f''(x) = 12x - 22$.

    $f''(x) = 4x - 11$.

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

(D)

7. Which of the following is the indefinite integral of $x^2 + 7$?

(A) $\int (x^2 + 7)\, dx = 2x + c$.

(B) $\int (x^2 + 7)\, dx = x^3 + 7x$.

(C) $\int (x^2 + 7)\, dx = \frac{1}{2}x^3 + 7x$.

(D) $\int (x^2 + 7)\, dx = \frac{1}{3}x^3 + 7x + c$.

8. Which of the following correctly evaluates the definite integral $\int_1^3 (x^2 + 3x + 2)\, dx$?

(A) 74/3

(B) 97/3

(C) 110/3

(D) 4

9. Which of the following correctly evaluates the definite

integral $\int_1^2 (x^{-2} + 2x^{-3})\, dx$?

(A) -11/4

(B) 5/4

(C) 4/3

(D) 11/8

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

10. What is the solution of $(1/2a^2+1/2a+1/2)+(1/2a^2+a/2)$

    (A) $2/4a^2+1/2a+1/2$

    (B) $a^2+1/2a$

    (C) $a^2+a+1/2$

    (D) $1/2a^2+1/2a+1/2$

11. What is the solution of $(6x^2-5x) - (4x^2-3x-4)$

    (A) $-4y^2+y-4$

    (B) $10y^2+y-4$

    (C) $10y^2+y+12$

    (D) $10y^2-y-4$

12. What is the solution of $(4x + 2)(6x^2 - x + 2)$

    (A) $24x^3+ 8x^2+ 6x+4$

    (B) $24x^2+ 8x^3+ 6x+4$

    (C) $22x^2- 8x - 64$

    (D) $48x^2+ 4x - 4$

13. What is the solution of $(x^2 + 6x -4)(2x-4)$

    (A) $2x^3+ 8x^2- 32x + 18$

    (B) $2x^3+ 8x^2- 32x + 16$

    (C) $2x^3+ 8x^2+ 6x+4$

    (D) $24x^3+ 8x^2+ 6x+8$

14. Which of the following is the second derivative of $f(x) = -2x^4 + 3x^{-2} + 9$?

    (A) $f''(x) = -24x^2 - 18x^{-4}$.

    (B) $f''(x) = -8x^3 - 6x^{-3}$.

    (C) $f''(x) = -24x^2 + 18x^{-4}$.

    (D) $f''(x) = -24x^2 + 18x^{-4}$.

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

(e) $Y = \dfrac{(3x+5)}{(2x^2+3)}$ (03 Marks)

(f) Use chain rule to differentiate followings

(i) $Sin^3(3x-2)$ (05 Marks)

(ii) $(5x-2)^{\frac{1}{2}}$ (05 Marks)

Question 06

(a) Given $Y = (3X^2 - 7X)/ 5X^6$

   (i) Find the derivative directly using Quotient rule.

   (05 Marks)

   (ii) Simplify the original function by multiplication and then find the derivative. (05 Marks)

   (iii)   Compare the derivatives in 'Part i' and 'ii' (01 Marks)

(b) For each of the following functions find the second – order derivative and third – order derivative. Evaluate them at $X = 2$

   (i) $Y = -2X^6 + 3X^3 - 5$ (03 Marks)

   (ii) $Y = X^5 - 5X^3 + X^2$ (03 Marks)

(c) Find the derivative,

   (i) $y = \dfrac{3x(2x - e^x)}{(3x-2)}$ (04 Marks)

   (ii) Show that derivative of $y = Sin\,x / Cos\,x$ is equal to $Sec^2\,x$, using quotient rule (Hint: $Sin^2\,x + Cos^2\,x = 1$) (04 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

15. Which of the following is not a property of an exponential function?

(A) The graph passes through the point (0,1)

(B) The graph is decreasing

(C) The graph is continuous

(D) The domain is all real numbers

(25 Marks)

Question 02

(a) Evaluate followings

(i) $(729)^{\frac{1}{6}}$ (02 Marks)

(ii) $\left((-125)^{\frac{2}{3}}\right)$ (02 Marks)

(iii) $(1024)^{\frac{3}{5}}$ (02 Marks)

(b) Factorise $3x^2 - 3$ completely. Hence simplify $\frac{x^2-5x+4}{3x^2-3}$ (03 Marks)

(c) Simplify followings
   (i) $(2X^3 - 6x - 3)(5X^4 + 2X^2)$ (03 Marks)

   (ii) $(4X^6 - 2X + 1) + (3X^3 + 7X - 4) - (-3X^6 - 2X + 7)$ (03 Marks)

(d) Factorise Completely

   (i) $28X^2 - 19X - 20$ (03 Marks)
   (ii) $6X^2 - X - 2$ (03 Marks)

(e) Divide $2X^4 - 9X^3 + 13X^2 - 17X + 15$ by $(X-3)$ (04 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Question 03

(a) Integrate the following functions

    (i) $\int X^{-3/2} \, dx$ (02 Marks)

    (ii) $\int \sqrt{x} \, dx$ (02 Marks)

    (iii) $\int (2 X^5 - 3 X5 + X^{-1}) \, dx$ (02 Marks)

    (iv) $\int e^{-2.5x} \, dx$ (02 Marks)

    (v) $\int Sin (2x + 3) \, dx$ (02 Marks)

(b) Use integration by parts to find the Integral of $\int x * e^x \, dx$. Hence find the integral of $\int x^2 * e^x \, dx$ (10 Marks)

(c) Use integration by parts to find the integral of $\int \ln x \, dx$ (05 Marks)

Question 04

(a) Write the properties of exponential function   (05 Marks)

(b) Draw $y = 3^x$ and $y = \frac{1}{3}^x$ curves on the same graph paper and show above properties on the graphs.   (20 Marks)

Question 05

Differentiate Followings

(a) $Y = x^{5/2} + 5X^{7/3} + 9$ (03 Marks)

(b) $Y = \sqrt{2x}$ (03 Marks)

(c) $Y = -4 X^4 (- 2X^2 + 9X)$ (03 Marks)

(d) $Y = (x^2 + 9X)(x^3 + 5)$ (03 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons) in Supply Chain Management
Course CODE: COM552

Question 07

(a) Solve following quadratic equations using the quadratic formula   (3*2 Marks)

   (i) $3x^2 - 4x = 2$

   (ii) $(2x - 3)^2 = 2x$

(b) Sketch the curve $y = x^2 - 6x + 19$. Use the range $[-1,7]$, On your sketch give the coordinates of the turning point   (10 Marks)

(c) $\int \frac{2x}{e^{2x}} dx$ (05 Marks)

(d) Given the rate of net investment is $I = 9t^{\frac{1}{2}}$. Find the capital formation K in, 8

   years {Hint: $K = \int_{a}^{b} I \, dt$ }   (04 Marks)

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

Colombo International Nautical and Engineering College

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I

SEMESTER END EXAMINATION

English for Business I – BSCM1202

- This paper consists of FIVE questions on THIRTEEN (13) pages.
- Answer <u>ALL</u> 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: 2019.08.27   Pass mark: 40%   Time: 02 Hours

Section A – Business Vocabulary/ Structures

Question 01

A. Complete the paragraph with the most appropriate word given below. (10 marks)

Management by walking around is a (i)………. coined by management guru Tom Peters. Apparently, from his (ii)……….. of successful companies and their (iii)………., Tom Peters noticed that good (iv)……….. tend to (v)…….... a lot better with their team. And they do that in (vi)……….. ways, like just hanging around in the office and (vii)…………. with them, rather than having (viii)……. interaction sessions in their cabins or boardrooms. Sam Walton, the founder of the largest company in the world (ix)………… in visiting as many of his stores as many times as possible and talking to (x)……………. staff.

[formal/informal/frontline/believed/study/term/communicate/managers/practices/

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

chatting]

B. Fill in the blanks with the correct form of the verb given within brackets. (10 marks)

Loss leaders (i)………(be) high volume, high profile brands or products that (ii)…….. (sell) by retailers to attract customers into their premises with the hope that those customers (iii)…… (end up) buying other goods as well once inside. The company usually (iv)…….. (keep) a very slim profit margin for loss leader products. Loss leaders (v)………… (use) by smaller retailers against the giant national chains to maintain their market share.

Section B – English in Pragmatic/ Realistic Settings

Question 02

A. **What do the following extracts of conversations express. Look at the example.**

(10 marks)

Example: That's true. We'll need to take that into consideration.   [conceding a point]

(i). I'd certainly go along with that idea. …………………………………………………

(ii). What do you think about those high speeding trains? …………………………

(iii). Can I come back to that point later? ……………………………………………

(iv). We'll have to leave it there, but thank you all very much for your input?

