

PAST PAPERS

Faculty	Department / Section/Division
Not Applicable	Learning Resource Centre

Past Papers

Faculty of Humanities & social Sciences  
Department of Logistics & Transportation

**Bsc.(Hons) Logistic & Transportation**  
**(Year 3 – Semester II)**  
**2016 - 2022**

Document Control & Approving Authority	Senior Director – Quality Management & Administration
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Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551



Year 3 Semester II

SEMESTER END EXAMINATION

Airport Planning and Management – LTAM3210

- This paper consists of SEVEN (07) questions on THREE (03) pages.
- Answer FOUR (04) Questions including Question 01.
- Only non-programmable calculators are allowed.
- You may use appropriate graphs, diagrams, equation/s to prove or justify the answers.
- If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it on the script.
- Write Legibly.

Date: 2022.03.21

Pass mark: 50%

Time: 02 Hours

### Question 01: (Compulsory)

- Differentiate between operation and maintenance expenses and capital improvement expenses of an airport with examples. (06 Marks)
- Briefly explain the residual cost approach and compensatory cost approach used by airports for financial management. (06 Marks)
- Aeronautical charges and non-aeronautical charges are the two main sources of revenue generation in an airport. What are your recommendations to increase non-aeronautical revenue of Bandaranaike International Airport? (13 Marks)

### Question 02

- Runway configuration refers to the relative orientations of one or more runways on an airfield. There are different runway configurations at different airports. Explain how each basic runway configuration affects capacity and delay of an airport? (12 Marks)
- An aircraft approaching Runway 22 at Honolulu International airport needs to determine whether the aircraft is in the correct approach path. It is visible for the Pilot in Command (PIC) that there are red and white lights emanating from Visual Approach Slope Indicator (VASI) light units on the left side of the runway. Explain in detail how the PIC would interpret these lights and make use of them to approach and land the aircraft safely. (13 Marks)



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

### Question 03

- (a) Terminal of an airport provides the vital link between the airside and the landside of the airport. Terminal configurations have evolved over the years as airports expanded to meet the growing needs of the public and the growing wingspan of aircraft. Compare and contrast linear terminal configuration and Pier finger terminal configuration. (12 Marks)
- (b) Aviation is a system that is vulnerable to security threats with the changing environment of the industry. Explain the different techniques and methods used by commercial airports to provide airport security. (13 Marks)

### Question 04

- (a) Airports are among the largest public facilities in the world. Airports play different roles in shaping the economic, political, and environmental aspects of the communities they serve. Explain in detail the economic role and the political role played by an airport operating at its maximum capacity. (25 Marks)

### Question 05

- (a) What is meant by an Airport master plan? Explain the elements of an airport master plan with examples. (12 Marks)
- (b) Airports today are in the midst of a technological, functional, architectural, and cultural evolution, in response to the changing needs of populations and cities around the world. Explain strategies that airports must adopt in order to thrive in the twenty-first century. (13 Marks)



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

**Question 06**

- (a) Define delay and capacity. Identify factors that cause delays in an airport and explain strategies that can be used by the airport management to overcome these factors that cause delays. (13 Marks)
- (b) 'Every airport has four "publics" with which it interacts despite the difference in size and scope of activities of airports.' Explain with examples. (12 Marks)

**Question 07**

- (a) Briefly explain the importance of an Aerodrome Safety Inspection Programme for an airport. (06 Marks)
- (b) Birds and other wildlife striking an aircraft in operation in vicinity of airport cause serious damage to aircraft and loss of human life. Explain controlling techniques used by airports to avoid bird attractions. (06 Marks)
- (c) In air traffic management the area of responsibility for the provision of air traffic control services changes from one control center to another as the aircraft flies. Briefly explain the air traffic control centers responsible for the provision of air traffic control services from take-off to landing taking into consideration the below given flight:  
Flight UL234 taking off from Mattala Rajapaksha International Airport and landing at Velana International Airport, Male. (13 Marks)

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





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551



Year 3 Semester II

SEMESTER END EXAMINATION

Project Management – LTPM3209

- This paper consists of SEVEN (07) questions on NINE (09) pages.
- Answer FOUR (04) 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.
- Standard Normal Table is attached.

Date: 2022.03.16

Pass mark: 50%

Time: 02 Hours

### Question 01 (Compulsory)

Project management is widely recognized as a results-oriented management style that places a premium on building collaborative relationships among a diverse cast of characters.

- (a) Based on your knowledge on Project management, consult a manufacturing firm moving toward a project-oriented business practices.
- (i) Name 3 features that differentiate a project from daily operations of a firm? (06 Marks)
  - (ii) How can you differentiate a 'Project', a 'Program' and a 'Portfolio'; the 3Ps of project management? (03 Marks)
  - (iii) Briefly explain 2 drivers of project management. (04 Marks)





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

- (b) The Ceylon Transportation Board (CTB) is planning to conduct a project on safety within public transportation to the general public in line with World Women's Day, 2022. CTB will be partnering with Ministry of Women and Child Affairs in sponsoring the event. CTB will conduct the program on March 8<sup>th</sup>. The budget was estimated to be around Rs. 250 000, but the project needs to be planned and executed within a week. CTB has already selected a project team consisting 8 members and a project manager. The project team is aware of the theme, but with the tight schedule, they do not have a fixed specific plan for the program on March 8<sup>th</sup>. A few ideas brainstormed included a television program, an awareness camp and an event with delegates and invitees. The project manager would need to make a quick decision on the scope of the project to do their utmost in a short time.
- (i) Name 2 characteristics identified in this effort that classifies this as a project. (02 Marks)
  - (ii) Name 3 stakeholders of this project. (03 Marks)
  - (iii) Develop a project priority matrix for this project providing appropriate justification. (05 Marks)
  - (iv) What qualities would the project manager of the project be benefitted from? (02 Marks)

## Question 02

Organizational strategy is the fundamental way an organization choose to compete in the market.

- (a) Today, projects are increasingly used in the strategic management process of an organization in fulfilling organizational strategy.
- (i) In modern business environment how important is it for project managers to understand strategy? (02 Marks)
  - (ii) What are the basic classifications of projects conducted within an organization? (03 Marks)
  - (iii) Name 2 reasons for an organization to prioritize its projects. (02 Marks)





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

- (b) Project success is directly linked to the amount of autonomy and authority project managers have over their projects.
- (i) List an advantages and a disadvantage for the following organizational structures.
1. Dedicated project team structure
  2. Matrix structure
  3. Functional structure
- (06 Marks)
- (ii) Name 2 organizational considerations and project consideration when selecting an organizational structure. (04 Marks)
- (iii) Under what conditions would it be advisable to use a strong matrix instead of a dedicated project team? (03 Marks)
- (iv) What is more important for the project success the parent company structure or the culture? Justify your answer. (05 Marks)

### Question 03

A project uses both a Work breakdown Structure (WBS) and a Network Diagram to navigate through the work completion of a project.

- (a)
- (i) How does a project network differ from a WBS? (04 Marks)
- (ii) In what stages of a project would a WBS be used by a project manager? (03 Marks)
- (iii) Discuss the benefits of using a WBS. (06 Marks)
- (b) Assume you are the manager of a software development company and you have received a contract to develop a software for a new 3D printer developed by ABC Group. Tale 3.00 contains information regarding the activities of the project. You are required to:
- (i) Develop the network diagram for the project. (02 Marks)
- (ii) Calculate the early, late and slack activity times. (08 Marks)
- (iii) Determine the critical path of the network (02 Marks)





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

Table 3.00: 3D printer software development activities

Activity	Description	Duration (Hours)	Predecessor
A	External specifications	8	-
B	Review design features	2	A
C	Document new features	3	A
D	Write software	60	A
E	Program and test	60	B
F	Edit and publish notes	2	C
G	Review manual	2	D
H	Alpha site	20	E, F
I	Print manual	10	G
J	Beta site	10	H, I
K	Complete manufacture	12	J
L	Release and transfer to ABC Group	3	K

#### Question 04

The Lock-head Aircraft Co. is ready to begin a project to develop a new fighter airplane for the U.S. Air Force. The company's contract with the Department of Defense calls for project completion within 100 weeks, with penalties imposed for late delivery. The project involves 10 activities (labeled A, B, . . . J), where their precedence relationships are shown in the following project network.

- (a)
- (i) Name 3 tools that could the project manager of this project assess the project risk. (03 Marks)
  - (ii) When using PERT simulations, what is the major outcome? (02 Marks)





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

(b) The Figure 4.00 shows the network diagram of the project to develop the new fighter airplane. Table 4.00 contains the information required to carry out a PERT Simulation. Use three estimate PERT approach simulation to answer the following questions.

- (i) Find the estimate of the mean and variance of the duration of each activity. (05 Marks)
- (ii) Find the mean critical path (08 Marks)
- (iii) Find the approximate probability that the project will finish within 90 weeks and 105 weeks.

(07 Marks)

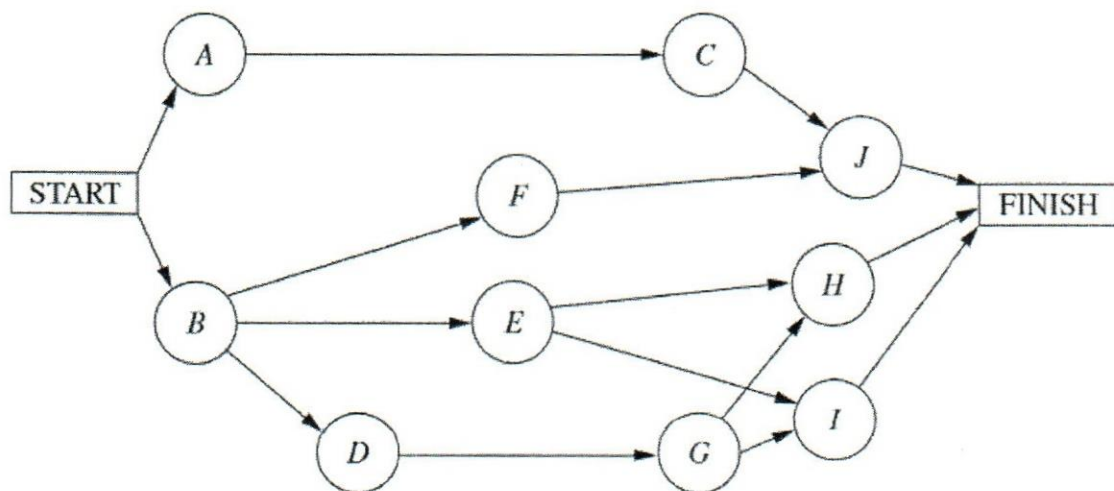


Figure 4.00: Network diagram of the project





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

Table 4.00: Time variances of the project

Activity	Optimistic Time (Weeks) (a)	Most Likely Time (Weeks) (m)	Pessimistic Time (Weeks) (b)
A	28	32	36
B	22	28	32
C	26	36	46
D	14	16	18
E	32	32	32
F	40	52	74
G	12	16	24
H	16	20	26
I	26	34	42
J	12	16	30

### Question 05

(a) Assume you are the main organizer for a workshop for the 3<sup>rd</sup> year and 4<sup>th</sup> year students of your degree programme. You need to organize a motivational programme to be held at the university in 4 weeks. You need to invite a motivational speaker and prepare the venue and refreshments for the workshop.

- (i) What are the 6 elements included in a scope statement? (06 Marks)
- (ii) Develop a scope statement for the scenario given above. (06 Marks)
- (iii) Name 3 major stakeholders of this workshop. (03 Marks)
- (iv) How does an Organizational Breakdown Structure (OBS) help in project execution? (02 Marks)



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- (b) While planning and execution of a project are important, a project closure holds a similar importance.
- (i) What are the reasons for project closure? (03 Marks)
  - (ii) What are the 3 major deliverables in a project closure? (03 Marks)
  - (iii) How does 'Project Retrospectives' help a company in long-term? (02 Marks)

### Question 06

- (a) Risk management is a knowledge area that is given high priority at the early stages of project planning.
- (i) What is the relationship between different stages of a project life cycle and the cost to fix a risk event? (02 Marks)
  - (ii) What are the basic responses of opportunity management? (04 Marks)
  - (iii) A construction company has undertaken a project to build a housing complex in an area where floods are common. The neighboring community of the land reserved for the housing complex have also lodged complaints regarding the noise disturbances the complex may cause when in construction. It is to be a housing complex with 20 units of housing units, parking and other utilities. As a proactive measure the project team is starting the risk assessment process. You are the team member responsible for the risk assessment process. You are required to 1) Identify at least 4 risks associated with the project; 2) Develop a risk assessment matrix stating the probability and impact of each risk; 3) Develop a risk response for each identified risk. (12 Marks)





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

- (b) Project duration and costs are altered on different rationale during a project life cycle. Whilst time duration is crashed, due to tight budgets project outcomes gets altered.
- (i) Name 3 reasons for project duration reductions. (03 Marks)
  - (ii) Name 2 methods of accelerating a project. (02 Marks)
  - (iii) What are the methods of cutting back costs of a project? (02 Marks)

### Question 07

- (a) Estimating is the process followed by project managers in forecasting or approximating the time and cost of completing project deliverables.
- (i) What are the factors influencing the quality estimation process of a project?  
(03 Marks)
  - (ii) "Project cost estimation is a continuous one". Discuss the statement based on Phase estimating method.  
(04 Marks)
  - (iii) List 2 advantages and 2 disadvantages of the top-down estimating method.  
(04 Marks)
  - (iv) "Padding might defeat chances for realistic estimates". Briefly discuss.  
(02 Marks)
  - (v) Name 2 reasons that leads to the refining of estimates of a project.  
(02 Marks)
  - (vi) Calculate the direct cost of labor for the project team using the following data. What are the individual costs for the individual project team members? What is the overall direct labor cost?



Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

Table 7.00: Labor costs the project

Name	Hours Needed	Overhead Charge	Personnel Time Rate	Hourly Rate (\$/hr)	Total Direct Labor Cost (\$)
John	40	1.80	1.12	21	
Bill	40	1.80	1.12	40	
Sam	60	1.35	1.05	10	
Sonny	25	1.80	1.12	32	

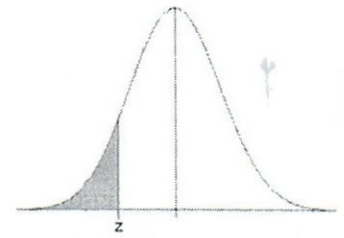
(03 Marks)

- (b) It is commonly accepted that project network times are not a schedule until resources have been assigned.
- (i) What are the 2 methods used by project managers to overcome the scheduling problem? (02 Marks)
  - (ii) When should a project manager avoid splitting activities? Why? (02 Marks)
  - (iii) Name 3 common issues faced by planners when scheduling activities in a multi-project environment. (03 Marks)

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



## Standard Normal Cumulative Probability Table



Cumulative probabilities for NEGATIVE z-values are shown in the following table:

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
-3.4	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002
-3.3	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0003
-3.2	0.0007	0.0007	0.0006	0.0006	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005
-3.1	0.0010	0.0009	0.0009	0.0009	0.0008	0.0008	0.0008	0.0008	0.0007	0.0007
-3.0	0.0013	0.0013	0.0013	0.0012	0.0012	0.0011	0.0011	0.0011	0.0010	0.0010
-2.9	0.0019	0.0018	0.0018	0.0017	0.0016	0.0016	0.0015	0.0015	0.0014	0.0014
-2.8	0.0026	0.0025	0.0024	0.0023	0.0023	0.0022	0.0021	0.0021	0.0020	0.0019
-2.7	0.0035	0.0034	0.0033	0.0032	0.0031	0.0030	0.0029	0.0028	0.0027	0.0026
-2.6	0.0047	0.0045	0.0044	0.0043	0.0041	0.0040	0.0039	0.0038	0.0037	0.0036
-2.5	0.0062	0.0060	0.0059	0.0057	0.0055	0.0054	0.0052	0.0051	0.0049	0.0048
-2.4	0.0082	0.0080	0.0078	0.0075	0.0073	0.0071	0.0069	0.0068	0.0066	0.0064
-2.3	0.0107	0.0104	0.0102	0.0099	0.0096	0.0094	0.0091	0.0089	0.0087	0.0084
-2.2	0.0139	0.0136	0.0132	0.0129	0.0125	0.0122	0.0119	0.0116	0.0113	0.0110
-2.1	0.0179	0.0174	0.0170	0.0166	0.0162	0.0158	0.0154	0.0150	0.0146	0.0143
-2.0	0.0228	0.0222	0.0217	0.0212	0.0207	0.0202	0.0197	0.0192	0.0188	0.0183
-1.9	0.0287	0.0281	0.0274	0.0268	0.0262	0.0256	0.0250	0.0244	0.0239	0.0233
-1.8	0.0359	0.0351	0.0344	0.0336	0.0329	0.0322	0.0314	0.0307	0.0301	0.0294
-1.7	0.0446	0.0436	0.0427	0.0418	0.0409	0.0401	0.0392	0.0384	0.0375	0.0367
-1.6	0.0548	0.0537	0.0526	0.0516	0.0505	0.0495	0.0485	0.0475	0.0465	0.0455
-1.5	0.0668	0.0655	0.0643	0.0630	0.0618	0.0606	0.0594	0.0582	0.0571	0.0559
-1.4	0.0808	0.0793	0.0778	0.0764	0.0749	0.0735	0.0721	0.0708	0.0694	0.0681
-1.3	0.0968	0.0951	0.0934	0.0918	0.0901	0.0885	0.0869	0.0853	0.0838	0.0823
-1.2	0.1151	0.1131	0.1112	0.1093	0.1075	0.1056	0.1038	0.1020	0.1003	0.0985
-1.1	0.1357	0.1335	0.1314	0.1292	0.1271	0.1251	0.1230	0.1210	0.1190	0.1170
-1.0	0.1587	0.1562	0.1539	0.1515	0.1492	0.1469	0.1446	0.1423	0.1401	0.1379
-0.9	0.1841	0.1814	0.1788	0.1762	0.1736	0.1711	0.1685	0.1660	0.1635	0.1611
-0.8	0.2119	0.2090	0.2061	0.2033	0.2005	0.1977	0.1949	0.1922	0.1894	0.1867
-0.7	0.2420	0.2389	0.2358	0.2327	0.2296	0.2266	0.2236	0.2206	0.2177	0.2148
-0.6	0.2743	0.2709	0.2676	0.2643	0.2611	0.2578	0.2546	0.2514	0.2483	0.2451
-0.5	0.3085	0.3050	0.3015	0.2981	0.2946	0.2912	0.2877	0.2843	0.2810	0.2776
-0.4	0.3446	0.3409	0.3372	0.3336	0.3300	0.3264	0.3228	0.3192	0.3156	0.3121
-0.3	0.3821	0.3783	0.3745	0.3707	0.3669	0.3632	0.3594	0.3557	0.3520	0.3483
-0.2	0.4207	0.4168	0.4129	0.4090	0.4052	0.4013	0.3974	0.3936	0.3897	0.3859
-0.1	0.4602	0.4562	0.4522	0.4483	0.4443	0.4404	0.4364	0.4325	0.4286	0.4247
0.0	0.5000	0.4960	0.4920	0.4880	0.4840	0.4801	0.4761	0.4721	0.4681	0.4641









Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551



Year 3 Semester II

SEMESTER END EXAMINATION

Transport Contract and Regulations – LTTR3213

- This paper consists of SEVEN (07) questions on EIGHT (08) pages.
- Answer FOUR (04) Questions including Question 01.
- Only non-programmable calculators are allowed.
- You may use appropriate graphs, diagrams, equation/s to prove or justify the answers.
- If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it on the script.
- Write Legibly.

Date: 2022.03.13

Pass mark: 50%

Time: 02 Hours

**Question 01 (Compulsory)**

1. Select the most appropriate answer from below.

- (I) An offer which requires acceptance to be communicated to the offeror in a specified method, can be accepted by any method.
- (II) A legal contract is formed as soon as there is an offer and acceptance.
- (III) Offer has to be conveyed to the offeree. The offeree cannot accept an offer unless he knows of its existence.
- A) 1st and 2nd statements are wrong.
- B) 1st statement is wrong.
- C) All Statements are correct.
- D) The 2nd statement is wrong.

Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

02. Which of the following statements are True?

(I) An exclusion clause may be inserted into a contract to exclude or limit one party's liability for death or injury due to negligence.

(II) Silence is not considered as a valid acceptance.

(III) In English Law, the contracts are not valid (unless under seal), without consideration.

A) I only.

B) II Only.

C) III Only.

D) I and II.

E) II and III.

03. Which of the following statements are True?

(I) Force Majeure is a concept of French law.

(II) When a contract is frustrated, it will excuse a party for non-performance of a particular obligation but the contract shall be continued.

(III) When the concept of force majeure applies, the contract can be brought to an end without parties being responsible for their obligations.

A) I only.

B) II Only.

C) III Only.

D) I and III.

E) II and III.



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

04. Which of the following statements are True?

- (I) The principal gives his consent to an agency by express agreement.
  - (II) The principal gives his consent to an agency by ratification.
  - (III) The principal needs to give his consent for creation of an agency by implied agreement.
- A) I only.
  - B) II Only.
  - C) III Only.
  - D) I and II.
  - E) II and III.

05. Which of the following statements are True?

- (I) The main function of an agent is to bring his principal into a contractual relationship with third parties, provided that the agent acts within the given authority by his principal.
  - (II) The principal has the option either to ratify or reject the action of his agent, if the agent has acted beyond the authority given by the principal.
  - (III) The principal must ratify all actions of his agent.
- A) All.
  - B) II Only.
  - C) III Only.
  - D) I and II.
  - E) I and III.

Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

06. Which of the following statements are True?

- (I) The principal is liable for any contract of his agent.
- (II) The principal acquires rights and liabilities under a contract entered into by his agent, with principal's prior approval.

(III) The Important feature of an agency relationship is that the agent by his act "with in the real authority given by his principal", affects the principal's legal position towards third parties.

- A) All
- B) II Only.
- C) III Only.
- D) I and II.
- E) II and III.

07. Which of the following statements are True?

(I) The purpose of an appointment of an agent is to transfer all responsibilities of the principal to the appointed agent, when the agent acts within his actual /real authority granted by the principal.

(II) The purpose of an appointment of agent is for the convenience and to use the agent's expertise.

(III) The purpose of an appointment of agent is to reduce the cost of the principal.

- A) All
- B) II Only.
- C) III Only.
- D) I and II.



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

E) II and III.

08. Select the most appropriate answer from below.

- (I) A revocable L/C can be revoked at any time by the issuing bank without consent from the seller.
  - (II) Documentary credit is a contract between the Buyer and the Seller.
  - (III) The documentary credit is a contract between the issuing bank and the seller.
- A) 1st and 2nd statements are correct.
  - B) 1st statement is wrong.
  - C) All statements are correct.
  - D) The 2nd statement is wrong.

09. Select the most appropriate answer from below.

- (I) Credit is a separate and independent of the corresponding sales contract between the buyer and seller.
  - (II) In UCP 600 the irrevocable L/C has not been expressly defined but broadly covered in the Article 3
  - (III) Revocable L/C cannot be changed, reversed, revoked and needs the consent of all parties to revoke same.
- A) 1st and 2nd statements are correct.
  - B) 1st statement is wrong.
  - C) All statements are correct.
  - D) The 2nd statement is wrong.

Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

10. When an irrevocable documentary credit is issued,

- (I) Buyer is assuring the seller of the payment.
  - (II) Issuing Bank assures seller for the payment and undertaking to pay on behalf of the buyer through another bank.
  - (III) The seller should be vigilant with regard to the credit worthiness of the issuing bank.
- A) 1st and 2nd statements are correct.
  - B) 1st statement is wrong.
  - C) All statements are correct.
  - D) The 2nd statement is correct.

(2.5 Marks \* 10)

### Question 02

- (a) Explain the functions of the Bill of lading issued to a non-chartering shipper. (10Marks)
- (b) Explain the function of the Bill of lading issued to a shipper, who is also the charterer of the vessel. (10Marks)
- (c) Explain at which situation the Bill of lading creates a contract. (05 Marks)

### Question 03

On the 2<sup>nd</sup> of April 2021 Kamal , the sales executive of ABC shipping lines (Pvt) Ltd offered an ocean freight rate of USD 5000 per 20' from Colombo to Hamburg to Mr. Sunil, the MD of Heladiva exports (Pvt) Ltd.

Kamal agreed to carry 5 TEUs with confirmed space on their vessel due on the 10<sup>th</sup> of April.



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

On the 3<sup>rd</sup> of April Mr. Sunil sent an e mail as a response to Kamal's offer, with the following wordings. "Heladiva exports (pvt) Ltd will hand over 5 x 20's to Hamburg to ABC shipping line at USD 4500 per 20'.

Kamal released his space to another shipper. Heladiva exports (pvt) Ltd could not secure space on the agreed voyage and Heladiva's buyer has demanded them to air freight the entire shipment.

Mr. Sunil wants to file action against ABC shipping lines (pvt) Ltd for breach of contract. You are requested to advise Mr. Sunil under English Law.

(25 Marks)

#### Question 04

(a) Explain the importance of INCOTERMS in international trade. (05Marks)

(b) Write short notes on the following INCOTERMS explaining the costs and risk passing point. (20Marks)

- (i) CIF
- (ii) FOB
- (iii) DDP
- (iv) Ex-Works

#### Question 05

"All legal contracts are agreements, but all agreements are not contracts." Explain the basic requirements needed for formation of a contract.

(25Marks)

#### Question 06

Write a comprehensive report on the concept of General Average and the main requirements that need to be satisfied, when a general average contribution be claimed.

(25 Marks)

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Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

**Question 07**

- a) What is a charter party? Briefly explain the three types of charter parties.

(10 Marks)

- b) Common law implies 5 terms into every voyage charter party. Explain each of them.

(15 Marks)

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



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Year 3 Semester II

## SEMESTER END EXAMINATION

### Transport Contract and Regulations – LTTR3213

- This paper consists of SEVEN (07) questions on EIGHT (08) pages.
- Answer FOUR (04) Questions including Question 01.
- Only non-programmable calculators are allowed.
- You may use appropriate graphs, diagrams, equation/s to prove or justify the answers.
- If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it on the script.
- Write Legibly.

Date: 2022.03.13

Pass mark: 50%

Time: 02 Hours

### Question 01 (Compulsory)

1. Select the most appropriate answer from below.

(I) An offer which requires acceptance to be communicated to the offeror in a specified method, can be accepted by any method.

(II) A legal contract is formed as soon as there is an offer and acceptance.

(III) Offer has to be conveyed to the offeree. The offeree cannot accept an offer unless he knows of its existence.

A) 1st and 2nd statements are wrong.

B) 1st statement is wrong.

C) All Statements are correct.

D) The 2nd statement is wrong.

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BSc Hons in Logistics and Transportation  
Course CODE: COM551

02. Which of the following statements are True?

(I) An exclusion clause may be inserted into a contract to exclude or limit one party's liability for death or injury due to negligence.

(II) Silence is not considered as a valid acceptance.

(III) In English Law, the contracts are not valid (unless under seal), without consideration.

A) I only.

B) II Only.

C) III Only.

D) I and II.

E) II and III.

03. Which of the following statements are True?

(I) Force Majeure is a concept of French law.

(II) When a contract is frustrated, it will excuse a party for non-performance of a particular obligation but the contract shall be continued.

(III) When the concept of force majeure applies, the contract can be brought to an end without parties being responsible for their obligations.

A) I only.

B) II Only.

C) III Only.

D) I and III.

E) II and III.



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Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

04. Which of the following statements are True?

- (I) The principal gives his consent to an agency by express agreement.
- (II) The principal gives his consent to an agency by ratification.
- (III) The principal needs to give his consent for creation of an agency by implied agreement.

- A) I only.
- B) II Only.
- C) III Only.
- D) I and II.
- E) II and III.

05. Which of the following statements are True?

- (I) The main function of an agent is to bring his principal into a contractual relationship with third parties, provided that the agent acts within the given authority by his principal.
- (II) The principal has the option either to ratify or reject the action of his agent, if the agent has acted beyond the authority given by the principal.
- (III) The principal must ratify all actions of his agent.

- A) All.
- B) II Only.
- C) III Only.
- D) I and II.
- E) I and III.

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BSc Hons in Logistics and Transportation  
Course CODE: COM551

06. Which of the following statements are True?

- (I) The principal is liable for any contract of his agent.
- (II) The principal acquires rights and liabilities under a contract entered into by his agent, with principal's prior approval.
- (III) The Important feature of an agency relationship is that the agent by his act "with in the real authority given by his principal", affects the principal's legal position towards third parties.

- A) All
- B) II Only.
- C) III Only.
- D) I and II.
- E) II and III.

07. Which of the following statements are True?

- (I) The purpose of an appointment of an agent is to transfer all responsibilities of the principal to the appointed agent, when the agent acts within his actual /real authority granted by the principal.
- (II) The purpose of an appointment of agent is for the convenience and to use the agent's expertise.
- (III) The purpose of an appointment of agent is to reduce the cost of the principal.

- A) All
- B) II Only.
- C) III Only.
- D) I and II.



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Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

E) II and III.

08. Select the most appropriate answer from below.

- (I) A revocable L/C can be revoked at any time by the issuing bank without consent from the seller.
  - (II) Documentary credit is a contract between the Buyer and the Seller.
  - (III) The documentary credit is a contract between the issuing bank and the seller.
- A) 1st and 2nd statements are correct.
  - B) 1st statement is wrong.
  - C) All statements are correct.
  - D) The 2nd statement is wrong.

09. Select the most appropriate answer from below.

- (I) Credit is a separate and independent of the corresponding sales contract between the buyer and seller.
  - (II) In UCP 600 the irrevocable L/C has not been expressly defined but broadly covered in the Article 3
  - (III) Revocable L/C cannot be changed, reversed, revoked and needs the consent of all parties to revoke same.
- A) 1st and 2nd statements are correct.
  - B) 1st statement is wrong.
  - C) All statements are correct.
  - D) The 2nd statement is wrong.

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BSc Hons in Logistics and Transportation  
Course CODE: COM551

10. When an irrevocable documentary credit is issued,

- (I) Buyer is assuring the seller of the payment.
  - (II) Issuing Bank assures seller for the payment and undertaking to pay on behalf of the buyer through another bank.
  - (III) The seller should be vigilant with regard to the credit worthiness of the issuing bank.
- A) 1st and 2nd statements are correct.
  - B) 1st statement is wrong.
  - C) All statements are correct.
  - D) The 2nd statement is correct.