………………………………………………………………………………………

(v). I think it's likely that these people know each other. ……………………………

(vi). I really appreciate what you've done…………………………………………………

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

(vii). If you need to use a computer, there's one in my office............................

(viii). I'd suggest you do the literature review first.....................................

(ix). I would choose the newer one on the grounds that it will last longer.

....

(x). Sorry, what I mean is, we need two handouts per person.

....

[speculating/ giving reasons/ making recommendation/ dealing with questions/ asking for opinion/ agreeing/ correcting yourself/ offering help/ wrapping up discussion/ thanking somebody]

B. Identify the common errors in the following conversational phrase and correct them. Look at the example. (10 marks)

Example: English isn't difficult, no?

English isn't difficult, is it?

(i). I asked from the lecturer.

....

(ii). The supplier is from Maradana side.

....

(iii). You finished the assignment, no?

....

(iv). The customer returned back the goods.

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

00053

....

(v). He gave a long speech.

....

(vi). He is interesting business.

....

(vii). The ship drowned in the sea.

....

(viii). You know your subject well, no?

....

(ix). The batch top hardly worked.

....

(x). I congratulate you for your success.

....

Colombo International Nautical and Engineering College

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

Section C – Comprehension

Question 03

A. Read the following definitions and underline the wrong statement.

(12 marks)

I. Profit-maximizing firms will use AVC (Average Variable Cost) to determine at what point they should shut down production in the short run. If the price they are receiving for the good is more than the AVC given the output they are producing, then they are at least covering all variable costs and some fixed costs. Fixed costs are those incurred that do not vary with production.

(a). AVC is a reliable indicator for running of a company profitably.

(b). If the price of a good is higher than AVC, it will cover some fixed costs.

(c). When all variable costs are covered, the price of a good is above AVC.

(d). If the output changes, fixed costs change as well.

II. An abstract summarizes, usually in one paragraph of 300 words or less, the major aspects of the entire paper in a prescribed sequence that includes the overall purpose of the study, the research problem investigated, the basic design of the study, major findings or trends found as a result of your analysis and a brief summary of your interpretations and conclusions.

(a). An abstract helps readers to get a general idea of a research paper.

(b). All research findings are elaborated in the abstract.

(c). An abstract usually has a clearly and firmly stated order.

00053

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

(d). An abstract usually tells the whole story about a study in a nutshell.

III. Gradient or slope of a line is a number that describes both direction and steepness of a line. Steepness is measured by the absolute value of the slope. A greater absolute value indicates a steeper slope. The direction of a line is either increasing, decreasing, horizontal or vertical. If the slope is positive, the line goes up from left to right and vice versa.

(a). Gradient and slope are equivalent terms.

(b). Steepness is the magnitude without regard to sign since absolute means remove signs.

(c). A high absolute value doesn't mean a steeper slope.

(d). The slope is negative if the line goes down from left to right.

B. Think logically and underline the letter of the correct answer.   (08 marks)

I. In propositional logic, modus tollens is a valid argument form and a rule of inference. The rule of logic states that if a conditional statement 'if P then Q' is accepted and the consequence does not hold 'not Q' then the negation of the 'not P' can be inferred. The symbolic form of modus tollens is $P \rightarrow Q.\sim Q \ \therefore \ \sim P$. Accordingly, if an angle is inscribed in semicircle, then it is a right angle; this angle is not a right angle. Therefore, what can you conclude?

(a). angle is inscribed in a semicircle

(b). ang angle is not a right angle

(c). angle is not inscribed in a semicircle

(d). a conclusion cannot be reached

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

II. Of four straight lines A, B, C and D, BC is longer than D but C is shorter than B. If A is longer than C and shorter than B, which is the longest line?

(i). A   (iii). C

(ii). B   (iv). D

Section D – Presenting Information

Question 04

A. Draw a bar graph to show which detergent makes the biggest bubbles following these steps. **(10 marks)**

First identify the variables. Detergent brand is the independent variable which should be represented on the horizontal axis. The average size of the bubbles is the_dependent variable shown by vertical axis.

Here is the data in a table to create the bar graph.

Detergent Brand	Average size of bubbles (cm)
Aqua	25
Wursha	15
Prata	20

Label the vertical/horizontal axes and title the graph.

B. The following ten expressions are taken from presentations. There are two expressions for one function. Write the letter of the following functions before the expressions. **(10 marks)**

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

(a). introducing

(b). explaining structure

(c). introducing each point

(d). clarifying

(e). changing the subject

(i). Moving on to the next benefit, financial gain to the company. [........]

(ii). So I'm here today to present you with the results of that survey. [........]

(iii). That is to say, we should be looking into alternatives. [.........]

(iv). I've divided my presentation into three parts. [.......]

(v). The first point I'd like to discuss is the impact on families. [.........]

(vi). Now I'd like to turn to the impact on the growth of the business. [........]

(vii). I'd now like to look at the second benefit of abolishing the law. [.........]

(viii). Hello. Today I'm going to discuss the findings of my research on youth unrest. [........]

(ix). In other words, the project has failed. [..........]

(x). I'm going to examine the three advantages of planned renovations. [..........]

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

Section E – Business Writing

Question 05

A. Write a description of the sales performance of VEGEFRESH company using the following details. The annual turnover of 15 branches in 2018 is given in million rupees. **(10 marks)**

| Malabe- 28 | Jaela- 35 | Moratuwa- 39 | Kegalle – 42 | Horana – 45 |

| Wattala – 49 | Galle- 58 | Kandy – 61 | Kottawa- 67 | Maharagama - 71 |

| Panadura -76 | Jaffna – 79 | Borella – 85 | Ratnapura- 74 | Negombo - 82 |

Write a paragraph answering the following sentences in complete sentences.

(i). What does the above information show?

(ii). What was the highest and the lowest sales recorded?

(iii). What is the median of sales?

(iv). What is the average sales of a branch?

(v). How many branches had an annual turnover of more than 50 million?

(vi). How many branches had sales below average

(vii). What is the difference between the highest and lowest sales

(viii). What can you conclude about the sales performance?

....
....
....

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

....

....

....

....

....

....

....

....

....

....

....

....

....

....

B. A leading confectionery company wishes to shift their main ware house to Polgasovita, a rural area along 120 main bus-route. Write a short report pointing out the advantages and disadvantages if any of shifting the main ware house to the interior country side. You may use the following guidelines,

- transport costs

- access to highways

- storage capacity

- use of equipment

- distance to distribution centers

Use about 150 words.   (10 marks)

Colombo International Nautical and Engineering College

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

Use the following format: Title – Introduction – Body – Conclusions – Recommendations

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
BMgt (Hons.) in Supply Chain Management
Course CODE: COM552

....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....
....

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

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
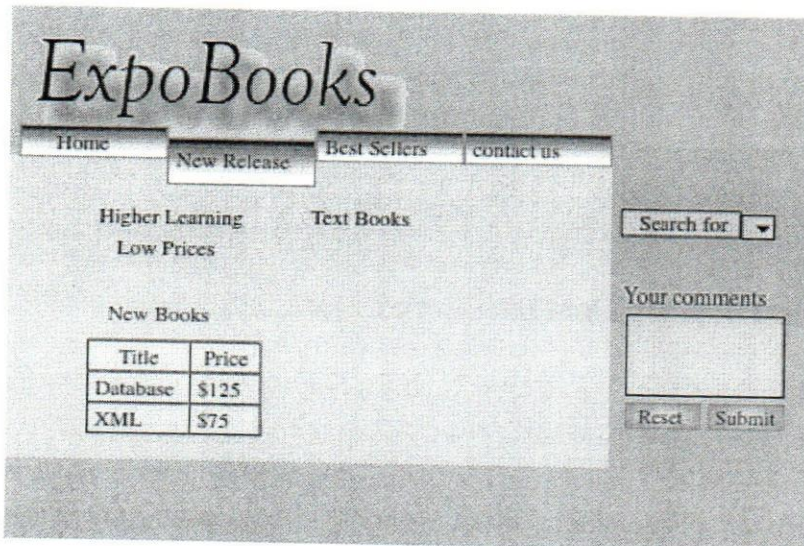Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
REPEAT EXAMINATION
ICT Applications – BSCM1205

- This paper consists of SEVEN (07) questions on SIX (06) pages.
- Answer <u>FOUR (04)</u> 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: 2018.10.26   Pass mark: 40%   Time: 02 Hours

Question 01: (Compulsory)

List, and briefly explain FOUR uses of the Internet in the modern society.

(25 Marks)

Question 02

An Operating system (OS) is a set of programs that manage the hardware and software resources of the computer.