(2.5 Marks \* 10)

### Question 02

- (a) Explain the functions of the Bill of lading issued to a non-chartering shipper. (10Marks)
- (b) Explain the function of the Bill of lading issued to a shipper, who is also the charterer of the vessel. (10Marks)
- (c) Explain at which situation the Bill of lading creates a contract. (05 Marks)

### Question 03

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Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

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(25 Marks)

#### Question 04

(a) Explain the importance of INCOTERMS in international trade. (05Marks)

(b) Write short notes on the following INCOTERMS explaining the costs and risk passing point. (20Marks)

- (i) CIF
- (ii) FOB
- (iii) DDP
- (iv) Ex-Works

#### Question 05

"All legal contracts are agreements, but all agreements are not contracts." Explain the basic requirements needed for formation of a contract.

(25Marks)

#### Question 06

Write a comprehensive report on the concept of General Average and the main requirements that need to be satisfied, when a general average contribution be claimed.

(25 Marks)

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BSc Hons in Logistics and Transportation  
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**Question 07**

a) What is a charter party? Briefly explain the three types of charter parties.

(10 Marks)

b) Common law implies 5 terms into every voyage charter party. Explain each of them.

(15 Marks)

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





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BSc Hons in Logistics and Transportation  
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Year 3 Semester II

SEMESTER END EXAMINATION

Marketing Management – LTMM3212

- This paper consists of SEVEN (07) questions on FIVE (05) pages.
- Answer FOUR (04) Questions including Question 01.
- Only non-programmable calculators are allowed.
- You may use appropriate graphs, diagrams, equation/s to prove or justify the answers.
- If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it on the script.
- Write Legibly.

Date: 2022.03.11

Pass mark: 50%

Time: 02 Hours

### Question 01 (Compulsory)

#### Daraz Sri Lanka

The emergence of Internet technologies greatly impacts on the consumer 's daily activities and many offline activities have now migrated to the online environment. Online shopping today is not a new phenomenon. From the evolution of the internet to accelerated digitalisation to the booming e-commerce industry, people have come a long way to make life simpler.

Daraz is a household name among the Sri Lankan online shopping community. Having begun its operations just over five years back, the e-commerce giant today has transformed the way people view digitalisation and the abundant opportunities that comes with it. Supported by the strength of the Alibaba Group, Daraz is transforming into the fastest-growing e-commerce platform in the region. Supported by cutting-edge technology, tailored marketing, and data and service solutions Daraz Sri Lanka



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

hosts a growing base of 2.5 million users, over 125,000 registered sellers and at any given time, over 4.5 million products are being advertised and sold on the platform.

Daraz's logistics company, DEX, delivers more than 50,000 packages to consumers every day, and a majority of those 50,000+ packages are sold by local sellers that operate on the platform. Daraz is focused on delivering excellent customer experiences, ease of purchase, comprehensive customer care, and a hassle-free shopping and returns experience.

After nearly two decades of war, which disrupted normal life and economic activities, the telecoms sector has exhibited strong growth in Sri Lanka. The number of active SIM cards has increased from a mere 0.43 million in 2000 to about 28.2 million in 2017. By 2019, the total number of cellular mobile connections had grown to 33.5 million, with over 12.5 million broadband and dial-up internet connections. Further, a sharply increasing trend in telecoms usage, especially in mobile usage, can be observed during Covid 19 pandemic in many countries including Sri Lanka. With this growth in the telecommunication sector, e-commerce in Sri Lanka seems to be developing fast.

Although e-commerce is already established in Sri Lanka, the degree of its penetration and adoption is still seems to be limited. The country has considerable potential to expand e-commerce. It can be said that currently not more than 10 per cent of commerce is technology driven. This indicates that great potential remains untapped.

The main challenges to faster and wider diffusion of e-commerce among consumers are low penetration of internet. Low level of adoption of e-payment modalities arising from limited credit card/debit card penetration is another challenge to wider diffusion of e-commerce. Lack of trust, awareness, and skill among the general population in e-commerce is another factor that contribute for low penetration in e-commerce.

Sri Lanka has taken various significant steps towards creating an enabling environment for ICT use within the government and in society at large. To encourage e-commerce, the government has passed several laws aimed at facilitating e-government and e-commerce.





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Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

Logistics and transport in the country is multimodal, with a developed network of roads, rail and air transport, as well as a wide network of waterways and port infrastructure, which is an important part of successful e-commerce ecosystem. The government has also, in the recent past, initiated a number of projects and programmes to improve roads, expand road connectivity and improve materials-handling systems at the ports.

*The above data has been based on a real-life situation, but details have been changed for assessment purposes and may not be an accurate reflection of reported news.*

Using the given information in the case study you are required to prepare a SWOT analysis for Daraz Sri Lanka. (25Marks)

### **Question 02**

As a Marketing Manager you might expect to have a well-resourced and managed Marketing Information System (MIS). Though, some information is available but neither the form nor the accessibility of the data is entirely suitable for marketing purposes. Using a company of your choice, prepare a brief report for the IT Manager that.

- a) Explain the importance of Marketing Information System (MIS) (05Marks)
- b) Discuss how Marketing Information System (MIS) should function for managers to make correct decision in this turbulent environment. (20Marks)

### **Question 03**

You are the Marketing Director of a manufacturer of high-quality bathroom equipment, but sales and profits have been declining for some time.

- c) With the aid of a diagram, discuss the key stages of the product life cycle (15Marks)



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Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- d) Recommend TWO price adjustment strategies that they could use for improving sales.

(10 Marks)

#### Question 04

As a Marketing Assistant working within the marketing department of a global internet-based clothing brand, you have been asked by your manager to produce a report for your marketing department that:

- a) Explain decisions that company make when designing a suitable channel for the company.

(16Marks)

- b) Recommend TWO suitable marketing communication tools that your organization could use to communicate with its target market effectively.

(09Marks)

#### Question 05

You are working for a newly established telecommunication services provider as an assistant marketing manager.

- a) With reference to the consumer buyer decision process, explain the five (05) stages a consumer may go through in selecting a telecommunication service.

(10 Marks)

- b) Identify THREE buyer characteristics that could influence their behavior in choosing a telecommunication service provider.

(15 Marks)





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Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

### Question 06

Perera & Sons is a small independent bakery that supplies and markets pastries and bakery items such as buns, patties, cakes, etc mostly in Western region. They wish to substantially grow their business around the country.

- (a) Recommend how Perera & Sons could segment the market using THREE suitable bases (You are required to discuss both main bases and suitable sub criteria).

(15 Marks)

- (b) Explain TWO suitable value differences that you suggest using for positioning the company offer.

(10Marks).

### Question 07

You work for a large national insurance company based in a country of your choice. You have been asked by your manager to produce a report for all local and regional managers, that

- (a) Discuss the challenges they face by a company in similar nature in becoming market-oriented (05Marks)
- (b) Explain how the extended marketing mix elements could be used to gain competitive advantage for the company. (20Marks)

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

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Course CODE: COM 551

Year 3 Semester 2

END SEMESTER EXAMINATION

Research Methodology – LTRM3214

- This paper consists of SEVEN (07) questions on SEVEN pages.
- Answer FOUR (04) questions including question 01.
- Only Non-programmable calculators are allowed.
- You may use appropriate graphs, diagrams, equation/s to prove or justify the answers.
- If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it on the script.
- Write legibly.

Date: 2022.03.09

Pass mark: 50%

Time: 02 Hours

**Question: 01**

**Multiple Choice**

For each question there are four possible answers A, B, C and D. Choose the one you consider correct and record your choice in the given sheet.

Each correct answer will score 2.5 marks. A mark will not be deducted for a wrong answer.

1) Identify the main role of research in education ?.

- a) To upsurge one's social status
- b) To increase one's job prospects
- c) To augment one's personal growth
- d) To help an applicant in becoming a renowned educationalist





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BSc Hons in Logistics and Transportation  
Course CODE: COM 551

- 2) Which of these is not a step in the problem identification process?
- (a) Discussion with subject experts
  - (b) Review of existing literature
  - (c) Theoretical foundation and model building
  - (d) Management decision making
- 
- 3) Which of the following does not correspond to characteristics of research ?
- a) Research is not passive
  - b) Research is systematic
  - c) Research is not a problem-oriented
  - d) Research is not a process
- 4) Mean, Variance and Standard Deviation are :
- a) Tools of Descriptive statistics
  - b) Tools of Inferential Statistics
  - c) Ways of sampling
  - d) Ways of collecting data
- 5) A researcher is interested in studying the prospects of a particular political party in an urban area. So, what tool should he prefer for the study?
- a) Rating Scale
  - b) Interview
  - c) Questionnaire
  - d) Schedule
- 6) Identify the non-probability sampling techniques of the following ?
- A) Snowball



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Course CODE: COM 551

- B) Random  
C) Cluster  
D) Stratified
- 7) Which of the following is NOT an essential element of report writing?
- a) Research Methodology
  - b) Reference
  - c) Conclusion
  - d) None of these
- 8) The research that is especially carried out to test and validate the study hypotheses is termed
- a) Fundamental research
  - b) Applied research
  - c) Conclusive research
  - d) Exploratory research
- 9) The research studies that explore the effect of one thing on another and more specifically, the effect of one variable on another are known as
- (a) Causal research
  - (b) Applied research
  - (c) Conclusive research
  - (d) Exploratory research
- 10) Which of the following is a non-probability sampling method?.
- a) Simple random sampling
  - b) Systematic sampling
  - c) Cluster sampling
  - d) Quota sampling





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Course CODE: COM 551

**Question: 02**

- a) Briefly explain the significance of conducting a field science research with the aid of an example. (05 Marks)
- b) Classify the three phases of a research process with the aid of an example (06 Marks)
- 
- c) Briefly explain the THREE types research with the aid of an example. (06 Marks)
- d) "The inductive approach begins with a set of empirical observations, seeking patterns in those observations, and then theorizing about those patterns". Explain the statement with the aid of an example. (08 Marks)

**Question: 03**

- a) Briefly explain the Process of a Research with the aid of an example. (06 Marks)
- b) "Deductive research approach is most associated with scientific investigation". Briefly explain the statement with the aid of an example. (06 Marks)
- c) Identify the significance of a Pure Research with the aid of an example. (05Marks)
- d) "The systematic investigation into and study of materials, sources, etc., in order to establish facts and reach new conclusions". Analyze the statement with the aid of an example. (08 Marks)

**Question: 04**

- a) "Correlational research refers to a non-experimental research method which studies the relationship between two variables with the help of statistical analysis." Briefly explain the statement with the aid of an example. (08 Marks)



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Course CODE: COM 551

- b) Briefly explain the elements of methods of data collection. (06 Marks)
- c) "Applied research seek to solve practical problems, scientists are in constant research to find out cure for diseases." Explain the statement with the aid of an example. (06 Marks)
- d) Identify the difference between Theoretical framework and Conceptual Framework of the study. (05 Marks)
- 

**Question: 05**

- a) "Quantitative Research which involves collecting and analyzing numerical data and applying statistical tests". Briefly explain the statement with the aid of an example. (06 Marks)
- b) Illustrate a research objective on your own. You may think any researchable topic or area to support your answer. (05 Marks)
- c) Explain the term of "Desk Research" with the aid of an example. (06 Marks)
- d) "Qualitative Research which is more subjective in nature and involves examining and reflecting on perceptions in order to gain an understanding of social and human activities by using non-numerical and parametric statistics". Explain the statement by providing suitable examples. (08 Marks)





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Course CODE: COM 551

**Question: 06**

- a) "Demand forecasting plays an important role for supply chains decision making." Explain the statement how research is involved for demand forecasting. (08 Marks)
- b) Briefly explain the difference between structured questions and unstructured questions with the aid of an example. (07 Marks)
- c) Paraphrase the following paragraph using citation of your own.

"Most medical people despised the press, holding attitudes not totally unfamiliar today. Reporters tended to be suckers for every quack, half-quack, over-eager scientist, or naive country doctor who thought he had a serum to cure tuberculosis, a herbal remedy for cancer, or a new surgical procedure to rejuvenate the aged. When the newspapers were not wasting space on undeserving medical stories, they were over-playing legitimate news, getting their facts wrong, and generally making a nuisance of themselves interfering in the lives and practices of busy professionals.

Doctors' deep suspicion of what they read in the newspapers and even in the less-carefully edited of the medical journals, helps to explain some of the early skepticism about insulin in countries like Britain: Oh, the Americans are always curing everything; this week it's diabetes. Even in Canada and the United States it was some months before there was enough confirmation of the unlikely news from Toronto to convince wire services and the more skeptical doctors and editors that insulin was, indeed, the real thing." (10 Marks)



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### Question: 07

#### Part -A

Briefly explain the following terms with the aid of an example. (Answer 03 from the following terms)

- i. Survey
  - ii. Population
  - iii. Comparative Research
  - iv. Plagiarism
  - v. Scholarly Articles
  - vi. Observation
- (5\*3 Marks)

#### Part -B

- a) Identify the secondary sources with reference to transport sector in Sri Lanka. (03 Marks)
- b) "A reference list is a list of the publication information for the sources you've cited in your paper and is intended to give your readers all the information they need to find those sources.". Identify the term of Reference and highlight the significance of referencing in a referencing study. (07 Marks)

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





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Year 3 Semester II  
SEMESTER END EXAMINATION  
Econometrics – LTEC3211

- This paper consists of SEVEN (07) questions on ELEVEN (11) pages.
- Answer FOUR (04) 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.
- Formulae sheet and Statistical tables are attached.

Date: 2022.03.08

Pass mark: 50%

Time: 02 Hours

**Question 01 (Compulsory)**

**Write the correct answer in your answer book**

1. There are two companies which produce medical tablets to provide vitamin C to patients. Doctors say that both tablets consist of equal content of vitamin C and no difference between the two tablets. For test that statement a researcher have test vitamin constrained of 10 tablets from each company. Which test is most appropriate?
  - a. One way ANOVA
  - b. One sample T test
  - c. Independent sample t test
  - d. Paired sample t test.



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Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

2. Type I error occurs when ,
  - a. Reject a false null hypothesis.
  - b. Reject a true null hypothesis.
  - c. Do not reject a false null hypothesis.
  - d. Do not reject a true null hypothesis.
  
3. Meaning of term "heteroscedasticity"
  - a. The variance of the errors is not constant
  - b. The variance of the dependent variable is not constant
  - c. The errors are not linearly independent of one another
  - d. The errors have non- zero mean.
  
4. Autocorrelation is generally occurred in
  - a. Cross - section data
  - b. Time series data
  - c. Pooled data
  - d. None of the above
  
5. The coefficient of determination ( $r^2$ ) shows,
  - a. Proportion of the variance in the dependent variable Y is explained by the independent variable X
  - b. Proportion of the variance in the independent variable X is explained by the dependent variable Y
  - c. Proportion of the variation in  $U_i$  is explained by the independent variable X
  - d. Both a and c
  
6. When independent variables in a multiple regression model are correlated,..... problem arise,
  - a. Heteroscedasticity
  - b. Multicollinearity
  - c. Homoscedasticity





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Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- d. Autocorrelation
7. The formula of coefficient of determination is ,( RSS: sum of squares of residuals ,  
ESS: sum of squares of explained, TSS: total sum of squares)
- $1 + \text{RSS}/\text{TSS}$
  - $1 - \text{RSS}/\text{ESS}$
  - $1 - \text{RSS}/\text{TSS}$
  - $1 * \text{RSS} / \text{TSS}$
8. Durbin Watson test is associated with,
- Heteroscedasticity
  - Multicollinearity
  - Autocorrelation
  - Both a and c
9. The value of coefficient of correlation always,
- Lies below 0
  - Lies above 1
  - Lies between 0 and  $\infty$
  - Lies between 0 and 1
10. Consider the equation,  $Y = \beta_1 + \beta_2 X_2 + u$ . A null hypothesis,  $H_0: \beta_2 = 0$  states that:
- $X_2$  has no effect on the expected value of  $\beta_2$ .
  - $X_2$  has no effect on the expected value of  $Y$ .
  - $\beta_2$  has no effect on the expected value of  $Y$ .
  - $Y$  has no effect on the expected value of  $X_2$

(20 Marks)



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BSc Hons in Logistics and Transportation  
Course CODE: COM551

11. The term "linear" in a multiple linear regression model means that the equation is linear in parameters

True ( ) False ( )

12. A dummy variable is used to incorporate quantitative information in a regression model

True ( ) False ( )

13. when study population is assumed that not normally distributed and data is categorical person correlation can be applied

True ( ) False ( )

14. It is possible to construct a frequency table showing the values assumed by the statistic and the frequency of their occurrence. This distribution of sample values of a statistic is called a sampling distribution.