(a) Write four major activities of an operating system. (04 Marks)

(b) Write two types of user interfaces (UI) with an example for each. (05 Marks)

(c) Write the differences between DOS and Windows operating systems. (04 Marks)

(d) Write two main types of software and give two examples for each. (06 Marks)

(e) Explain following terms. (06 Marks)

      (i)   Wild card characters

      (ii) File compression

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

(iii) File extensions

Question 03:

The questions which follow the paragraph below related to Word Processing

Information Technology (IT) is the use of computers to store, retrieve, transmit, and manipulate data, or infomation, often in the context of a businss or other enterprise. IT is considered to be a subset of information and communication technology (ICT). Humans have been storing, retrieving, manipulating, and communicating information since the Sumerians in Mesopotamia developed writing in about 3000 BC, but the term *information technology* in its modern sense first appared in a 1958 article published in the Harvard Business Review; authors Harold J. Leavitt and Thomas L. Whisler commented that "the new technology does not yet have a single established name.

(a) What kind of justification is used in this paragraph? (02 Marks)

(b) Author wants to use Information Technology (IT) as a title for this paragraph. What steps would you take to place it above the paragraph and center it?

(04 Marks)

(c) How can you change the paragraph, so that the second sentence is in a new paragraph? (04 Marks)

(d) Some words are misspelled in the paragraph. What feature of word processing would you use to correct them? (04 Marks)

(e) The heading of your document is **<u>INFORMATION TECHNOLOGY (IT)</u>**

    (i)   List four formatting features used in above title. (04 Marks)

    (ii)   How would you remove the underline? (01 Mark)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

(f) The second line of your paragraph contains the word 'manipulate'. Write how to replace the word 'manipulate' with the word 'manage'. (03 Marks)

(g) How would you print the content of a page across the length of a paper?

(03 Marks)

Question 04:

Provide the answers based on below spreadsheet.

	A	B	C	D	E	F	G	H
1				Mark Sheet				
2	S_No	S_Name	Science	Maths	IT	Total Marks	No. of Subjects	Average Marks
3	1	Rosy	70	70	85			
4	2	Ann	90	80	67			
5	3	Jane	80	89	93			
6	4	Jefry	60	98	56			
7	5	Jorge	50	67	90			
8	6	Shreya	90	45	75			
9		Max						
10								
11								
12								
13								

(a) Write formulas for the operations (i) – (iv) based on the above spreadsheet, along with the relevant cell address:

(i). To calculate the Total Marks as sum of Science, Maths & IT for each student and display them using cell references in column F. (04 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

(ii). To calculate the total number of subjects each student has obtained and display them using cell references in column G. (04 Marks)

(iii). To calculate the average marks for each student and display them using cell references in column H. (04 Marks)

(iv). To calculate the highest marks in Science and display it using cell references in cell C9. (04 Marks)

(b) Name the option (button) available in MS Excel to make the title "Mark Sheet" as it displays on above screen. (04 Marks)

(c) Name the shortcut key combinations used for following actions. (05 Marks)
   (i) to navigate to the top of the Worksheet (cell A1)
   (ii) to the last column of the worksheet.
   (iii) to the last row of the worksheet
   (iv) to make absolute cell reference
   (v) to save work sheet

Question 5

Data can be stored & manage manually or in a computerized environment.

(a) Briefly explain the terms "data" and "information" (04 Marks)

(b) List five difficulties of handling large volumes of data manually. (05 Marks)

(c) What is a database? Briefly explain how you would overcome the difficulties mentioned in question (ii) above by using a database. (06 Marks)

(d) What is the general name used to describe a set of software which creates, maintains and utilizes databases? List two popular examples of such software packages.

(05 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

(e) Assume that you are asked to create a simple database containing the data of lecturers of your College. List five fields that can be used to construct a table in the database. Give two sample records that you would enter in the table. (05 Marks)

Question 6
A page of a web site is shown below. Provide the answers based on it.

(a) What is meant by a 'Hyperlink'? (03 Marks)

(b) Write down two file extensions to identify a webpage. (02 Marks)

(c) Write the correct tag combinations (Start and Ending tags) to perform following tasks. (08 Marks)

    (i) Insert hyperlink

    (ii) Insert image

    (iii) Insert table

    (iv) Insert form

(d) Write the correct HTML code to display the table new books in above web page. (08 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

(e) Write HTML code to prepare an ordered list to display names of two books in the
above table   (04 Marks)

Question 7

Write short notes on following

(a) File Compression
(b) CUI
(c) HTTP
(d) Computer Virus
(e) RAM

(5*5 Marks)

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

Colombo International Nautical and Engineering College 00

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
REPEAT EXAMINATION
Business Mathematics I – BSCM1203

- This paper consists of SEVEN questions on FIVE (05) pages.
- Answer <u>FOUR</u> questions including question 01.
- Calculators are NOT 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: 2018.10.23   Pass mark: 40%   Time: 02 Hours

Question 01 (Compulsory)

(a) Factorise completely

    (i) $6X^2 - 5x - 6 = 0$

    (ii) $14X^2 - 5x - 1 = 0$

                                    (2*2 Marks)

(b) Solve $X - Y = 4$ and $2X^2 + XY + Y^2 = 8$ (03 Marks)

(c) Factorise $3x^2 - 3$ completely. Hence simplify $\dfrac{x^2 - 5x + 4}{3x^2 - 3}$ (03 Marks)

(d) Find second order and third order derivatives of following functions.

                                              (2*2 Marks)

    (i) $Y = x^5 - 9x^4 + 2x^2 - 2$

    (ii) $Y = -2x^7 - 4x^6 + 2x^5 - 3x^3$

(e) Integrate following functions   (3*2 Marks)

    (i) $\int_0^2 (x^3 + 9x)\, dx$

    (ii) $\int 3 \ln x\, dx$

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

(f) Find the coordinates of the points on the curve $Y = 2x^3 + 3x^2 - 12x + 6$ at which Y has a turning point. For each turning point, identify whether the minimum or maximum. (05 Marks)

Question 02

(a) Evaluate followings

    (i) $(243)^{\frac{1}{5}}$ (02 Marks)

    (ii) $\left((-27)^{\frac{2}{3}}\right)$ (02 Marks)

    (iii) $(243)^{\frac{3}{5}}$ (02 Marks)

(b) Simplify followings

    (i) $(2X^3 - 6x - 3)(5X^4 + 2X^2)$ (03 Marks)

    (ii) $(4X^6 - 2X + 1) + (3X^3 + 7X - 4) - (-3X^6 - 2X + 7)$ (03 Marks)

(c) Divide $2X^4 - 9X^3 + 13X^2 - 17X + 15$ by $(X-3)$ (04 Marks)

(d) Factorise Completely

    (i) $28X^2 - 19X - 20$ (03 Marks)

    (ii) $6X^2 - X - 2$ (03 Marks)

(e) Solve the simultaneous equations given below   (03 Marks)

    $X + Y = 1$

    $16X^2 + Y^2 = 65$

Question 03

Sketch the curve $y = x^2 - 6x + 19$. Use the range $[-1,7]$ (10 Marks)

On the same graph sheet, sketch the curve $y = -X^2 + 2X$ (10 Marks)

On your sketch give the coordinates of the turning point

         (02 Marks)

Give the coordinates of the points where the curve meets the coordinate axes.

         (03 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 04

Differentiate Followings
   (a) $Y = x^3 + 9x + 19$ (02 Marks)

   (b) $Y = e^{(-2x+4)}$ (02 Marks)

   (c) $Y = \sqrt{5x}$ (02 Marks)

   (d) $Y = -5 X^5 (- 2X^3 + 7)$ (03 Marks)

   (e) $Y = (x^3 + 1)(x^3 + 5)$ (04 Marks)

   (f) $Y = \dfrac{(2x+5)}{(2x^2 + 3)}$ (04 Marks)

   (g) Using derivative knowledge, find the coordinates of the stationary points on the curve with equation $y = X^3 - 3X + 2$. Sketch the curve, showing the stationary points and the coordinates of the points at which the curve meets the axes.

   (08 Marks)

Question 05

   (a) Given $Y = 5 X^4 (2X^3 - 9X)$
      (i) Find the derivative directly using Multiplication rule.

      (03 Marks)
      (ii) Simplify the original function by multiplication and then find the derivative. (03 Marks)
      (iii) Compare the derivatives in 'Part a' and 'b' (01 Marks)

   (b) For each of the following functions find the second – order derivative and third – order derivative. Evaluate them at $X = 2$
      (i) $Y = -5X^5 + 5 X^2 + 12X - 5$ (03 Marks)
      (ii) $Y = X^6 + 3 X^4 + X$ (03 Marks)

   (c) Find the derivative,
   $$y = \frac{3x(2x - e^x)}{(3x - 2)}$$
   (04 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

(d) Given C = 2500 + 0.8 Y_d, where Y_d = Y – T and T = 350 + 0.3 Y.