True ( ) False ( )

15. Sample of a given size are drawn repeatedly from the population and particular "parameters" is computed for each sample.

True ( ) False ( )

(05 Marks)





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 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

### Question 02

- a. You are given following daily productivity values of a company. The production manager said that daily productivity is 28. (Use 95% confidence) test the statement

30	20	35	28	30	32	28	29	34	35
----	----	----	----	----	----	----	----	----	----

(08 Marks)

- b. You need to test whether there is a difference between the two financial institutions in relation to leasing facilities. Selecting ten customers from each institution, a questionnaire was given to answer. Each answer has been assigned some marks and the total mark is 50. Following table provides the marks given by each customer. Test and interpret the results.

A	40	42	41	39	38	42	37	39	39	40
B	43	37	39	41	37	39	40	38	41	38

(10 Marks)

- c. You are given following SPSS output about marks of the students from two groups interpret the results with appropriate hypothesis.



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 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

#### Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Marks	Equal variances assumed	.009	.926	.934	18	.363	7.70000	8.24763	-9.62762	25.02762
	Equal variances not assumed			.934	17.770	.363	7.70000	8.24763	-9.64374	25.04374

#### Group Statistics

class	N	Mean	Std. Deviation	Std. Error Mean
Marks A	10	72.5000	17.36056	5.48989
B	10	64.8000	19.46393	6.15503

(07 Marks)

### Question 03

- a. Four companies which produce food item say that their products are equal in quality. You need to test this statement and collected data with regard to vitamin content. Information is provided by the following table. Construct one way ANOVA and test the statement.

Company A (Mg)	Company B (Mg)	Company C (Mg)	Company D (Mg)
10	8	10	13
14	10	11	14
13	9	12	10
12	3	12	11
12	8	14	12
11	10	13	12

(15 Marks)





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

**Paired Samples Test**

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Productivity before - productivity after	-7.30000	6.56675	2.07659	-11.99757	-2.60243	-3.515	9	.007

- b. You are given following SPSS output on results comparison of productivity of employees after the specific training program

**Paired Samples Statistics**

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Productivity before	52.6000	10	21.17756	6.69693
Productivity after	59.9000	10	17.94095	5.67343

**Paired Samples Correlations**

	N	Correlation	Sig.
Pair 1 Productivity before & Productivity after	10	.957	.000

(10 Marks )



Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

### Question 04

The following data relate to the scores obtained by 9 salesmen of a company in an intelligence test and their weekly sales (in Rs 1000's)

Table 1.1: Weekly Sales of the Company

Salesmen	A	B	C	D	E	F	G	H	I
Test Scores ( $X_i$ )	50	60	50	60	80	50	80	40	70
Weekly sales ( $Y_i$ )	30	60	40	50	60	30	70	50	60

- Test whether there is a linear association between  $Y_i$  and  $X_i$  (06 Marks)
- Find the regression equation for the weekly sales (06Marks)
- Is it best fit line? Prove that (04 Marks)
- Plot the regression line on the scatter diagram (part (a)) and show the deviations of each  $Y_i$  from the corresponding  $\hat{Y}_i$ . (05 Marks)
- Calculate % error of observations and comment on that (04 Marks)





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 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

### Question 05

the following SPSS output obtained by a researcher data on Price of X, Price of Y and Quantity demanded of product X.

#### Descriptive Statistics

	Mean	Std. Deviation	N
QDX	148.50	13.243	10
Price of the Y	61.50	9.009	10
Price of the X	192.80	16.552	10

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.986 <sup>a</sup>	.973	.965	2.474	1.885

#### Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	31.832	13.893		2.291	.056
	Price of Y	.869	.269	.591	3.228	.014
	Price of X	.328	.146	.410	2.240	.040

a. Dependent Variable: QDx

Interpret the above results with appropriate hypothesis

(25 Marks)



Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

### Question 06

a. Interpret following model coefficients.

I.  $\text{Log}(\text{wage}) = 1.5 + 3.3\text{education} + 1.2 \text{experiance} + 0.40 \text{age}$

II.  $\log(\text{GDP})_t = 2.17 + 0.03t$

III.  $(\text{GDP})_t = 2.67 + 3.1 \log(\text{import})_t$

IV.  $\text{consumption Expenditure} = 600 + 0.8 \text{disposable income}$

(16 Marks)

b. Following results obtained on weight of a person and his or her age and gender.

(1 coded for Male while 0 coded for Female)

Model	Coefficients				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	-1687.115	813.844		-2.073	.051
Age	118.670	20.959	.765	5.662	.000
Gender	166.279	74.573	.301	2.230	.037

a. Dependent Variable: Weight

I. Write appropriate hypothesis

(04 Marks)

II. Write and interpret the equation

(05 Marks)





Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

### Question 07

Write short notes on 05 (five) of followings.

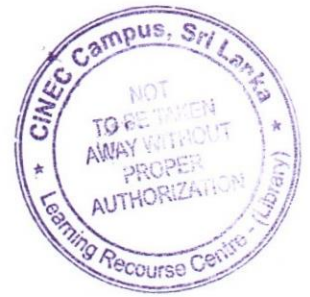
- a. Methodology of Econometrics
- b. Types of Data
- c. Polynomial Regression Model
- d. Ordinary Least Squared Method
- e. Sampling Distribution
- f. Assumptions of OLS method

(5\*5 Marks)

-----END OF THE EXAMINATION PAPER-----



Faculty of Management and Social Sciences  
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BSc Hons in Logistics and Transportation  
Course CODE: COM551



Year 3 Semester II  
SEMESTER END EXAMINATION  
Econometrics – LTEC3211

- This paper consists of SEVEN (07) questions on ELEVEN (11) pages.
- Answer FOUR (04) 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.
- Formulae sheet and Statistical tables are attached.

Date: 2022.03.08

Pass mark: 50%

Time: 02 Hours

**Question 01 (Compulsory)**

**Write the correct answer in your answer book**

1. There are two companies which produce medical tablets to provide vitamin C to patients. Doctors say that both tablets consist of equal content of vitamin C and no difference between the two tablets. For test that statement a researcher have test vitamin constrained of 10 tablets from each company. Which test is most appropriate?
  - a. One way ANOVA
  - b. One sample T test
  - c. Independent sample t test
  - d. Paired sample t test.





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Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

2. Type I error occurs when ,
  - a. Reject a false null hypothesis.
  - b. Reject a true null hypothesis.
  - c. Do not reject a false null hypothesis.
  - d. Do not reject a true null hypothesis.
  
3. Meaning of term "heteroscedasticity"
  - a. The variance of the errors is not constant
  - b. The variance of the dependent variable is not constant
  - c. The errors are not linearly independent of one another
  - d. The errors have non- zero mean.
  
4. Autocorrelation is generally occurred in
  - a. Cross - section data
  - b. Time series data
  - c. Pooled data
  - d. None of the above
  
5. The coefficient of determination ( $r^2$ ) shows,
  - a. Proportion of the variance in the dependent variable Y is explained by the independent variable X
  - b. Proportion of the variance in the independent variable X is explained by the dependent variable Y
  - c. Proportion of the variation in  $U_i$  is explained by the independent variable X
  - d. Both a and c
  
6. When independent variables in a multiple regression model are correlated,..... problem arise,
  - a. Heteroscedasticity
  - b. Multicollinearity
  - c. Homoscedasticity



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BSc Hons in Logistics and Transportation  
Course CODE: COM551

- d. Autocorrelation
7. The formula of coefficient of determination is  $r^2$  (RSS: sum of squares of residuals, ESS: sum of squares of explained, TSS: total sum of squares)
- $1 + \text{RSS}/\text{TSS}$
  - $1 - \text{RSS}/\text{ESS}$
  - $1 - \text{RSS}/\text{TSS}$
  - $1 * \text{RSS}/\text{TSS}$
8. Durbin Watson test is associated with,
- Heteroscedasticity
  - Multicollinearity
  - Autocorrelation
  - Both a and c
9. The value of coefficient of correlation always,
- Lies below 0
  - Lies above 1
  - Lies between 0 and  $\infty$
  - Lies between 0 and 1
10. Consider the equation,  $Y = \beta_1 + \beta_2 X_2 + u$ . A null hypothesis,  $H_0: \beta_2 = 0$  states that:
- $X_2$  has no effect on the expected value of  $\beta_2$ .
  - $X_2$  has no effect on the expected value of  $Y$ .
  - $\beta_2$  has no effect on the expected value of  $Y$ .
  - $Y$  has no effect on the expected value of  $X_2$

(20 Marks)





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Course CODE: COM551

11. The term "linear" in a multiple linear regression model means that the equation is linear in parameters

True ( ) False ( )

12. A dummy variable is used to incorporate quantitative information in a regression model

True ( ) False ( )

13. when study population is assumed that not normally distributed and data is categorical person correlation can be applied

True ( ) False ( )

14. It is possible to construct a frequency table showing the values assumed by the statistic and the frequency of their occurrence. This distribution of sample values of a statistic is called a sampling distribution.

True ( ) False ( )

15. Sample of a given size are drawn repeatedly from the population and particular "parameters" is computed for each sample.

True ( ) False ( )

(05 Marks)



Faculty of Management and Social Sciences  
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 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

### Question 02

- a. You are given following daily productivity values of a company. The production manager said that daily productivity is 28. (Use 95% confidence) test the statement

30	20	35	28	30	32	28	29	34	35
----	----	----	----	----	----	----	----	----	----

(08 Marks)

- b. You need to test whether there is a difference between the two financial institutions in relation to leasing facilities. Selecting ten customers from each institution, a questionnaire was given to answer. Each answer has been assigned some marks and the total mark is 50. Following table provides the marks given by each customer. Test and interpret the results.

A	40	42	41	39	38	42	37	39	39	40
B	43	37	39	41	37	39	40	38	41	38

(10 Marks)

- c. You are given following SPSS output about marks of the students from two groups interpret the results with appropriate hypothesis.





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Marks	Equal variances assumed	.009	.926	.934	18	.363	7.70000	8.24763	-9.62762	25.02762
	Equal variances not assumed			.934	17.770	.363	7.70000	8.24763	-9.64374	25.04374

Group Statistics

class	N	Mean	Std. Deviation	Std. Error Mean
Marks A	10	72.5000	17.36056	5.48989
Marks B	10	64.8000	19.46393	6.15503

(07 Marks)

Question 03

- a. Four companies which produce food item say that their products are equal in quality. You need to test this statement and collected data with regard to vitamin content. Information is provided by the following table. Construct one way ANOVA and test the statement.

Company A (Mg)	Company B (Mg)	Company C (Mg)	Company D (Mg)
10	8	10	13
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11	10	13	12

(15 Marks)



Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

#### Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Productivity before - productivity after	-7.30000	6.56675	2.07659	-11.99757	-2.60243	-3.515	9	.007

- b. You are given following SPSS output on results comparison of productivity of employees after the specific training program

#### Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Productivity before	52.6000	10	21.17756	6.69693
Productivity after	59.9000	10	17.94095	5.67343

#### Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 Productivity before & Productivity after	10	.957	.000

(10 Marks )



Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

### Question 04

The following data relate to the scores obtained by 9 salesmen of a company in an intelligence test and their weekly sales (in Rs 1000's)

Table 1.1: Weekly Sales of the Company

Salesmen	A	B	C	D	E	F	G	H	I
Test Scores ( $X_i$ )	50	60	50	60	80	50	80	40	70
Weekly sales ( $Y_i$ )	30	60	40	50	60	30	70	50	60

- Test whether there is a linear association between  $Y_i$  and  $X_i$  (06 Marks)
- Find the regression equation for the weekly sales (06Marks)
- Is it best fit line? Prove that (04 Marks)
- Plot the regression line on the scatter diagram (part (a)) and show the deviations of each  $Y_i$  from the corresponding  $\hat{Y}_i$ . (05 Marks)
- Calculate % error of observations and comment on that (04 Marks)





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 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

### Question 05

the following SPSS output obtained by a researcher data on Price of X, Price of Y and Quantity demanded of product X.

#### Descriptive Statistics

	Mean	Std. Deviation	N
QDX	148.50	13.243	10
Price of the Y	61.50	9.009	10
Price of the X	192.80	16.552	10

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.986 <sup>a</sup>	.973	.965	2.474	1.885

#### Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	31.832	13.893		2.291	.056
	Price of Y	.869	.269	.591	3.228	.014
	Price of X	.328	.146	.410	2.240	.040

a. Dependent Variable: QDx

Interpret the above results with appropriate hypothesis

(25 Marks)



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 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

### Question 06

a. Interpret following model coefficients.

- I.  $\text{Log}(\text{wage}) = 1.5 + 3.3\text{education} + 1.2 \text{experiance} + 0.40 \text{age}$
- II.  $\log(\text{GDP})t = 2.17 + 0.03t$
- III.  $(\text{GDP})t = 2.67 + 3.1 \log(\text{import}) t$
- IV.  $\text{consumption Expenditure} = 600 + 0.8 \text{disposable income}$

(16 Marks)

b. Following results obtained on weight of a person and his or her age and gender.  
 (1 coded for Male while 0 coded for Female)

Model	Coefficients				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	-1687.115	813.844		-2.073	.051
Age	118.670	20.959	.765	5.662	.000
Gender	166.279	74.573	.301	2.230	.037

a. Dependent Variable: Weight

- I. Write appropriate hypothesis (04 Marks)
- II. Write and interpret the equation (05 Marks)



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Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

### Question 07

Write short notes on 05 (five) of followings.

- a. Methodology of Econometrics
- b. Types of Data
- c. Polynomial Regression Model
- d. Ordinary Least Squared Method
- e. Sampling Distribution
- f. Assumptions of OLS method

(5\*5 Marks)

-----END OF THE EXAMINATION PAPER-----





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BSc Hons in Logistics and Transportation  
Course CODE: COM551

Year 3 Semester II

REPEAT EXAMINATION

Econometrics – LTEC3211

- This paper consists of SEVEN (07) questions on EIGHT (08) pages.
- Answer FOUR (04) 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.
- Statistical tables are attached.

Date: 2020.08.23

Pass mark: 50%

Time: 02 Hours

---

### Question 01 (Compulsory)

“Econometrics is the amalgam of Economics, Mathematics and Statistics”

- Briefly describe this statement. (06 Marks)
- What is the difference between theoretical econometrics and applied econometrics? (08 Marks)
- Describe the traditional econometric methodology. (08 Marks)
- What is meant by internal constancy?. (03 Marks)



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 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

### Question 02

- (a) A car producer says that the fuel consumption of their product is 25 km per litre. When a sample of 10 cars is tested, their running distance per litre has been given below.

25, 23, 24, 26, 22, 20, 24, 27, 28, 21

- i. Test the statement of the producer. (10 Marks)
  - ii. Estimate the confidence interval of the difference. (05 Marks)
- (b) Independent sample t test has been carried out to study whether there is any significant difference between the productivity of company 1 and company 2. Results are provided below. Interpret the results.

Group Statistics

Companies	N	Mean	Std. Deviation	Std. Error Mean
Productivity Company 1	100	4.8633	.59815	.0598
Company 2	100	4.7902	.62394	.0623



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 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

### Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Productivity Equal variances assumed	.157	.721	.597	98	.661	.07307	.12231	-0.16966	.31580
Productivity Equal variances not assumed			.598	98	.662	.07307	.12221	-0.16945	.31559

(10 Marks)

### Question 03

i. Describe eight (08) assumptions of Classical Linear Regression Model (CLRM). (16 Marks)

ii. Following Multiple Regression Model has been constructed to predict Economic Growth (EG) in Sri Lanka. Interpret the results.





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 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

Dependent Variable: EG

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	16.59691	2.490723	6.663491	0.0000
Import	-0.226392	0.060135	-3.764727	0.0007
Inflation rate	-0.166574	0.046470	-3.584533	0.0011
Export	0.124352	0.042854	2.901722	0.0068
Exchange rate	-0.014981	0.032152	-0.465921	0.6445
R-squared	0.525518	Mean dependent var		5.169444
Adjusted R-squared	0.464295	S.D. dependent var		1.925887
S.E. of regression	1.409593	Akaike info criterion		3.652725
Sum squared resid	61.59549	Schwarz criterion		3.872658
Log likelihood	-60.74904	F-statistic		8.583614
Durbin-Watson stat	2.698178	Prob(F-statistic)		0.000088

(09 Marks)

#### Question 04

- i. Sri Lanka is expecting to import busses for public transportation. There are two companies which produce busses to international market. Management of the two companies say that both products are equal in fuel consumption. Selecting eight busses from each company, running distance per fuel litre has been estimated. Following information is given. Test the statement of the managements at 5% level of significance.



Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

Company 1 (Km)	12	14	13	11	10	14	09	11
Company 2 (Km)	15	09	11	13	09	11	12	10

(10 Marks)

- ii. Three companies which produce same electronic product say that their products are equal in durability. A researcher has selected four items from each company and the durability has been estimated in months. Construct a one way ANOVA and test the statement at 5% level of significance.

Company (Months)	1	Company (Months)	2	Company (Months)	3
3		5		4	
6		7		3	
6		6		4	
5		6		5	

(15 Marks)

### Question 05

- i. What are the critics of Vector Auto Regression (VAR)? (10 Marks)
- ii. What is the importance of unit root analysis? (06 Marks)
- iii. A researcher has carried out Lag length criterion and Johansen test of cointegration to construct Vector Error Correction Model (VECM) for three variables Exports (EX), Domestic Debt (DD) and Exchange Rate (ER). Advise the researcher using following test results.



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 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

VAR Lag Order Selection Criteria

Endogenous variables: EX DD ER

Exogenous variables: C

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-876.3330	NA	2.25e+16	51.84312	52.06758	51.91967
1	-712.6896	269.5303*	6.59e+12*	43.68762*	45.03441*	44.14691*
2	-692.2828	27.60911	9.56e+12	43.95781	46.42693	44.79985

Unrestricted Cointegration Rank Test (Trace)

Hypothesized	Trace	0.05		
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.726651	107.9247	69.81889	0.0000
At most 1 *	0.593413	63.82647	47.85613	0.0008
At most 2 *	0.479393	33.22788	29.79707	0.0194
At most 3	0.227501	11.03407	15.49471	0.2094
At most 4	0.064250	2.257823	3.841466	0.1329

(09 Marks)





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 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

### Question 06

- i. What is meant by volatility clustering of financial data?  
(06 Marks)
- ii. Define Null and Alternative hypotheses of ARCH test.  
(06 Marks)
- iii. Why do you use Mean and Variance equations in ARCH family models?  
(06 Marks)
- iv. How can you select the appropriate model from ARCH family?  
(04 Marks)
- v. A study has been conducted to examine the effect of consumption on Gross Domestic Production (GDP). Residuals of the OLS model provide following ARCH test results. What would be your decision according to the results provided?

Heteroskedasticity Test: ARCH

F-statistic	1.455291	Prob. F(1,208)	0.2291
Obs*R-squared	1.459076	Prob. Chi-Square(1)	0.2271

(03 Marks)



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Course CODE: COM551

### Question 07

Write short notes on followings.

- i. Multicollinearity
- ii. Stationary data
- iii. Serial Correlation
- iv. Jarque-Bera test
- v. Heteroscedasticity

(25 marks)

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



**CRITICAL VALUES for the "F" Distribution, ALPHA = .05.**

00002

Denominator DF	Numerator DF									
	1	2	3	4	5	6	7	8	9	10
1	161.448	199.500	215.707	224.583	230.162	233.986	236.768	238.883	240.543	241.882
2	18.513	19.000	19.164	19.247	19.296	19.330	19.353	19.371	19.385	19.396
3	10.128	9.552	9.277	9.117	9.013	8.941	8.887	8.845	8.812	8.786
4	7.709	6.944	6.591	6.388	6.256	6.163	6.094	6.041	5.999	5.964
5	6.608	5.786	5.409	5.192	5.050	4.950	4.876	4.818	4.772	4.735
6	5.987	5.143	4.757	4.534	4.387	4.284	4.207	4.147	4.099	4.060
7	5.591	4.737	4.347	4.120	3.972	3.866	3.787	3.726	3.677	3.637
8	5.318	4.459	4.066	3.838	3.687	3.581	3.500	3.438	3.388	3.347
9	5.117	4.256	3.863	3.633	3.482	3.374	3.293	3.230	3.179	3.137
10	4.965	4.103	3.708	3.478	3.326	3.217	3.135	3.072	3.020	2.978
11	4.844	3.982	3.587	3.357	3.204	3.095	3.012	2.948	2.896	2.854
12	4.747	3.885	3.490	3.259	3.106	2.996	2.913	2.849	2.796	2.753
13	4.667	3.806	3.411	3.179	3.025	2.915	2.832	2.767	2.714	2.671
14	4.600	3.739	3.344	3.112	2.958	2.848	2.764	2.699	2.646	2.602
15	4.543	3.682	3.287	3.056	2.901	2.790	2.707	2.641	2.588	2.544
16	4.494	3.634	3.239	3.007	2.852	2.741	2.657	2.591	2.538	2.494
17	4.451	3.592	3.197	2.965	2.810	2.699	2.614	2.548	2.494	2.450
18	4.414	3.555	3.160	2.928	2.773	2.661	2.577	2.510	2.456	2.412
19	4.381	3.522	3.127	2.895	2.740	2.628	2.544	2.477	2.423	2.378
20	4.351	3.493	3.098	2.866	2.711	2.599	2.514	2.447	2.393	2.348
21	4.325	3.467	3.072	2.840	2.685	2.573	2.488	2.420	2.366	2.321
22	4.301	3.443	3.049	2.817	2.661	2.549	2.464	2.397	2.342	2.297
23	4.279	3.422	3.028	2.796	2.640	2.528	2.442	2.375	2.320	2.275
24	4.260	3.403	3.009	2.776	2.621	2.508	2.423	2.355	2.300	2.255
25	4.242	3.385	2.991	2.759	2.603	2.490	2.405	2.337	2.282	2.236
26	4.225	3.369	2.975	2.743	2.587	2.474	2.388	2.321	2.265	2.220
27	4.210	3.354	2.960	2.728	2.572	2.459	2.373	2.305	2.250	2.204
28	4.196	3.340	2.947	2.714	2.558	2.445	2.359	2.291	2.236	2.190
29	4.183	3.328	2.934	2.701	2.545	2.432	2.346	2.278	2.223	2.177
30	4.171	3.316	2.922	2.690	2.534	2.421	2.334	2.266	2.211	2.165
31	4.160	3.305	2.911	2.679	2.523	2.409	2.323	2.255	2.199	2.153
32	4.149	3.295	2.901	2.668	2.512	2.399	2.313	2.244	2.189	2.142
33	4.139	3.285	2.892	2.659	2.503	2.389	2.303	2.235	2.179	2.133
34	4.130	3.276	2.883	2.650	2.494	2.380	2.294	2.225	2.170	2.123
35	4.121	3.267	2.874	2.641	2.485	2.372	2.285	2.217	2.161	2.114
36	4.113	3.259	2.866	2.634	2.477	2.364	2.277	2.209	2.153	2.106
37	4.105	3.252	2.859	2.626	2.470	2.356	2.270	2.201	2.145	2.098
38	4.098	3.245	2.852	2.619	2.463	2.349	2.262	2.194	2.138	2.091
39	4.091	3.238	2.845	2.612	2.456	2.342	2.255	2.187	2.131	2.084
40	4.085	3.232	2.839	2.606	2.449	2.336	2.249	2.180	2.124	2.077
41	4.079	3.226	2.833	2.600	2.443	2.330	2.243	2.174	2.118	2.071
42	4.073	3.220	2.827	2.594	2.438	2.324	2.237	2.168	2.112	2.065
43	4.067	3.214	2.822	2.589	2.432	2.318	2.232	2.163	2.106	2.059
44	4.062	3.209	2.816	2.584	2.427	2.313	2.226	2.157	2.101	2.054
45	4.057	3.204	2.812	2.579	2.422	2.308	2.221	2.152	2.096	2.049
46	4.052	3.200	2.807	2.574	2.417	2.304	2.216	2.147	2.091	2.044
47	4.047	3.195	2.802	2.570	2.413	2.299	2.212	2.143	2.086	2.039
48	4.043	3.191	2.798	2.565	2.409	2.295	2.207	2.138	2.082	2.035
49	4.038	3.187	2.794	2.561	2.404	2.290	2.203	2.134	2.077	2.030
50	4.034	3.183	2.790	2.557	2.400	2.286	2.199	2.130	2.073	2.026



**CRITICAL VALUES for the "F" Distribution, ALPHA = .05.**

00002

Denominator DF	Numerator DF									
	1	2	3	4	5	6	7	8	9	10
51	4.030	3.179	2.786	2.553	2.397	2.283	2.195	2.126	2.069	2.022
52	4.027	3.175	2.783	2.550	2.393	2.279	2.192	2.122	2.066	2.018
53	4.023	3.172	2.779	2.546	2.389	2.275	2.188	2.119	2.062	2.015
54	4.020	3.168	2.776	2.543	2.386	2.272	2.185	2.115	2.059	2.011
55	4.016	3.165	2.773	2.540	2.383	2.269	2.181	2.112	2.055	2.008
56	4.013	3.162	2.769	2.537	2.380	2.266	2.178	2.109	2.052	2.005
57	4.010	3.159	2.766	2.534	2.377	2.263	2.175	2.106	2.049	2.001
58	4.007	3.156	2.764	2.531	2.374	2.260	2.172	2.103	2.046	1.998
59	4.004	3.153	2.761	2.528	2.371	2.257	2.169	2.100	2.043	1.995
60	4.001	3.150	2.758	2.525	2.368	2.254	2.167	2.097	2.040	1.993
61	3.998	3.148	2.755	2.523	2.366	2.251	2.164	2.094	2.037	1.990
62	3.996	3.145	2.753	2.520	2.363	2.249	2.161	2.092	2.035	1.987
63	3.993	3.143	2.751	2.518	2.361	2.246	2.159	2.089	2.032	1.985
64	3.991	3.140	2.748	2.515	2.358	2.244	2.156	2.087	2.030	1.982
65	3.989	3.138	2.746	2.513	2.356	2.242	2.154	2.084	2.027	1.980
66	3.986	3.136	2.744	2.511	2.354	2.239	2.152	2.082	2.025	1.977
67	3.984	3.134	2.742	2.509	2.352	2.237	2.150	2.080	2.023	1.975
68	3.982	3.132	2.740	2.507	2.350	2.235	2.148	2.078	2.021	1.973
69	3.980	3.130	2.737	2.505	2.348	2.233	2.145	2.076	2.019	1.971
70	3.978	3.128	2.736	2.503	2.346	2.231	2.143	2.074	2.017	1.969
71	3.976	3.126	2.734	2.501	2.344	2.229	2.142	2.072	2.015	1.967
72	3.974	3.124	2.732	2.499	2.342	2.227	2.140	2.070	2.013	1.965
73	3.972	3.122	2.730	2.497	2.340	2.226	2.138	2.068	2.011	1.963
74	3.970	3.120	2.728	2.495	2.338	2.224	2.136	2.066	2.009	1.961
75	3.968	3.119	2.727	2.494	2.337	2.222	2.134	2.064	2.007	1.959
76	3.967	3.117	2.725	2.492	2.335	2.220	2.133	2.063	2.006	1.958
77	3.965	3.115	2.723	2.490	2.333	2.219	2.131	2.061	2.004	1.956
78	3.963	3.114	2.722	2.489	2.332	2.217	2.129	2.059	2.002	1.954
79	3.962	3.112	2.720	2.487	2.330	2.216	2.128	2.058	2.001	1.953
80	3.960	3.111	2.719	2.486	2.329	2.214	2.126	2.056	1.999	1.951
81	3.959	3.109	2.717	2.484	2.327	2.213	2.125	2.055	1.998	1.950
82	3.957	3.108	2.716	2.483	2.326	2.211	2.123	2.053	1.996	1.948
83	3.956	3.107	2.715	2.482	2.324	2.210	2.122	2.052	1.995	1.947
84	3.955	3.105	2.713	2.480	2.323	2.209	2.121	2.051	1.993	1.945
85	3.953	3.104	2.712	2.479	2.322	2.207	2.119	2.049	1.992	1.944
86	3.952	3.103	2.711	2.478	2.321	2.206	2.118	2.048	1.991	1.943
87	3.951	3.101	2.709	2.476	2.319	2.205	2.117	2.047	1.989	1.941
88	3.949	3.100	2.708	2.475	2.318	2.203	2.115	2.045	1.988	1.940
89	3.948	3.099	2.707	2.474	2.317	2.202	2.114	2.044	1.987	1.939
90	3.947	3.098	2.706	2.473	2.316	2.201	2.113	2.043	1.986	1.938
91	3.946	3.097	2.705	2.472	2.315	2.200	2.112	2.042	1.984	1.936
92	3.945	3.095	2.704	2.471	2.313	2.199	2.111	2.041	1.983	1.935
93	3.943	3.094	2.703	2.470	2.312	2.198	2.110	2.040	1.982	1.934
94	3.942	3.093	2.701	2.469	2.311	2.197	2.109	2.038	1.981	1.933
95	3.941	3.092	2.700	2.467	2.310	2.196	2.108	2.037	1.980	1.932
96	3.940	3.091	2.699	2.466	2.309	2.195	2.106	2.036	1.979	1.931
97	3.939	3.090	2.698	2.465	2.308	2.194	2.105	2.035	1.978	1.930
98	3.938	3.089	2.697	2.465	2.307	2.193	2.104	2.034	1.977	1.929
99	3.937	3.088	2.696	2.464	2.306	2.192	2.103	2.033	1.976	1.928
100	3.936	3.087	2.696	2.463	2.305	2.191	2.103	2.032	1.975	1.927

## Formula sheet

$$\text{Mean} = \frac{\sum x}{n}$$

$$\text{Variance} = \frac{\sum (x - \bar{x})^2}{n-1}$$

$$(\bar{x}_1 - \bar{x}_2) \pm z_{\frac{\alpha}{2}} SE$$

$$SE = \sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}$$

$$SE = SP \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}$$

$$SP = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

$$TS = \frac{\bar{x} - \mu_0}{\frac{\sigma}{\sqrt{n}}}$$

$$TS = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}}$$

$$TS = \frac{\bar{x}_1 - \bar{x}_2}{SP \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$\text{Granger Causality } (F) = \frac{(RSS_R - RSS_{UR})/M}{RSS_{UR}/(N - K)}$$

$$\text{CHOW } (F) = \frac{(RSS_C - (RSS_1 + RSS_2))/K}{(RSS_1 + RSS_2)/(N_1 + N_2 - 2K)}$$

*Coefficient of Correlation*

$$= \frac{n \sum xy - \sum x \sum y}{\sqrt{(n \sum x^2 - (\sum x)^2)(n \sum y^2 - (\sum y)^2)}}$$

Normal Equations

$$Y = a + bx$$

$$\sum y = na + b \sum x$$

$$\sum xy = a \sum x + b \sum x^2$$

$$\text{Sum of Square of Regression} = \sum (\hat{Y} - \bar{Y})^2$$

$$\text{Sum of Square of Residual} = \sum (Y - \hat{Y})^2$$

$$\text{Sum of Square of Total} = \sum (Y - \bar{Y})^2$$

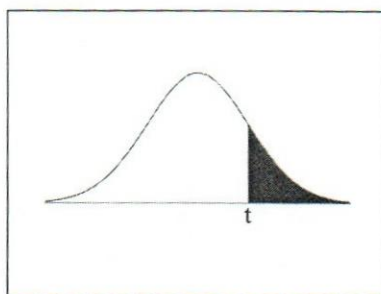
$$\text{Sum of Square of Variance between groups} = \sum (\bar{X} - \bar{\bar{X}})^2$$

$$\text{Sum of Square of variance within groups} = \sum (X - \bar{X})^2$$

$$\text{Sum of Square of Total variance} = \sum (X - \bar{\bar{X}})^2$$

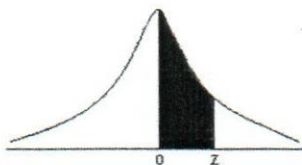


## t-Distribution Table



The shaded area is equal to  $\alpha$  for  $t = t_{\alpha}$ .