Determine Y_d in terms of 'Y' ONLY

Determine C in terms of 'Y' ONLY

Use the derivative to find the Marginal Propensity to Consume (MPC),

MPC = $\dfrac{dC}{dY}$

(08 Marks)

Question 06

(a) Determine the following indefinite integrals.

(i) $\int X^{-3/2} \, dx$ (02 Marks)

(ii) $\int \sqrt{x} \, dx$ (02 Marks)

(iii) $\int (2 X^5 - 3 X5 + X^{-1}) \, dx$ (02 Marks)

(iv) $\int e^{-2.5x} \, dx$ (02 Marks)

(b) Determine following integrals using "Integration By Parts"

(i) $Y = \int x * e^x \, dx$ (04 Marks)

(ii) Using the answer in part (i) above, evaluate $\int x^2 * e^x \, dx$

(04 Marks)

(iii) $\int \ln x * x^2 \, dx$ (04 Marks)

(iv) $\int \dfrac{2x}{e^{2x}} \, dx$ (05 Marks)

Question 07

(a) Evaluate following

(i) $\int_0^{10} 2e^{-2x} \, dx$ (04 Marks)

(ii) $\int_0^3 8X(2 X^2 + 3) \, dx$ (04 Marks)

(iii) $\int_{2}^{5} X^2(X^3 - 7)\,dx$ (04 Marks)

(iv) $\int_{0}^{1} x * e^{2x+1}\,dx$ (05 Marks)

(b) Given the rate of net investment is $I = 9t^{\frac{1}{2}}$. Find the capital formation K   in,

(i) 8 years (04 Marks)

(ii) for the fifth through the eight year (interval [4,8])

{Hint: $K = \int_{a}^{b} I\,dt$ } (04 Marks)

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

Colombo International Nautical and Engineering College

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
Introduction to Transportation – BSCM1301

- This paper consists of EIGHT (08) questions on SIX (06) pages.
- Answer <u>FIVE (05)</u> 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: 2018.08.10   Pass mark: 40%   Time: 03 Hours

Question 01 (Compulsory)

Transportation contributes to the economic, social and cultural development of any country. Transportation is vital for the economic development of any region since every commodity produced whether it is food, clothing, industrial products or medicine needs transport at all stages from production to distribution.

(a) Explain the National Highways classifications of Sri Lanka and give two examples for each.   (05 Marks)

(b) Explain the Categories of road Transport by explaining the mode, means and fields.   (05 Marks)

(c) Explain the term 'Accessibility' and "Mobility'. Give your recommendations to mitigate the road transport issues of Sri Lanka by improving accessibility, mobility and usage of intelligent transport systems for the betterment of freight transportation.   (10 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 02

Maritime Freight is conventionally considered in two main markets.

(a) What are the two main cargo categories in maritime freight? Give examples for each type. (05 Marks)

(b) What are the type of ships used in Freight transportation? (05 Marks)

(c) Draw a diagram of a ship and explain following:

    (i).   LOA

    (ii).   BEAM

    (iii).   DEPTH

    (iv).   FREEBOARD

    (v).   DRAFT (05 Marks)

(d) The maritime shipping industry offers two major types of services. Name and explain then briefly. (05 Marks)

Question 03

Air transportation is a method of transportation by which passengers, mail and cargo are conveyed by air. Air transport drives economic and social progress. It connects people, countries and cultures.

(a) List five characteristic of air transport. (05 Marks)

(b) Explain the categorization of air transportation (pay load) in general.

(05 Marks)

(c) Characteristics of Commodities transported by air. (10 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 04

Rail is the principal means of economically moving large, heavy freight long distances overland.

(a) Give two examples of cargo transported by rail. (02 Marks)

(b) Name major functions perform by Rail freight terminals. (03Marks)

(c) Draw and name the configuration of an Intermodal Rail Terminal.

(05 Marks)

(d) Name Two future aspects of Sri Lankan railway and explain one of them.

(10 Marks)

Question 05

Pipelines are limited in the markets they serve and very limited in the commodities they can haul and a unique mode of transportation.

(a) Explain how you are going to identify a location of an underground pipeline.

(02 Marks)

(b) Explain the categories of pipeline transportation. (03 Marks)

(c) Elaborate the Typical advantages of Pipelines with justifications using other modes. (05 Marks)

(d) Explain the factors that Multiphase Pipe Flow Depends on with examples.

(05 Marks)

(e) Describe the Current Issues with related to pipeline transportation.

(05 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 06

(a) Briefly explain the differences between Piracy and Armed Robbery. 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. (04 Marks)

(b) What is the ISPS Code? Explain your answer by explaining different security levels. (04 Marks)

(c) What is FOC and name five countries that practice this function. (04 Marks)

(d) Explain the decision of the insurer for the following situations, assuming yourself as a Cargo insurance consultant.

(i). "Mr. Pooh took a cargo insurance policy for his shipment of Bee Honey to England from his Farm. At the time of taking policy, he sent some boxes of explosives in that shipment and he didn't disclose this fact to the insurer. His container caught fire during the journey and cargo was destroyed. He claims for the insurance".

(ii). "The passengers in Air Africa flight are insured against death in the event of the air crash. Mrs. Daisy who's flying to America from South- Africa, dies of the Bird Flu in between the journey. Her family claims for the insurance".

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

19

(iii).   "Mr. Sylvester J, transported Tin Fish to Shanghai from his boat house in

Guangzhou. He took a cargo insurance policy to protect his cargo from the

perils of the sea. At the time of taking policy, he sent some cans of

Chemicals in that shipment and he clearly mentioned that fact to the

insurer. His cargo was destroyed due to the deterioration/expiration of the

cargo. He claims for the insurance".

(iv).   Miss Merida insured her house for Rs 100000. Her house got destroyed due

to a fire and she was managed to salvage her jewels and electrical

components amounting Rs. 45000. She is claiming for the compensation of

Rs. 100000.   (08 Marks)

Question 07

The transportation is a major source of emission of most pollutants and their multiple
impacts on the environment

(a) Name major types of pollution caused by transportation.   (06 Marks)

(b) Explain the difference between climate and weather.   (05 Marks)

(c) Write a very brief description about following topics.

   (i).   Territorial dispute

   (ii).   Cabotage Laws

   (iii). Transport Waste   (09 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 08

(a) Explain the concept of Globalization in your own words   (05 Marks)

(b) What are the two components of Globalization? Explain   (07 Marks)

(c) Describe forces driving Globalization   (08 Marks)

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

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
Introduction to Logistics – BSCM1307

- This paper consists of EIGHT (08) questions on FIVE (05) pages.
- Answer <u>FIVE (05)</u> 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.
- Supporting documents are attached.

Date: 2018.08.13   Pass mark: 40%   Time: 03 Hours

Question 01: (Compulsory)

"Logistics is the process of planning, implementing and controlling the efficient and effective flow and storage of goods, services and related information from the point of origin to the point of consumption for the purpose of conforming to customer requirements"
                                                    - Council of Logistics Management

Answer the following questions
(a) Briefly explain on several mile stones in the history that it expresses Logistics existed
                                                                (04 Marks)
(b) What it is meant by Inbound Logistics and Outbound Logistics   (02 Marks)
(c) List down the 7Rs in logistics and briefly explain each of them giving examples where necessary
                                                                (05 Marks)
(d) List down all the Activities in Logistical Channel and explain one of them of your own
                                                                (05 Marks)
(e) Briefly explain the four (04) systems of logistics with appropriate examples
                                                                (04 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 02

(a)

(i) Define what is global logistics? (03 Marks)

(ii) Explain how domestic logistics differ from global logistics (06 Marks)

(b)

(i) List down six (06) types of purchases (03 Marks)

(ii) Discuss the reasons for purchasing materials/components from external suppliers rather than making those in-house (08 Marks)

Question 03

(a) State the assumptions of a Basic EOQ model (05 Marks)

(b) AVIAN is a world renowned brand for quality and expensive wrist watches. The sales and marketing department of AVIAN Pvt. Ltd. has forecasted the annual demand for "Type A" wrist watches in one region as 975,000 units and accordingly the production plan of the Indian plant, runs all days per year (to cater to the region, only Indian plant produces). The ordering cost is calculated to be $ 860 per order and the supplier agrees to make the shipment available at the plant 02 weeks and 03 days after placing the order by AVIAN procurement team. The company policy is to maintain 1900 units as the safety stock and has decided to maintain the holding cost per unit per annum at $ 175

Answer the following questions with the data given above

(i) Calculate the Economic Order Quantity

(ii) How many times that the order must be placed?