$df$	$t_{.100}$	$t_{.050}$	$t_{.025}$	$t_{.010}$	$t_{.005}$
1	3.078	6.314	12.706	31.821	63.657
2	1.886	2.920	4.303	6.965	9.925
3	1.638	2.353	3.182	4.541	5.841
4	1.533	2.132	2.776	3.747	4.604
5	1.476	2.015	2.571	3.365	4.032
6	1.440	1.943	2.447	3.143	3.707
7	1.415	1.895	2.365	2.998	3.499
8	1.397	1.860	2.306	2.896	3.355
9	1.383	1.833	2.262	2.821	3.250
10	1.372	1.812	2.228	2.764	3.169
11	1.363	1.796	2.201	2.718	3.106
12	1.356	1.782	2.179	2.681	3.055
13	1.350	1.771	2.160	2.650	3.012
14	1.345	1.761	2.145	2.624	2.977
15	1.341	1.753	2.131	2.602	2.947
16	1.337	1.746	2.120	2.583	2.921
17	1.333	1.740	2.110	2.567	2.898
18	1.330	1.734	2.101	2.552	2.878
19	1.328	1.729	2.093	2.539	2.861
20	1.325	1.725	2.086	2.528	2.845
21	1.323	1.721	2.080	2.518	2.831
22	1.321	1.717	2.074	2.508	2.819
23	1.319	1.714	2.069	2.500	2.807
24	1.318	1.711	2.064	2.492	2.797
25	1.316	1.708	2.060	2.485	2.787
26	1.315	1.706	2.056	2.479	2.779
27	1.314	1.703	2.052	2.473	2.771
28	1.313	1.701	2.048	2.467	2.763
29	1.311	1.699	2.045	2.462	2.756
30	1.310	1.697	2.042	2.457	2.750
32	1.309	1.694	2.037	2.449	2.738
34	1.307	1.691	2.032	2.441	2.728
36	1.306	1.688	2.028	2.434	2.719
38	1.304	1.686	2.024	2.429	2.712
$\infty$	1.282	1.645	1.960	2.326	2.576



Z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.0000	0.0040	0.0080	0.0120	0.0160	0.0199	0.0239	0.0279	0.0319	0.0359
0.1	0.0398	0.0438	0.0478	0.0517	0.0557	0.0596	0.0636	0.0675	0.0714	0.0753
0.2	0.0793	0.0832	0.0871	0.0910	0.0948	0.0987	0.1026	0.1064	0.1103	0.1141
0.3	0.1179	0.1217	0.1255	0.1293	0.1331	0.1368	0.1406	0.1443	0.1480	0.1517
0.4	0.1554	0.1591	0.1628	0.1664	0.1700	0.1736	0.1772	0.1808	0.1844	0.1879
0.5	0.1915	0.1950	0.1985	0.2019	0.2054	0.2088	0.2123	0.2157	0.2190	0.2224
0.6	0.2257	0.2291	0.2324	0.2357	0.2389	0.2422	0.2454	0.2486	0.2517	0.2549
0.7	0.2580	0.2611	0.2642	0.2673	0.2704	0.2734	0.2764	0.2794	0.2823	0.2852
0.8	0.2881	0.2910	0.2939	0.2967	0.2995	0.3023	0.3051	0.3078	0.3106	0.3133
0.9	0.3159	0.3186	0.3212	0.3238	0.3264	0.3289	0.3315	0.3340	0.3365	0.3389
1.0	0.3413	0.3438	0.3461	0.3485	0.3508	0.3531	0.3554	0.3577	0.3599	0.3621
1.1	0.3643	0.3665	0.3686	0.3708	0.3729	0.3749	0.3770	0.3790	0.3810	0.3830
1.2	0.3849	0.3869	0.3888	0.3907	0.3925	0.3944	0.3962	0.3980	0.3997	0.4015
1.3	0.4032	0.4049	0.4066	0.4082	0.4099	0.4115	0.4131	0.4147	0.4162	0.4177
1.4	0.4192	0.4207	0.4222	0.4236	0.4251	0.4265	0.4279	0.4292	0.4306	0.4319
1.5	0.4332	0.4345	0.4357	0.4370	0.4382	0.4394	0.4406	0.4418	0.4429	0.4441
1.6	0.4452	0.4463	0.4474	0.4484	0.4495	0.4505	0.4515	0.4525	0.4535	0.4545
1.7	0.4554	0.4564	0.4573	0.4582	0.4591	0.4599	0.4608	0.4616	0.4625	0.4633
1.8	0.4641	0.4649	0.4656	0.4664	0.4671	0.4678	0.4686	0.4693	0.4699	0.4706
1.9	0.4713	0.4719	0.4726	0.4732	0.4738	0.4744	0.4750	0.4756	0.4761	0.4767
2.0	0.4772	0.4778	0.4783	0.4788	0.4793	0.4798	0.4803	0.4808	0.4812	0.4817
2.1	0.4821	0.4826	0.4830	0.4834	0.4838	0.4842	0.4846	0.4850	0.4854	0.4857
2.2	0.4861	0.4864	0.4868	0.4871	0.4875	0.4878	0.4881	0.4884	0.4887	0.4890
2.3	0.4893	0.4896	0.4898	0.4901	0.4904	0.4906	0.4909	0.4911	0.4913	0.4916
2.4	0.4918	0.4920	0.4922	0.4925	0.4927	0.4929	0.4931	0.4932	0.4934	0.4936
2.5	0.4938	0.4940	0.4941	0.4943	0.4945	0.4946	0.4948	0.4949	0.4951	0.4952
2.6	0.4953	0.4955	0.4956	0.4957	0.4959	0.4960	0.4961	0.4962	0.4963	0.4964
2.7	0.4965	0.4966	0.4967	0.4968	0.4969	0.4970	0.4971	0.4972	0.4973	0.4974
2.8	0.4974	0.4975	0.4976	0.4977	0.4977	0.4978	0.4979	0.4979	0.4980	0.4981
2.9	0.4981	0.4982	0.4982	0.4983	0.4984	0.4984	0.4985	0.4985	0.4986	0.4986
3.0	0.49865	0.49869	0.49874	0.49878	0.49882	0.49886	0.49889	0.49893	0.49896	0.49900
3.1	0.49903	0.49906	0.49910	0.49913	0.49916	0.49918	0.49921	0.49924	0.49926	0.49929
3.2	0.49931	0.49934	0.49936	0.49938	0.49940	0.49942	0.49944	0.49946	0.49948	0.49950
3.3	0.49952	0.49953	0.49955	0.49957	0.49958	0.49960	0.49961	0.49962	0.49964	0.49965
3.4	0.49966	0.49968	0.49969	0.49970	0.49971	0.49972	0.49973	0.49974	0.49975	0.49976
3.5	0.49977	0.49978	0.49978	0.49979	0.49980	0.49981	0.49981	0.49982	0.49983	0.49983





Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

Year 3 Semester II

REPEAT EXAMINATION

Project Management – LTPM3209

- This paper consists of SEVEN (07) questions on SEVEN (07) pages.
- Answer FOUR (04) 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.
- Use MCQ answer sheet to Answer Question 01.

Date: 2020.08.22

Pass mark: 50%

Time: 02 Hours

### Question 01: Compulsory

(a) Answer following MCQ questions in the MCQ answer sheet.

(20 Marks)

1. What is the critical path in a network diagram?
  - A. The critical path is the network that hosts the activities most critical to the project success.
  - B. The critical path is the path with the longest duration.
  - C. The critical path is always one path that cannot be delayed or the entire project will be delayed.
  - D. The critical path is the path from start to completion with no deviation from the project plan.
2. Identify the example that would not usually be considered a project.
  - A. Manufacturing a new car
  - B. Developing a computer software application program
  - C. Designing a new product
  - D. Installing new equipment in an existing production line





Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

3. Who is ultimately responsible for quality management on the project?
  - A. Project engineer
  - B. Project manager
  - C. Quality manager
  - D. Team member
  
4. The decision to request an increase of the resources for a project is the responsibility of the:
  - A. Functional manager
  - B. Project manager
  - C. Director of project management
  - D. Customer
  
5. Which of the following is a direct project cost?
  - A. Lighting the corporate office
  - B. Workers Compensation insurance
  - C. Piping for an irrigation project
  - D. 1 and 2 above
  
6. What are the triple constraints?
  - A. Time, schedules, and quality
  - B. Time, availability, and quality
  - C. Time, money, and schedules
  - D. Time, money, and quality
  
7. The functional manager and project manager have equal power in which organizational structure?
  - A. Weak matrix
  - B. Functional
  - C. Strong matrix
  - D. Balanced matrix
  
8. Which of the following elements is NOT normally common in projects?
  - A. Uniqueness
  - B. No defined end points
  - C. Uncertainty
  - D. An objective



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

9. The project life cycle is comprised of which of the following?
- A. Phases
  - B. Milestones
  - C. Estimates
  - D. Activities
10. Which statement is CORRECT regarding the project lifecycle?
- A. The completion and reviewing of Project Scope Statement characterizes commencement of each project phase.
  - B. Initiating, Planning, Executing, Monitoring & Controlling and closing are the main phases in project life cycle.
  - C. Phases can be further subdivided into sub phases.
  - D. Life cycle comprises of Initiation phase, planning phases, Implementation Phase and final phase.
11. Focus on soliciting, selecting, and managing vendors to complete project work or supply project materials is a part of
- A. Project Procurement Management
  - B. Project Risk Management:
  - C. Project Human Resources Management:
  - D. Project Cost Management:
12. Which statement is INCORRECT regarding project and Operation
- A. purpose of project is to Attain objectives and terminate.
  - B. People in project are Dynamic, temporary team formed to meet project needs.
  - C. Tasks in project are repetitive or substantially similar
  - D. Operation produces Non-unique product, service, or result.
13. Scheduling can best be defined as the process used to determine:
- A. Overall project duration.
  - B. Project cost estimating.
  - C. Project staffing plan.
  - D. Resource Allocation.





Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

14. Which one of the following statements is true?
- A. An increase in project scope is likely to increase project cost.
  - B. A decrease in the project time is likely to increase project quality.
  - C. An increase in the project quality requirements is likely to decrease project cost.
  - D. A decrease in the project cost is likely to decrease project time.
15. Who owns the Project Management Plan (PMP)?
- A. The project team.
  - B. The chief executive.
  - C. The project manager.
  - D. The project support office
16. The purpose of preparation of WBS is to identify,
- A. development stages of project
  - B. activities of the project
  - C. Resources of project
  - D. Risks of project.
17. Project requires a Software programmer at eighth month but not at start. This is an example of which of the following?
- A. Resource constraints
  - B. Stakeholder management
  - C. Staffing requirements
  - D. Contractor requirements
18. The cost and staffing level is,
- A. High at initiation of project
  - B. High at closure of project
  - C. High at mid stage of project
  - D. Average through the project period.
19. A project is:
- A. An activity with a fixed start date, but no end date
  - B. A number of ongoing tasks an organization undertakes
  - C. A set of activities planned to complete within a specific time period.
  - D. A task without a budget





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

20. Projects can fail because:
- The project is planned in too much detail
  - The project is not monitored or controlled closely
  - Stakeholder requirements are too specific
  - Project risks are identified too early in the project

(20 Marks)

- (b) Explain Project Priority Matrix

(05 Marks)

### Question 02

Estimation or forecasting of time and cost is very important in planning of project

- Why Estimating Time and Cost are important for a Project? (5 Marks)
- Explain the methods of Top-down Approaches for Estimating Project Time and Cost. (5 Marks)
- What are the good guidelines you can recommend for estimating time and cost of a project? (5 Marks)
- Explain how "Use of several people to estimate project time and cost" will minimize the estimation errors. (5 Marks)
- Explain Direct costs, Direct project overhead costs and General and administrative (G&A) overhead costs. (5 Marks)

### Question 03

Projects are defined to be aligned with the strategic goals of the organization.

- Explain why organizations need projects. (5 Marks)
- Explain the main three characteristic of a project? (5Marks)
- Explain the deferent between project Management and Operation management. (5 Marks)
- What are the common project management activities in Initial phase of a project? (5 Marks)
- Explain Portfolio Management & Program management (5 Marks)



Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

### Question 04

The estimated details of project activities are given below. Use the details to answer following questions.

Task	Duration (Day)	Preceding Activity
A	6	None
B	10	A
C	8	A
D	6	B
E	10	B,C
F	12	B,C,D
G	15	F
H	20	E,G

- Draw an activity-on-node network to represent the project. (5 Marks)
- Calculate the expected earliest start & finish and latest start & finish times for each activity and then the expected slack time for each activity. (7 Marks)
- Determine the expected project completion time and identify the critical path(s). (5 Marks)
- If the project manager needs to shorten the project period than it calculates. Explain at least two possible methods of doing it. (expediting project schedule). (8 Marks)

### Question 05

There are Different types of organization structures in general practice.

- Explain how a change (Decrease or Increase) of any parameter in "Project **Triple Constraint**" effects on other parameters of the same. (5 Marks)
- List any five key stakeholder of a project and explain their interest or/and intentions. (5 Marks)
- Compare the main Organizational Structures with each other considering its influences on effective project management on following areas.
  - Project manager's title
  - Project manager's focus





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

- Project manager's Power
- Project manager's Time in duty
- Project Manager reports to whom, etc., (10 marks)

(d) Explain Organizational Cultures and Styles (5 Marks)

### Question 06

Project Risk Management is to minimize any potential problems/ obstructions that may impact on execution of Project.

- (a) What is positive risk? explain with example(s). (6 Marks)
- (b) What is Risk Breakdown Structure? (6 Marks)
- (c) Explain 'identifying the risks' and 'responding risks' in a project. (7 Marks)
- (d) Explain "Project Risk Matrix". (6 Marks)

### Question 07

Defining and controlling what is and is not included in the project is the **Project scope management**.

- (a) What are the advantages of preparing "Project Scope Statement", before planning stage of a project. (5 Marks)
- (b) Explain the consequences of a poor 'Work Breakdown Structure (WBS)'. (5 Marks)
- (c) What is a milestone in project planning? What are the advantages of establishing millstones in the project? (5 Marks)
- (d) How "scope creeping" can damage in projects success. (5 Marks)
- (e) Explain Project scope statement and its elements (5 Marks)

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





Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

Year 3 Semester II

REPEAT EXAMINATION

Marketing Management – LTMM3212

- This paper consists of SEVEN (07) questions on SIX (06) pages.
- Answer FOUR (04) 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: 2020.08.22

Pass mark: 50%

Time: 02 Hours

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### Question 01: (Compulsory)

#### “Laundry soap Market”

Laundry soap is one of the essential products to the consumer. Hence, this has achieved an important space in the shelf of the groceries and super markets.

Sunlight, the world-famous household name was the first brand to be introduced to the Sri Lankan market by Unilever. Although the product was initially imported to Sri Lanka, later the company establishes a local manufacturing plant to satisfy the increasing demand of the local customers.

Multi-purpose nature of the Sunlight soap, its great washing ability, as well as its gentleness towards the skin has made this brand number one choice amongst Sri Lankan housewives for decades. There are several soap categories and varieties such as laundry soap and laundry soap powder added to the Sunlight portfolio providing customers with



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

greater choice and improved washing experience. Currently company is the market leader in the Sri Lankan laundry market owing close to 60% of the market share.

Laundry soap industry in Sri Lanka is continually being affected by variety of macro and micro factors, including social, technological, economical, legal and political factors affecting the stability and growth of the sector. According to the article "Trends in the soap and detergent industry in Asia, except in a few countries where the soap and detergent industry is well developed, the production and consumption of soaps and detergents are low. But there are opportunities for future development and expansion of the industry. The course of future development, however, may differ from country to country depending on the national situation and the standard of living.

Unlike in many other markets where washing soaps have been gradually replaced by detergent powders, consumers in rural and suburban regions in Sri Lanka continue to be widely used laundry soaps for their washing needs. Consumers typically use washing soaps as well as detergent powders; soaps for daily-wear clothes and powders for special clothes and items that are difficult to wash such as bed linens and curtains. According to the research findings, in urban and sub urban areas the use of washing machine and washing powder is increasing. However, the use of soap in rural areas has not change in a considerable amount.

Sri Lankan laundry soap market consists number of laundry soap brands, but only few brands dominate the market with substantial market share. Some of those brands are, Sunlight, Wonderlight, Perlwite, Delmalight, Bar soap. Most of the consumers have brand loyalty towards the brand Sunlight as result of the first mover advantage they have being the first branded laundry soap in Sri Lanka.





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

The brand Sunlight has been strongly positioned in consumer mind. Sri Lankan people remember the colors, themes, jingles, locations of Sunlight Commercials well. When the sound of the jingle plays, they know that it is about Sunlight. Considerable number of consumers also use the products like Perlwite, Delmalight, and Wonder light, and some people are not brand conscious. Further, Sri Lankan has poor perception in terms of the quality of the local brands. This has also resulted for them to be loyalty to the brand Sunlight.

*The above data has been based on a real-life situation, but details have been changes for assessment purposes and may not be an accurate reflection of reported news.*

You are required to;

- (a) Discuss the event or developments in the external environment affecting business of the given case scenario. (15 Marks)
- (b) Prepare a SWOT for "Sunlight". (10 Marks)
- (Total 25 Marks)

### Question 02

Your company is considering installing a new Marketing Information System(MIS). The current MIS is largely based around the accounting systems used within the company.

- (a) Assess the suitability of internal databases such as data currently within the accounting system for decision making purposes. (08 Marks)
- (b) Explain two other sources that can be used to gather needed data for MIS with examples. (10 Marks)
- (c) What is a sample? How it differentiates from the population? (07 Marks)





Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

(Total 25Marks)

### Question 03

You are working for business that engage apparel retailing and have been asked by your manager to produce an email to be sent to the management team, that:

- (a) List five (05) environment stimuli that effect buyer choice when buying an apparel. (05 Marks)
- (b) Explain the ways in which buyers personal and psychological factors affect their final choice on an apparel. (10 Marks)
- (c) Illustrates consumers buyer decision process using examples from the relevant industry. (10 Marks)

(Total 25Marks)

### Question 04

The principle of segmentation is fundamental to marketing and implies that distinct groups of customers should be managed in different ways. Using examples, for organisations of your choice,

- (a) Explain three suitable bases that can be used to segment the market (15 Marks)
- (b) Finding point of differentiation is very important to position the company products in consumer's mind. Discuss two suitable point of differentiation to the organization that you have selected. (10 Marks)

(Total 25Marks)



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

### Question 05

Increasingly, global food retailers are extending their activities into new markets and so stretching their brands considerably across a wide range of categories, such as household appliances, consumer electronics, clothing and financial services.

(a) Identify and explain three dimensions that they need to consider when managing mix of product. (15 marks)

(b) Evaluate two options that the company could use for pricing their product mix. (10marks)

(Total 25Marks)

### Question 06

You are working for a newly established telecommunication services provider as an assistant marketing manager. You have been asked by your marketing manager to produce an email to be sent to all the other department managers, that:

(a) Explains two different systems that they could considered when deciding on a distribution channel for company offering. (10 marks)

(b) Recommends, with justifications three suitable promotional tools that the organisation can use in order to build brand awareness and gain market share.

(15 marks)

(Total 25Marks)



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

### Question 07

(a) "Unlike physical products, intangible products cannot be seen, tasted, felt, heard, or smelled before they are purchased. Therefore, almost all services contain some physical elements". Explain this statement using examples of your choice.

(09 Marks)

(b) "Virtually all services are reliant on people to perform them, very often dealing directly with the consumer". Explain this statement using examples of your choice.

(08 Marks)

(c) "Since services are usually carried out with the consumer present, the process by which the service is delivered is, again, part of what the consumer is paying for". Explain this statement using examples of your choice.

(08 Marks)

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





Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

Year 3 Semester II  
SEMESTER END EXAMINATION  
Econometrics – LTEC3211

- This paper consists of SEVEN (07) questions on NNE (09) pages.
- Answer FOUR (04) 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.
- Statistical tables are attached.

Date: 2020.03.07

Pass mark: 50%

Time: 02 Hours

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**Question 01 (Compulsory)**

“Traditional Econometrics Methodology can be applied to test theories practically”

- (a). Briefly describe this statement. (08 Marks)
- (b). Define theoretical and applied econometrics with example. (06 Marks)
- (c). What are the assumptions of Classical Linear Regression Model (CLRM). (08 Marks)
- (d). Interpret the following reliability test results.



Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

Variables	Cronbach's Alpha	No. of Items
Workload	0.821	5
Working Environment	0.541	4
Performance	0.231	6

(03 Marks)

### Question 02

- (a) A Tire manufacturing company says that the distance of their tire is 50,000km in average. You have been appointed to test the statement of the company. Selecting eight tires, distance has been measured and information is provided by the following table.

Distance in km,(000)	52.1	49.2	49.1	46.2	47.7	51.4	49.	51.
							3	2

- i. Test the statement of the tire company.

(10 Marks)

- ii. Estimate the confidence interval of the difference.

(03 Marks)

- (b) There are two companies which produce two types of tires. Management of the companies says that no difference between the tires in relation to running distance. Selecting 10 tires from each company, running distance has been calculated and information is provided below. Test the management statement.



Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

Company 1 (,000KM)	41	43	421	38	37	45	35	37	38	42
Company 2 (,000KM)	44	39	37	43	38	36	42	39	44	35

(12 Marks)

**Question 03**

- (a) Three companies which produce tires say that their products are equal in running distance in km. You need test this statement and following information is provided. Construct one way ANOVA and test the statement.

Company A (,000Km)	Company B (,000km)	Company C (,000km)
30	50	50
70	70	60
60	60	70
50	60	70
50	50	90
40	70	80

(18 Marks)

- (b) Multiple comparison has been constructed to the above three companies and results are given below. Interpret the results.





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

#### Multiple Comparisons

(I) Company	(J) Company	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Company A	Company B	-10.00000	7.30297	.381	-28.9692	8.9692
	Company C	-20.00000*	7.30297	.038	-38.9692	-1.0308
Company B	Company A	10.00000	7.30297	.381	-8.9692	28.9692
	Company C	-10.00000	7.30297	.381	-28.9692	8.9692
Company C	Company A	20.00000*	7.30297	.038	1.0308	38.9692
	Company B	10.00000	7.30297	.381	-8.9692	28.9692

#### Descriptive Statistics

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Company A	6	50.0000	14.14214	5.77350	35.1587	64.8413	30.00	70.00
Company B	6	60.0000	8.94427	3.65148	50.6136	69.3864	50.00	70.00
Company C	6	70.0000	14.14214	5.77350	55.1587	84.8413	50.00	90.00
Total	18	60.0000	14.55214	3.42997	52.7634	67.2366	30.00	90.00

(07 Marks)

#### Question 04

A transport company expects to determine the effect of fuel consumption on travel distance. Information is provided for the last six years in the following distribution.

Fuel Consumption( Rs. Million)	Distance (Km. ten thousand)
--------------------------------	-----------------------------



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

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1	40
2	50
3	50
3	70
4	80
5	70

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- i. Calculate the relationship between fuel consumption and distance.  
(06 Marks)
- ii. Construct regression model to test the effect of fuel consumption on distance.  
(06 Marks)
- iii. Calculate R square, Multiple Correlation and interpret the results.  
(06 Marks)
- iv. Construct regression ANOVA table and interpret the results.  
(07 Marks)



Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

### Question 05

(a). What are the advantages and critics of Vector Auto Regression (VAR)?

(10 Marks)

(b). Interpret the following Augmented Dickey Fuller unit root test results.

Variables	Probability at level	Probability at 1 <sup>st</sup> difference
Sales Income (SI)	0.632	0.000
Price (P)	0.723	0.000
Transport Cost (TC)	0.554	0.000

(06 Marks)

(c). Lag length criterion have been estimated to construct Vector Error Correction Model (VECM) for the given variables. Take your decision using the following test results.

VAR Lag Order Selection Criteria  
 Endogenous variables: SI P TC  
 Included observations: 55

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1936.278	NA	1.90e+23	70.62830	70.84729	70.71299
1	-1510.451	743.2618	1.34e+17	56.45277	57.98565*	57.04555
2	-1465.963	67.94587	1.03e+17	56.14411	58.99087	57.24497
3	-1409.655	73.71209*	5.56e+16*	55.40564*	59.56629	57.01460*

(04 Marks)





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

(d). Interpret the following VECM results.

Dependent Variable: D(DSI)  
 Method: Least Squares

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.357429	0.112754	-4.053584	0.0223
C(2)	592.0087	251.1736	2.356971	0.0147
C(3)	0.731049	1.454682	0.502549	0.5187
C(4)	-0.484715	0.306352	-1.582215	0.3234
C(5)	0.481882	0.242101	1.990419	0.0451
C(6)	0.436010	0.149635	2.913816	0.0045
C(7)	-939.4761	363.3578	-2.585540	0.0245
C(8)	-589.2770	355.3318	-1.658385	0.2070
C(9)	-476.2925	337.0859	-1.412971	0.3673
C(10)	-8.133492	3.468029	-2.345278	0.0154
R-squared	0.881176	Mean dependent var		1076.630
Adjusted R-squared	0.803197	S.D. dependent var		13719.25
S.E. of regression	6086.195	Akaike info criterion		20.55700
Sum squared resid	1.19E+09	Schwarz criterion		21.36733
Log likelihood	-533.0390	Hannan-Quinn criter.		20.86951
F-statistic	11.30026	Durbin-Watson stat		2.116324
Prob(F-statistic)	0.000000			

(05 Marks)

### Question 06

- (a). You need to test stationary of Gross Domestic Production (GDP) with drift and trend. Write the model.

(09 Marks)

- (b). It is expected to test whether Return (R) granger courses "ABC" Company Growth (G) that is listed in stock market. Two egression models have been constructed for 69 periods. Restricted and unrestricted models and



Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

Residual Sum of Square (RSS) are respectively provided below. Take the decision using granger causality.

$$G_t = \beta_0 + \beta_1 G(-1)_t + u_t \quad RSS = 226.06$$

$$G_t = \beta_0 + \beta_1 G(-1)_t + \beta_2 R(-1)_t + u_t \quad RSS = 199.97$$

(08 Marks)

- (c). The management of the above "ABC" company says that there is a structural change in the company growth in the period 30. You have been appointed to advise the management with evidence. Following regression model has been constructed to three periods. Take the decision using CHOW breakpoint test.

$$G_t = \beta_0 + \beta_1 R_t + u_t$$

$$RSS = 199.39 \text{ (Period 1 - 69)}$$

$$RSS = 59.01 \text{ (Period 1 - 30)}$$

$$RSS = 135.72 \text{ (Period 31 - 69)}$$

(08 Marks)



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

### Question 07

Write short notes on followings.

- i. Cusum test
- ii. Jarque Bera test
- iii. Cholesky dof adjusted method
- iv. Serial Correlation
- v. Heteroscedasticity

(5×5 marks)

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



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

Year 3 Semester II

**SEMESTER END EXAMINATION**

**Project Management – LTPM3209**

- This paper consists of SEVEN (07) questions on ELEVEN (11) pages.
- Answer FOUR (04) 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.
- Use MCQ answer sheet to Answer Question 01.

Date: 2020.03.05

Pass mark: 50%

Time: 02 Hours

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**Question 01: Compulsory**

- 1) What is Verbal Communication?
  - A. Talking to someone
  - B. When someone is talking and someone else is listening
  - C. When more than one person is talking
  - D. Using verbal noises to show you are listening like "uh huh"
  
- 2) What needs to be complete for there to have been effective communication?
  - A. The persons sentence
  - B. The documentation
  - C. Both the sending and receiving of the message
  - D. The task that was asked of the person

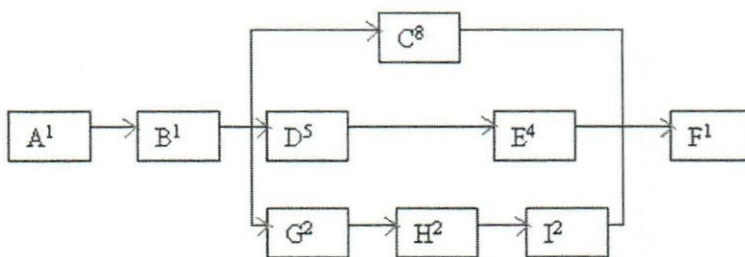
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Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- 3) When you are talking directly to a person and you can see them, this is called what?
- A. Verbal contact
  - B. Face to face communication
  - C. Talking d. Interaction
  - D. Body language
- 4) How can people use verbal communication?
- A. Verbal communication is any words used during face to face contact
  - B. Verbal communication can happen face to face, telephone, skype
  - C. Verbal communication is the use of words but not sounds
  - D. Verbal communication is any words either spoken or written but does not include body language
- 5) **The project life cycle consists of**
- A. Understanding the scope of the project,
  - B. Objectives of the project,
  - C. Formulation and planning various activities,
  - D. All of the above
- 6) Which of the following establishes a project start date and then schedules forward from that date?
- A. end scheduling
  - B. remote scheduling
  - C. forward pass scheduling
  - D. reverse pass scheduling

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Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- 7) The project management process groups are:
- A. Initiating, planning, expediting, and control.
  - B. Plan, organize, develop, and control.
  - C. Plan, do, observe, commit.
  - D. Initiating, planning, executing, monitoring &controlling, and closing.
- 8) A temporary endeavor undertaken to create a new product or service is called a:
- A. New product development.
  - B. Project.
  - C. Program.
  - D. Enterprise.