(iii) Calculate the Total Annual Ordering Cost

(iv) Calculate the Total Annual Holding Cost

(v) Calculate the Total Annual Inventory Cost

(vi) Determine the Re-Order Point (15 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

20

Question 04

(a) List down the activities of Order processing. Explain all the activities   (10 Marks)

(b) Discuss the evolution of the logistical organizations and those hierarchies in relation to the 'stages of evolution'   (10 Marks)

Question 05

(a) The Logistics Planning Manager at St. Jonathans Ltd. which is a large-scale manufacturer of consumer care products, is planning the logistics operations for the month of August 2018. Considering the "Baby Soap" production and sales data given in the table below, prepare the forecasts by answering the following questions.

Table 5.01: Actual production and sales in 2018 first seven months (in '000)

Year	2018						
Month	January	February	March	April	May	June	July
Sales	953.5	926	945	960.5	920	955.5	928

(i)   The Naïve Forecast for August 2018
(ii)   The Four - month Simple Moving Average forecast for August 2018
(iii)   The Weighted Moving Average forecast for August 2018 using the weights 0.26 , 0.39 , 0.12
(iv)   The Exponential Smoothing forecast for August 2018 with a smoothing constant of 0.41 (Assume the forecast for June 2018 is 950,000 units)

(10 Marks)

(b) Using the data given below, calculate :
(i)   Forecasting Error
(ii)   Running Sum of Forecast Error
(iii)   Mean Absolute Deviation
(iv)   Mean Squared Error
(v)   Mean Absolute Percentage Error
(vi)   Tracking Signal   (10 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Table 5.02: Weekly Forecast and Actual sales (W=Week)

Week	W1	W2	W3	W4	W5	W6	W7
Forecast	1018	1011	1019	1013	1018	1012	1016
Actual	1019	1014	1019	1016	1012	1010	1017

(note : refer the attachment where necessary)

Question 06

Warehousing's roots go back to the creation of granaries to store food, which was historically available to purchase during times of famine. As European explorers began to create shipping-trade routes with other nations, warehouses grew in importance for the storage of products and commodities from afar. Ports were the major locations for warehouses. Warehousing is a key component of the overall business supply chain.

Answer the following questions

(a) Define the term 'Warehousing'? (03 Marks)

(b) List down all the activities of warehousing (05 Marks)

(c) Warehousing plays a major and an extensive role in the logistics system. Briefly describe, the warehouse's role in logistics (05 Marks)

(d) List down the four (04) types of warehousing. Discuss with examples. (05 Marks)

(e) When designing a warehouse, there are a number of factors to be considered. State four (04) factors that needs to be considered when designing a warehouse.

(02 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

2(1)

Question 07

(a) Mr. Nirmal, the Logistics Planning Manager of Orange Electricals Pvt. Ltd., suggests on shifting some of the logistics activities that are performed inside, to a 3rd party logistics provider. Assuming that you are Mr. Nirmal, write a brief report to be submitted to the Head of Logistic, explaining on the **reasons and risks** of shifting towards a 3rd party logistics company   (10 Marks)

(b) Discuss in detail on the transport modal characteristics and modal selection criteria   (10 Marks)

Question 08

Write short notes on <u>four (04)</u> of the following

    (a) JIT concept
    (b) Packaging used in warehouses
    (c) Independent Demand vs. Derived Demand
    (d) Benefits of e-procurement
    (e) Routing and Scheduling problems
    (f) Functions performed by LIS   (5*4 Marks)

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

Colombo International Nautical and Engineering College

CINEC Campus
Faculty of Management Humanities and Social Sciences
Department of Logistics & Transport
BMgt.(Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
Introduction to Logistics BSCM 1307

Attachment

Equations for Calculations

$$C_{(T)} = (Q/2) * H + (D/Q) * S$$

$$C_{(H)} = (Q/2) * H$$

$$C_{(O)} = (D/Q) * S$$

$$Q_0 = \sqrt{(2DS/H)}$$

$$ROP = (d * L) + SS$$

$$F_t = F_{(t-1)} + \alpha [A_{(t-1)} - F_{(t-1)}]$$

$$E_t = A_t - F_t$$

$$RSFE = \sum E_t$$

$$MAD = \frac{\sum | A_t - F_t |}{n}$$

$$MSE = \frac{\sum [A_t - F_t]^2}{(n-1)}$$

$$MAPE = \frac{\sum \left[\frac{| A_t - F_t |}{A_t} * 100 \right] \%}{n}$$

$$TS = (RSFE / MAD)$$

1

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
Microeconomics – BSCM1204

- This paper consists of SEVEN (07) questions on FIVE (05) pages.
- Answer <u>FOUR (04)</u> 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: 2018.08.08   Pass mark: 40%   Time: 02 Hours

Question 01: (Compulsory)

(a) Distinguish the difference between Microeconomics and Macroeconomics.

(4 Marks)

(b) Explain the basic economic problems of a society.   (4 Marks)

(c) Briefly explain the factors affecting to demand.   (4 Marks)

(d)   What causes shift in the production possibilities frontier outward.   (4 Marks)

(e) Briefly explain 03 determinants of supply of an Air-conditions in the perfectly competitive market.   (4 Marks)

(f) Briefly explain two methods of government intervention in Market Price Controls.   (5 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 02:

Students have to consider the opportunity cost of going to university. University graduates usually earn more income than those who have not gone to University. Having more graduates influences a country's production possibility curve. Some economists suggest that students should pay the full cost of their university courses and accommodation. Others say that the government should pay some or all of the cost.

(a) Describe a possible opportunity cost of a student going to University.

(4 Marks)

(b) Explain why University graduates usually earn more than those who have not gone to University. (5 Marks)

(c) Using a production possibility curve diagram, analyses what effect an increase in the number of graduates will have on an economy. (8 Marks)

(d) Discuss whether graduates should pay the full cost of their University education. (8 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

19

Question 03:

In 2013, the market price of houses rose in China but fell in Greece. The Chinese Government tried to reduce the rise in house prices by discouraging borrowing. In Greece, the equilibrium price of houses fell, largely because of a decrease in income. In some countries, governments give subsidies to housebuilders to influence the market for houses.

(a) Define "Equilibrium Price". (2 Marks)

(b) Explain the term of "Subsidies to house builders ". (5 Marks)

(c) Using a demand and supply diagram, analyses why a fall in incomes may reduce the market price of houses. (8 Marks)

(d) Discuss whether the subsidies should be given for building of houses.

(10 Marks)

Question 04:

Consider the following Demand and Supply equations of a commodity in the market.

$Q_{dx} = 600 - 5P_x$
$Q_s = 100 + 5P_x$

(a) Find the equilibrium Price and the Quantity. (6 Marks)

(b) Illustrate the demand and supply curves in a diagram with the help of demand and supply schedules. (8 Marks)

(c) Find the excess demand and excess supply at the price of 20 and 60.

(4 Marks)

(d) Find the Consumer Surplus and Producer Surplus. (4 Marks)

(e) Define the Dead Weight Loss. (3 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
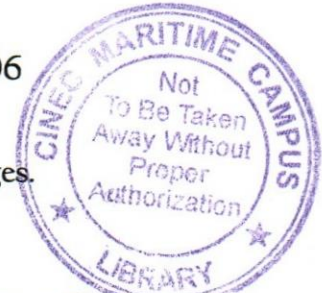B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 05:

Singapore is usually ranked as one of the best countries in which to do business. It is an open economy engaging in free trade. It has a history of strong entrepreneurship, low unemployment, low average costs and relatively low tax rates. Its example may encourage other countries to remove trade restrictions.

(a) Define the Average Costs and Variable Cost of a production firm.   (4 Marks)

(b) Identify four characteristics of an open economy.   (4 Marks)

(c) Define "Sunk Cost" with a suitable example.   (4 Marks)

(d) Briefly explain the term of Economies of Scale with the help of a diagram

(6 Marks)

 (e) Analyse how the market for a product would be affected by a reduction of the tax on the product combined with a fall in the price of a complement.   (7 Marks)

Question 06:

(a) Identify the factors affecting to price elasticity of demand   (4 Marks)

(b) Briefly explain the term of "Inferior goods" and "Luxurious goods".   (6 Marks)

(c) Briefly explain the term of Cross price elasticity of Demand and interpret the
    results of the sign of the co-efficient.   (6 Marks)

(d)Assume, If the price of petrol increased from Rs:130 to Rs:140 and demand fell from 10,000 units to 9,900. Calculate the PED of the above commodity.   (4 Marks)

(e) Assume your income is increased from Rs: 20,000 to Rs:25,000 and the demand for transportation is increased from 30 to 50 (Number of trips). Calculate the income elasticity of demand (YED) and interpret the results.   (5 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

19

Question 07:

(a) Identify the characteristics of a Perfectly Competitive Market.   (4 Marks)

(b) Explain the "Normal Profits" in the perfectly competitive market with

    aid of a diagram.   (6 Marks)

(c) Briefly explain the Cardinal Utility Theory.   (4 Marks)

(d) Explain the Law of Diminishing Marginal Utility   (4 Marks)

(e) Copy the following table and fill the blanks. Illustrate the Marginal Cost and Marginal

    Revenue curves in a diagram and find the Break Even Point.   (7 Marks)

Output (number of units produced)	Total Cost	Average Total Cost	Marginal Cost	Total Revenue	Marginal Revenue
0	0	0	0	0	0
1	14	14		9	9
2	22			16	
3	30	10	8	21	
4	40			24	3
5		11	15	25	

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

Colombo International Nautical and Engineering College

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
Principles of Management – BSCM1206

- This paper consists of SEVEN (07) questions on THREE (03) pages.
- Answer <u>FOUR (04)</u> 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: 2018.08.06   Pass mark: 40%   Time: 02 Hours

Question 01: (Compulsory)

Amal Senarathne was the owner and manager of a small business. For the first 25 years that the restaurant was open, Amal did not take a vacation. The restaurant was open 24 hours a day, seven days a week from 1955 to 1988. Amal managed the day-to-day operations and worked an average of 18 hours per day. The receipts averaged Rs. 5,000,000 a year.

Over the years restaurant has come to be regarded as the quintessential Sri Lankan restaurant.

As the manager, Amal supervised the entire organization, including all financial, employee, and customer issues. He cooked on the grill, worked behind the counter, managed the wait staff, ordered the food, and maintained the equipment. Amal's was known "for good service and a caring, personal touch." Amal knew his customers well enough to adjust their portions. "I used to ask the waitresses, 'Who's this for?'" reveals Vimal (Amal's Business partner) "If you ate and finished your dinner, you'd get more the next time. If you didn't eat it all, 1 would cut you back. I hate to waste food," he adds.

Amal served the community. If someone was hungry with no money, Amal would give them a free meal. He gave widows special prices. Amal remembers, "As long as they came in the diner and ate, that was the main thing for me. If they didn't come in, then I had to go
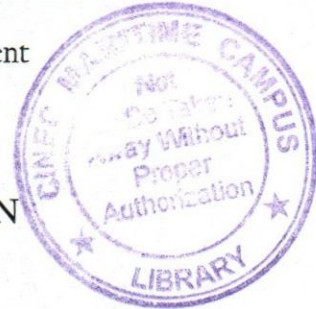
Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

and find out why they weren't in that day."

Amal sold his restaurant to three local restaurateurs. They've made changes to the diner's interior, while modernizing it. Unfortunately, many of the customers have left, and the new owners are losing money. Amal says, "I'd just like to see these three guys finish what I started. I think I had the best business in town," he continues. "You treat people right and they're going to treat you right."

(Note: This case was adopted from Management by Stephen P. Robbins and Mary Coulter)

(a)   Explain how you identify Amal as the manager in his business?   (07 Marks)

(b)   Which management functions did Amal perform? Cite examples to support your answer.   (18 Marks)

Question 02

(a)   Define the term "External Environment" in Business Organisation.   (04 Marks)

(b)   Identify the four components of Task Environment.   (04 Marks)

(c)   Identify the five components of General Environment.   (05 Marks)

(d)   Briefly explain three from above with examples.   (12 Marks)

Question 03

(a)   Define the term of "Planning" in Management.   (02 Marks)

(b)   Briefly explain the responsibilities of setting goals.   (05 Marks)

(c)   Briefly explain the purpose of setting goals.   (06 Marks)

(d)   Create a "Vision", "Mission", "Goal" and "Two Objectives" for an organization that you are going to start.   (12 Marks)

Question 04

(a)   Define the term "Organizing".   (03 Marks)

(b)   Define the term of "Organisational Structure".   (04 Marks)

(c)   Briefly explain four key elements of Organisatinal Structure.   (08 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

(d)   Briefly explain two basic forms of Organisational designs.   (10 Marks)

Question 05

(a)   Define the term "Leader".   (03 Marks)

(b)   Define the term "Leadership".   (04 Marks)

(c)   Briefly explain the Michigan Studies of Leadership Behavior.   (06 Marks)

(d)   "Power is an ability to affect or influence the behavior of others". Briefly explain.

                                                                           (12 Marks)

Question 06

(a)   Identify the main purpose of control in Management process.   (04 Marks)

(b)   Identify the four steps of controlling process.   (04 Marks)

(c)   Briefly explain the two characteristics of effective control in an organization.

                                                                           (05 Marks)

(d)   Identify the four main areas of controlling and briefly explain each.   (12 Marks)

Question 07

(a)   Define the term "Motivation".   (03 Marks)

(b)   Differentiate "Content Perspective" and "Process Perspective" of Motivation.

                                                                           (08 Marks)

(c)   Briefly explain Maslow's Hierarchy of Needs.   (14 Marks)

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

Colombo International Nautical and Engineering College

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
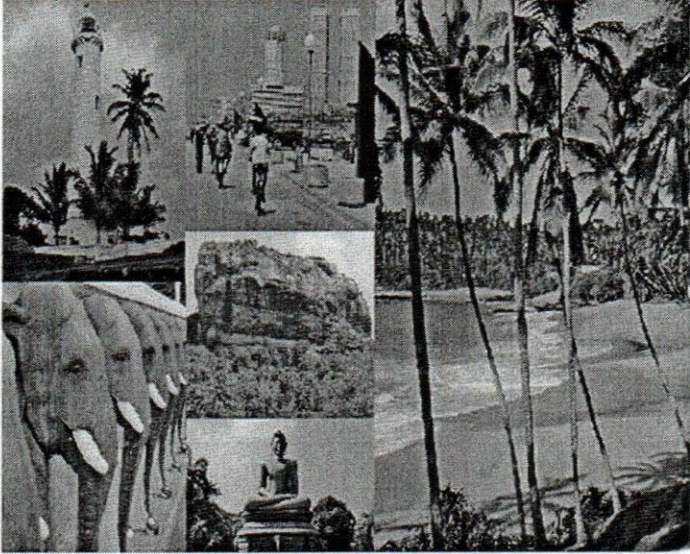Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
ICT Applications – BSCM1205

- This paper consists of SEVEN (07) questions on FIVE (05) pages.
- Answer <u>FOUR (04)</u> 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: 2018.08.03   Pass mark: 40%   Time: 02 Hours

Question 01: (Compulsory)

Discuss how Information Technology have made operations in Tourism, Marketing, Logistics and Education sectors more efficient and effective. (25 Marks)

Question 02

(a)   Explain what an Operating System is.   (05Marks)

(b)   Discuss the difference between CUI and GUI interfaces.   (06 Marks)

(c)   Explain what File Compression means.   (05 Marks)

(d)   Give two examples of file compression software.   (04 Marks)

(e)   Identify 5 symptoms that indicates your computer might be infected with malicious software.   (05 Marks)

Question 03:

Write the HTML code to generate a Web Page in the format given below. (25 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

SL Tour Guides   ×   +

file:///C:/Users/Public/Travel Guide.htm

Most Visited

Welcome To SL Tour Guides

HELPING PEOPLE PLAN TRIPS TO SRI LANKA

Let us help you plan your trip to the tropical paradise of Sri Lanka!

Local Information

CITY	Major Attractions	Distance from Colombo
Colombo	Galle Face Green World Trade Center National Museum	-
Kandy	Temple of the Tooth Relic Kandy Lake Botanic Gardens at Peradeniya	115 Km
Nuwara Eliya	Victoria Park Horton Plains Gregory Park	171 Km
Anuradhapura	Jaya Sri Maha Bodhi Ruwanwelisaya Mihintale Museum	200 Km

Our Branches

- Marine Drive
- Baththaramulla
- Rajagiriya

Promotions Contact us

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Consider the following while writing the HTML code:

(a) Title of the page should be SL Tour Guides

(b) Picture used in the page is the file "Sri_Lanka.jpg" and it is located in the folder where the webpage is also saved.

(c) Use an unordered list to list down the branches.

(d) The two links shown at the bottom of the page, "Promotions" and "Contact us" should be linked to "Promotions.html" and "Contact_Us.html" pages.

(e) Assume these two pages are also located in the folder where "Travel Guide.htm" page is saved.

(f) "Promotions" and "Contact us" links should open "Promotions.html" and "Contact_Us.html" pages on a new tab when clicked.

Question 04

(a) Define the terms "Data" and "Information" with examples.   (06 Marks)

(b) Explain the term "Data Processing".   (04 Marks)

(c) Identify which data types would be suitable for storing following information in MS Access databases.   (05 Marks)

    (i)   Price of an item for sale

    (ii)   Date and time of a client meeting

    (iii)   An email address

    (iv)   A student registration number

    (v)   First name of an employee

(d) Explain the use of reports in MS Access Database.   (05 Marks)

(e) Explain what is a Primary key in database table.   (05 Marks)

Question 5

(a) Explain what an ISP is. Name three ISPs available in Sri Lanka   (05 Marks)

(b) Explain what is email, parts of an email address and the uses of email.

(08 Marks)

(c) Explain the use of To, Cc and Bcc fields in email.   (06 Marks)

(d) Explain what a Web Browser is and give four examples of web browsers.

(06 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 6

Write the answers by referring following paragraph.

T he term computer hw refers to the physical components of a computer, namely Keyboard, Monitor, Mouse, and Printer, including the digital circuitry. **Computer hw** is an integral part embedded in all modern-day automobiles, microwave ovens, electrocardiograph machines, compact disc players, and other devices. The hw of a computer is not changed frequently, in contrast with software and data. The present computers are much advanced in terms of processing speed and have an efficient memory structure. The present lesson aims at providing an insight into the various hw concepts of a Computer System.

(a) Which word feature can instantly substitute every occurrence of word "hw" in this document with "hardware"? (03 Marks)

(b) Write down the steps to perform following tasks in MS Word.
   (i)   To display the letter T as in the beginning of the paragraph.   (02 Marks)
   (ii) To search a specific word or word phrase in the document.   (02 Marks)
   (iii) To insert automatically update date to the footer.   (02 Marks)
   (iv) To save the document as a web page.   (02 Marks)
   (v)   To get a hard copy of the document.   (02 Marks)

(c) The word formatting of the words "computer hw" in the second line needs to be copied on certain other words in the paragraph. Name the feature to be used for achieving the same. (03 Marks)

(d) To simplify editing selected words, suggest the mouse shortcut for selecting a complete word. (03 Marks)

(e) Write down the steps required to add a table with two rows and two columns to a word document. (06 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

19

Question 7

A sales person's total sales for each quarter are detailed in columns labelled Q1, Q2, Q3 and Q4 and the Total column represents the sum of the sales for the four quarters. The company pays a bonus of $300 to each sales person who grossed more than $2,800 in sales and only $50 to all sales people who grossed less than $2,800.

| C15 | f_x | | | | | | |

	A	B	C	D	E	F	G	H
1	Total Sales by Quarter							
2	Sales Person	Q1	Q2	Q3	Q4	Total	Bonus	
3	Jane	$ 980.00	$ 260.00	$ 480.00	$ 102.00	$1,822.00		
4	Sanjeev	$1,052.00	$ 852.00	$1,023.00	$1,001.00			
5	Asela	$ 260.00	$ 120.00	$ 560.00	$ 362.00			
6	Rajesh	$ 968.00	$ 369.00	$ 980.00	$1,423.00			
7	Kumara	$ 123.00	$ 258.00	$ 852.00	$1,059.00			
8	Sameera	$ 369.00	$ 855.00	$ 978.00	$ 230.00			
9	Nuwan	$ 152.00	$ 398.00	$ 982.00	$1,358.00			
10	Amila	$ 982.00	$ 986.00	$ 987.00	$ 896.00			
11	Rita	$ 258.00	$1,274.00	$ 25.00	$ -			
12								
13								

(a) Write down formulas to calculate following.

(i)	Total of the amounts into cell F3.	(03 Marks)
(ii)	Maximum sales amount of Q1 to cell B12.	(03 Marks)
(iii)	Calculate grand total in cell F12.	(03 Marks)
(iv)	To show the total number of sales persons in cell A12	(03 Marks)

(b) Write down the function to find out the bonus amount received by each sales person in cell G3 according to the criteria given in above scenario. (05 Marks)

(c) List down THREE (03) key uses of MS Excel in a work place. (03 Marks)

(d) Differentiate between absolute cell reference and relative cell reference.

(05 Marks)

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

Colombo International Nautical and Engineering College

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
Business Mathematics I – BSCM1203

- This paper consists of SEVEN questions on FIVE (05) pages.
- Answer <u>FOUR</u> questions including question 01.
- Calculators are NOT 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: 2018.08.01   Pass mark: 40%   Time: 02 Hours

Question 01 (Compulsory)

(a) Solve below quadratic equations using the quadratic formula

    (i) $X^2 - X - 2 = 0$

    (ii) $3X^2 - 7X + 2 = 0$ (2*2 Marks)

(b) Solve $X - Y = 4$ and $2X^2 + XY + Y^2 = 8$ (03 Marks)

(c) Factorise $3x^2 - 3$ completely. Hence simplify $\dfrac{x^2 - 5x + 4}{3x^2 - 3}$ (03 Marks)

(d) Find second order and third order derivatives of following functions.

        (2*2 Marks)

    (i) $Y = x^4 - 5x^3 + 2x^2 - 8$

    (ii) $Y = -2x^6 - 10x^5 + 2x^4 - x^2$

(e) Integrate following functions   (3*2 Marks)

    (i) $\int_0^2 (X + 9) * e^x \, dx$

    (ii) $\int \ln x \, dx$

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

(f) Find the coordinates of the points on the curve $Y = 2x^3 + 3x^2 - 12x + 6$ at which Y has a turning point. For each turning point, identify whether the minimum or maximum. (05 Marks)

Question 02

(a) Evaluate followings

    (i) $(125)^{\frac{-2}{3}}$ (02 Marks)

    (ii) $\left((15\frac{5}{8})^{\frac{3}{2}}\right)$ (02 Marks)

    (iii) $(243)^{\frac{3}{5}}$ (02 Marks)

(b) Simplify followings

    (i) $(2X^3 - 6x - 3)(5X^4 + 2X^2)$ (03 Marks)

    (ii) $(4X^6 - 2X + 1) + (3X^3 + 7X - 4) - (-3X^6 - 2X + 7)$ (03 Marks)

(c) Divide $2X^4 - 9X^3 + 13X^2 - 17X + 15$ by $(X-3)$ (04 Marks)

(d) Factorise Completely

    (i) $28X^2 - 19X - 20$ (03 Marks)
    (ii) $6X^2 - X - 2$ (03 Marks)

(e) Solve the simultaneous equations given below (03 Marks)
    $X + Y = 1$
    $16X^2 + Y^2 = 65$

Question 03

Sketch the curve $y = x^2 - 6x + 19$. Use the range $[-1,7]$ (10 Marks)

On the same graph sheet, sketch the curve $y = -X^2 + 2X$ (10 Marks)

On your sketch give the coordinates of the turning point

(02 Marks)

Give the coordinates of the points where the curve meets the coordinate axes.

(03 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Question 04

Differentiate Followings

    (a) $Y = x^2 + 5x + 9$ (02 Marks)

    (b) $Y = e^{(-x+4)}$ (02 Marks)

    (c) $Y = \sqrt{2x}$ (02 Marks)

    (d) $Y = -4 X^4 (- 2X^3+9)$ (03 Marks)

    (e) $Y = (x^2 + 1)(x^3+5)$ (04 Marks)

    (f) $Y = \dfrac{(3x+5)}{(2x^2+ 3)}$ (04 Marks)

    (g) Using derivative knowledge, find the coordinates of the stationary points on the curve with equation $y = X^3 - 3X +2$. Sketch the curve, showing the stationary points and the coordinates of the points at which the curve meets the axes.

                                                              (08 Marks)

Question 05

    (a) Given $Y = 5 X^6 (3X^2 - 7X)$
           (i) Find the derivative directly using Multiplication rule.

                                                           (03 Marks)
           (ii) Simplify the original function by multiplication and then find the derivative.   (03 Marks)
           (iii) Compare the derivatives in 'Part a' and 'b'   (01 Marks)

    (b) For each of the following functions find the second – order derivative and third – order derivative. Evaluate them at $X = 2$
           (i) $Y = - 5X^5 + 5 X^2 + 12X -5$ (03 Marks)
           (ii) $Y = X^6 + 3 X^4 + X$ (03 Marks)

    (c) Find the derivative,

$$y = \frac{3x(2x - e^x)}{(3x-2)}$$ (04 Marks)

    (d) Given $C = 2500 + 0.8 Y_d$, where $Y_d = Y - T$ and $T = 350 + 0.3 Y$.

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

Determine Y_d in terms of 'Y' ONLY

Determine C in terms of 'Y' ONLY

Use the derivative to find the Marginal Propensity to Consume (MPC),

$$MPC = \frac{dC}{dY}$$

(08 Marks)

Question 06

(a) Determine the following indefinite integrals.

    (i) $\int X^{-3/2} \, dx$ (02 Marks)

    (ii) $\int \sqrt{x} \, dx$ (02 Marks)

    (iii) $\int (2X^5 - 3X5 + X^{-1}) \, dx$ (02 Marks)

    (iv) $\int e^{-2.5x} \, dx$ (02 Marks)

(b) Determine following integrals using "Integration By Parts"

    (i) $Y = \int x * e^x \, dx$ (04 Marks)

    (ii) Using the answer in part (i) above, evaluate $\int x^2 * e^x \, dx$

          (04 Marks)

    (iii) $\int \ln x * x^2 \, dx$ (04 Marks)

    (iv) $\int \frac{2x}{e^{2x}} \, dx$ (05 Marks)

Question 07

(a) Evaluate following

    (i) $\int_0^{10} 2e^{-2x} \, dx$ (04 Marks)

    (ii) $\int_0^3 8X(2X^2 + 3) \, dx$ (04 Marks)

    (iii) $\int_2^5 X^2(X^3 - 7) \, dx$ (04 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
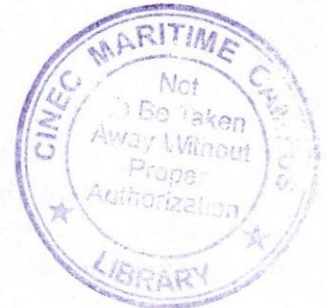Department of Logistics & Transport
B.Mgt. (Hons) in Supply Chain Management
Course CODE: COM552

$11

(iv) $\int_0^1 x * e^{2x+1} dx$ (05 Marks)

(b) Given the rate of net investment is I = $9t^{\frac{1}{2}}$. Find the capital formation K   in,

(i) 8 years   (04 Marks)

(ii) for the fifth through the eight year (interval [4,8])

{Hint: K = $\int_a^b I$ dt }   (04 Marks)

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

Colombo International Nautical and Engineering College

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons.) in Supply Chain Management
Course CODE: COM552

Year 1 Semester I
SEMESTER END EXAMINATION
English for Business I – BSCM1202

- This paper consists of FOUR questions on SIX (06) pages.
- Answer <u>ALL</u> 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: 2018.07.30   Pass mark: 40%   Time: 02 Hours

Question 01

Read the following article about the ways in which the climate affects business and answer the given questions.

Firms that rise or fall with the temperature

How do seasonal changes in the climate affect the UK's economy? In its recent research to find out what improves a company's performance, Chapman Stack, a firm of retail analysts, looked at the way in which climate has influenced consumer behavior over the past year.

When Julia Hinton, from the ice cream chain Kinsberry's was asked about sales of her company's products, she said, 'I would like to see a steady turnover throughout the year. However, our business depends on the weather. If it rains, the customers stay at home so even the summer, we can have disappointing results. Fortunately, in the second week of July, our busiest period last year, the customers were queuing in the street.

Damian Arthur, speaking for the department store Nellys, said that the company reported a 12% decline in sales last winter. 'A continued fall could lead to a loss of millions of pounds', he said. 'However I am pleased to say that despite the unusually cold weather last year, our annual earnings soon increased again. People did put off making big purchases, but they fortunately didn't stay away from the store for long.'

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons.) in Supply Chain Management
Course CODE: COM552

Mark Mackay, who represents the small Scottish retailing group P. Cummins Ltd. was asked about business conditions in the summer months. Mackay denied that the good weather was a factor in increased sales. He claimed that any rise resulted from overseas tourists deciding to extend their stay, which they could do for a number of reasons. He added that there had been an overall trend for small businesses to attract more customers.

Chapman Stack carried out research into the construction sector as well as into retail companies. The construction firm Aquilla Weeta saw some improvement in its annual results, even though conditions for building were not always perfect. While the mild spring weather was great for business, the heat last August caused their employees to slow down.

Wilfred Wharf from Chapman Stack was asked for his views on the overall effects of the climate on business. He said that in certain markets, favourable weather conditions could lead to huge growth. Companies which were usually happy with 5 – 10 % increase might see rises in profit over 50%. But while some companies made significant amounts, in the majority of cases the weather made a little difference. He said that in general, as always in business, success goes to companies that take advantage of every positive development.

(a) What was the objective of carrying out the research by the firm Chapman Stack? (03 Marks)

(b) Why doesn't the ice cream chain Kinsberry's have a steady turnover? (03 Marks)

(c) How could the department store Nelly's avoid bankruptcy? (03 Marks)

(d) According to Mark Mackay, why did his company's sales increase last year. (03 Marks)

(e) Compare the weather condition views expressed by the construction company Acquilla Weeta and Julia Hinton. (03 Marks)

(f) Explain the meaning of the following five words as used in the text: performance, a firm, turnover, decline, favourable (05 Marks)

(g) Write a summary of the above article using less than 50 words. Do not exceed the word limit. (05 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons.) in Supply Chain Management
Course CODE: COM552

Question 02

(a)   Read the following memo and answer the questions given.

Memo

From : The Manager / Administration

To : All the employees

Cc. : CEO

Subject : Renovation of the vehicle park

Date : 16th July 2018

This is to inform you that the Management has decided to renovate the vehicle park from 20th to 25th July 2018. An alternative arrangement has been made in MC car park. Please follow the following instructions.

- Vehicle owners should obtain a note from administration department to park free of charge.
- Please hand over the completed note to the security officer at MC park.

The management regrets any inconvenience caused.

(i)   What is this memo about?   (03 Marks)

....

(ii)   What does Cc. mean?   (04 Marks)

....

(iii) What does the alternative arrangement?   (04 Marks)

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons.) in Supply Chain Management
Course CODE: COM552

....

(iv)   Add another appropriate instruction to the above memo.   (04 Marks)

....

(c)   You have just received the message that a new client, Adriel Solomon is arriving at your office the day after tomorrow in the afternoon at 2.30 p.m.

Write a memo to your secretary, Anne Peterz
   o   Tell her about Mr. Adriel Solomon
   o   Explain why you might be late
   o   Tell Anne what to do with Mr. Adriel until you arrive

Use about 30-40 words and your answer sheet.

(10 Marks)

Question 03

(a) Shorten the following sentences using infinitive phrases. Look at the example
(10 marks)

Example : I was glad when I heard of your success.
          I was glad to hear of your success.

(i)   It seems that it is impossible.
....

(ii)   He hopes that he will know by tomorrow.
....

(iii)   He didn´t expect that he would pass the exam.
....

(iv)   She was sad when she heard the bad news.
....

(v)   The last person who criticized me like that was in hospital for two months.
....

Colombo International Nautical and Engineering College
CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons.) in Supply Chain Management
Course CODE: COM552

(b) Fil in the blanks with the most suitable coordinating conjunctions.

(05 Marks)

(i) We thought that the figures were correct. ……………….., we have now discovered some errors.

(ii) The horizontal axis shows the sales …………….. the vertical line indicate the companies.

(iii) The program will be postponed ……………….. the bad weather continues.

(iv) I was unable to attend lectures last Friday ………….. I was sick.

(v) You won't succeed in your future endeavors ……………… you work hard now.

(c) Write sentences to bring out the meaning of FIVE of the following words.

(10 Marks)

team work / sound knowledge / commensurate / flexible / self-motivated / wages / fringe benefits

(i) ....

(ii) ....

(iii) ....

(iv) ....

(v) ....

Colombo International Nautical and Engineering College

CINEC Campus
Faculty of Management, Humanities and Social Sciences
Department of Logistics & Transport
B.Mgt. (Hons.) in Supply Chain Management
Course CODE: COM552

Question 04

(a)   What is a report?   (02 Marks)

(b)   Mention two types of reports and briefly explain them.   (04 Marks)

(c)   Explain briefly the following four terms widely used in reports.
       objective/ acknowledgements/ appendices / references   (04 Marks)

(d)   Read this part of a letter below from Harry Silva, the Marketing Director of an
      accounting software company.

      You expressed your interest in our accounting software passages at the recent
      ICT Innovations Exhibition held at BMICH Colombo. We believe you may also
      be interested in our latest products:

      - **Accurate Accounting Routiner**™ makes your book keeping easy
      - **Data Store**™ is a user-friendly database

      We would be glad to demonstrate our software products either in your work
      place or at our own premises.

      Write a letter to Mr. Harry Silva:
                      - request a product demonstration at your workplace
                      - tell him you are interested in one of the products
                      - inquire the prices
                      - suggest two possible dates
      Use about 60-80 words.   (15 Marks)

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