9) What is the critical path through the network above?



Durations of each activity is shown

- A. ABGHIF.
- B. ABCEF.
- C. ABDEF.
- D. ABGHIF & ABDEF



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- 10) Which of the following elements is not normally common in projects?
- A. An objective
  - B. Uncertainty
  - C. No defined end point
  - D. Uniqueness
- 11) Which is the first stage in the project management model?
- A. Project control
  - B. Project definition
  - C. Project planning
  - D. Understanding the project environment
- 12) Which of the following activities would NOT be an appropriate way of crashing a project?
- A. Additional resources
  - B. Sub-contracting
  - C. Reducing quality
  - D. Overtime working
- 13) In which of the following project phases is the project schedule developed?
- A. Conceptual
  - B. Planning
  - C. Implementation
  - D. Design

Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- 14) Scheduling can best be defined as the process used to determine:
- A. Overall project duration.
  - B. Project cost estimating.
  - C. Project staffing plan.
  - D. Resource Allocation.
- 15) Which one of the following statements is true?
- A. An increase in project scope is likely to increase project cost.
  - B. A decrease in the project time is likely to increase project quality.
  - C. An increase in the project quality requirements is likely to decrease project cost.
  - D. A decrease in the project cost is likely to decrease project time.
- 16) Which one of the following best describes users?
- A. Providers of both strategic and tactical direction to the project.
  - B. Those intended to receive benefits or operate outputs.
  - C. Facilitators of an appropriate issue resolution procedure.
  - D. Those providing full-time commitment to the project.
- 17) Which one of the following is captured in the Work Breakdown Structure (WBS)?
- A. The life cycle phases.
  - B. The sequential order of tasks.
  - C. The scope of the project.
  - D. Project costs.

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Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

18) Project requires a Software programmer at eighth month but not at start. This is an example of which of the following?

- A. Resource constraints
- B. Stakeholder management
- C. Staffing requirements
- D. Contractor requirements

19) Project management is:

- A. Just like any other kind of management
- B. Done differently in the United States and Europe
- C. A job that should only be undertaken by technical staff
- D. The planning, implementing and controlling of resources for a specific time to achieve a pre-determined goal

20) Projects can fail because:

- A. The project is planned in too much detail
- B. The project is not monitored or controlled closely
- C. Stakeholder requirements are too specific
- D. Project risks are identified too early in the project

21) The project charter:

- A. Is only used for large projects
- B. Is the approved project mission statement
- C. Is a detailed project plan
- D. Does not contain the stakeholder's responsibilities



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- 22) In a conventional project lifecycle, as project works progress uncertainty about the expected outcome
- A. increases.
  - B. Decreases
  - C. Remains constant
  - D. Increases and then decreases
- 23) You are the project manager for the NBG Project. This project must be completed within six months. This is an example of which of the following?
- A. Schedule
  - B. Assumption
  - C. Constraint
  - D. Planning process
- 24) You are the project manager of the WIFI Project. You would like to meet with a stakeholder for scope verification. Which of the following is typical of scope verification?
- A. Reviewing changes to the project scope with the stakeholders
  - B. Reviewing the performance of the project deliverables
  - C. Reviewing the performance of the project team to date
  - D. Reviewing the final report of the project
- 25) You are the project manager for a construction project. Your foreman informs you that, due to the humidity, the concrete will need to cure or strengthen for an additional 24 hours before the framing can begin. To accommodate the requirement, you add \_\_\_\_\_ time to the framing activity with the Finish-to -start relationship.

Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- A. Lead
- B. Lag
- C. Delay
- D. Slack

(25 Marks)

### Question 02

Estimation or forecasting of time and cost is very important in planning of projects.

- (a) Explain importance of developing 'Work Breakdown Structure (WBS)' in project planning. (05 Marks)
- (b) Explain "Accuracy of Estimation" of a project. (05 Marks)
- (c) Explain "Cost of Estimation" of a project. (05 Marks)
- (d) What are the methods under Bottom-Up Approaches for Estimating Project Time and Cost. (05 Marks)
- (e) What are best Guideline you could recommend for higher accuracy of estimation? (05 Marks)

### Question 03

Explain the followings.

- (a) Explain how a change in any parameter of **Triple Constraint** of a project effects on other parameters of the same. (05 Marks)
- (b) Explain how projects are created in an organizations. (05 Marks)
- (c) List any five key stakeholder of a project and explain their interest or/and intentions. (05 Marks)
- (d) What is the main objective of 'Project Quality Management'? (05 Marks)
- (e) Explain the key phases of Project Life Cycle. (05 Marks)



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

### Question 04

The estimated details of project activities are given below. Use the details to answer following questions.

Task	Duration (Day)	Preceding Activity
A	6	None
B	10	A
C	8	A
D	6	B
E	10	B,C
F	12	B,C,D
G	15	F
H	20	E,G

- Draw an activity-on-node network to represent the project. (04 Marks)
- Calculate the expected earliest start & finish and latest start & finish times for each activity and then the expected slack time for each activity. (06 Marks)
- What is the general definition for Critical Path of a project. (05 Marks)
- Determine the expected completion time and identify the critical path(s) of project. (05 Marks)
- If the project manager needs to shorten the project period than it calculates (i.e. Expedited project schedule). Explain at least two possible methods of doing this. (05 Marks)

### Question 05

Project Risk Management is to manage any potential uncertainties that may impact on objectives of Project.

- Explain how to prepare a Probability Vs Impact Matrix in Risk Assessment using sample risks. (05 Marks)
- What is "Risk Breakdown Structure (RBS)"? Explain using example. (05 Marks)



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- (c) Explain the project management tools and techniques used for 'Identification of Risks' of a project. (05 Marks)
- (d) Explain how "cost of changes in project" is vary with Project life Cycle. (05 Marks)
- (e) Explain how the Tsunami is not a priority risk than General raining and wind conditions occurring time-to-time in a marine projects in Sri Lankan..  
Note: A tsunami is a series of waves caused by earthquakes or undersea volcanic eruptions. (05 Marks)

### Question 06

Project communication management timely and appropriate generate, collect and disseminate project information through stakeholders.

- (a) List main types of formal Communication Channels with examples and explain the advantages and disadvantages of them. (05 Marks)
- (b) What are the important information that you need to prepare the "Project Scope Statement". (05 Marks)
- (c) Factors need to be considered while selecting a suitable **Communication Channel/Medium** for a project. (05 Marks)
- (d) What are the main contents/ elements of a Project Communication Management Plan. (05 Marks)
- (e) If a project has 5 nos of communication points/Nodes . Calculate maximum total number of communication pathways. (05 Marks)

Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

### Question 07

There are Deferent types of organization structures in general practice.

- (a) Explain at least two main responsibilities of a Project manager In each level/ Phase of project life cycle (05 Marks)
- (b) Name three interpersonal skills which are important for management of stakeholders of a project, particularly. And Explain. (05 Marks)
- (c) What is the “**priority matrix for the project**”. Explain with example. (05 Marks)
- (d) Compare the main Organizational Structures with each other considering the influence for effective project management on following areas.
- Project manager’s title
  - Project manager’s focus
  - Project manager’s Power
  - Project manager’s Time in duty
  - Project Manager reports to whom, etc., (10 Marks)

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

**EXAMINATION**  
05 MAR 2020  
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Course CODE: COM551

**Year 3 Semester II**  
**SEMESTER END EXAMINATION**  
**Project Management – LTPM3209**  
**MCQ Answer Sheet**

- Cross (x) the relevant box according to your answer

Date: 2020.03.05

Pass mark: 50%

Time: 02 Hours

**Question 01**

1.  A  B  C  D

2.  A  B  C  D

3.  A  B  C  D

4.  A  B  C  D

5.  A  B  C  D

6.  A  B  C  D

7.  A  B  C  D

8.  A  B  C  D

9.  A  B  C  D

10.  A  B  C  D

11.  A  B  C  D

12.  A  B  C  D

13.  A  B  C  D

14.  A  B  C  D

15.  A  B  C  D

16.  A  B  C  D

17.  A  B  C  D

18.  A  B  C  D

19.  A  B  C  D

20.  A  B  C  D





Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

21.  A  B  C  D

22.  A  B  C  D

23.  A  B  C  D

24.  A  B  C  D

25.  A  B  C  D

(25 Marks)



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

Year 3 Semester II

SEMESTER END EXAMINATION

Marketing Management – LTMM3212

- This paper consists of SEVEN (07) questions on SIX (06) pages.
- Answer FOUR (04) 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: 2020.03.03

Pass mark: 50%

Time: 02 Hours

### Question 01: (Compulsory)

#### Real estate sector – Sri Lanka

Real estate is one of the country's top revenue generating sources. As per (Chen, 2019) "Real estate is property made up of land and the buildings on it, as well as the natural resources of the land including uncultivated flora and fauna, farmed crops and livestock, water, and any additional mineral deposits". Not like other products and service people often buy and sell in markets, real estate is a unique commodity that is costly, immobile, relatively durable. (Gotham, 2006)

Country's post-war impressive growth has led this sector to have an increased demand for residential property from the high and middle-income sectors, and see more and more companies seeking grade A office spaces. Thanks to the rapidly growing demand for residential and commercial properties and the government policies for new housing projects, the country's construction industry has been growing ever since 2009. According



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BSc Hons in Logistics and Transportation  
Course CODE: COM551

to NDB, since then its “growth has comfortably exceeded 7% despite global economic uncertainty during the period”.

While the construction sector witnessed substantial growth in the 24 months leading up to 2018, domestic market forces including a falling rupee, warnings of an asset bubble and political instability have hindered growth. Foreign direct investments (FDI) in Sri Lanka has declined from US\$ 1070 million in 2014 to US\$ 970 million in 2015. And it was only US\$ 450 million in 2016 to which Trade Minister Malik Samarawickreme reacted as being “extremely low by any standard”. The most significant reason causing this is policy instability. As Shiran Fernando, an analyst at Colombo-based Frontier Research, puts it “it is a lot to do with policy inconsistency on some of the key criteria like taxes and land ownership”. A policy is usually viewed inconsistent, when it is reversed or delayed. A prime example of this would be the VAT (value-added tax) increase. Its implementation was not only 6 months late, but previously the policy was also publicly opposed by the president, Maithripala Sirisena.

However, despite market disruptions, a number of key projects forged ahead in 2018, including Port City Colombo and the Hambantota Industrial Zone. Impressive economic growth since 2009 has supported Sri Lanka’s property market. More employment opportunities, rising salaries and rapid rural-urban migration have all played a part in the expansion of housing and commercial properties. In recent years, increased investor appetite and a maturing economy have transformed Colombo into a dynamic modern city that still retains a sense of its past.

Due to increased urbanization, Sri Lanka’s commercial hub, Colombo has been receiving increased attention from local and foreign investors. However, within the recent years,





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Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

due to factors like its skyrocketing property prices or the city's worsened traffic conditions, their focus has been shifting to exploring opportunities in the suburbs.

Yet, the challenge to cater to the increased demand for suburban properties is the country's infrastructure.

Even though property hunters are looking to relocate to the suburbs, their need to travel to Colombo for work purposes still exists. Thus, it is important to build efficient transportation links between the two. Presently, if you live in Galle or close to it, you can easily travel to Colombo using the Southern Expressway. Similarly, the Katunayake Expressway connects Colombo with the International Airport and the major travel destination, Negombo. Therefore, it is important to focus on enabling easy travel from areas such as Kandy, Trinco, Batticaloa, and Puttalam. Facilitated transportation times could potentially attract many investors to invest in properties all around Sri Lanka such as holiday homes, villas or commercial spaces for their businesses. This would ultimately vastly expand country's real estate market.

The Sri Lankan real estate industry is bound to boom. But ensuring the quality of the construction sector, showcasing policy stability to foreign investors to attract more FDI, and improving country's infrastructure will allow it to boom faster.

*The above data has been based on a real-life situation, but details have been changes for assessment purposes and may not be an accurate reflection of reported news.*

Using the given case scenario, you are required to;

- (a) Explain the importance of monitoring trends in the marketing environment

(05 Marks)



Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

- (b) Discuss four (04) macro environmental factors/ forces that have affected the Real estate sector in recent years? You are required to explain influence of each factor/ force in terms of opportunities and threats to the industry. (20 Marks)

### Question 02

- (a) With reference to the consumer buyer decision process, explain the five (05) stages a consumer may go through in buying a luxury apartment (05 Marks)
- (b) List five (05) environment stimuli that effect buyer choice when buying a luxury apartment (05 Marks)
- (c) Identify three (03) buyer characteristics that could influence their behavior in buying a luxury apartment. (15 Marks)

### Question 03

As a Marketing Manager you might expect to have a well-resourced and managed Marketing Information System (MIS). Though, some information is available but neither the form nor the accessibility of the data is entirely suitable for marketing purposes. Using a company of your choice, prepare a brief report for the IT Manager that;

- (a) Explain the importance of having a MIS for your company. (05 Marks)
- (b) Explain the importance of Marketing Intelligence as a source of gathering data for MIS and list four (04) different sources for gathering marketing intelligence. (08 Marks)
- (c) Discuss how customer data can be collected using marketing research. (12 Marks)





Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

#### Question 04

As a Product Manager for a global cosmetics company, you believe that the Asian market for cosmetics is growing rapidly and offers considerable potential. You therefore wish to develop your product portfolio to exploit the market opportunities across the region.

- (a) Assess three (03) suitable bases on which the Asian market for this product could be segmented (15 Marks)
- (b) Discuss two (02) suitable targeting strategies for your company to enter Asian Market. (10 Marks)

#### Question 05

As the Marketing Director of ASC components, a manufacturer of automotive components used in braking systems, you have prepared a detailed marketing plan to support the commercial activities.

- (a) Explain decision that company make when designing a suitable channel for the company (16 Marks)
- (b) The business is under considerable price pressure and needs to find cost-effective ways of operating in a dynamic marketing environment. Explain three (03) price adjustment strategies that the company could consider. (09 Marks)





Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

### Question 06

As a Marketing Assistant working within the marketing department of a global internet-based clothing brand, you have been asked by your manager to produce a report for your marketing department that:

- (a) Graphically present the product levels and explain how the products levels could be used to gain competitive advantage for the company. (16 Marks)
- (b) Recommend three (03) suitable marketing communication tools that your organization could use to communicate with its target market effectively. (09 Marks)

### Question 07

You work for a large national insurance company based in a country of your choice. You have been asked by your manager to produce a report for all local and regional managers, that:

- (a) Explain the importance of being marketing oriented by highlighting its differences with initial orientations/ concepts. (15 Marks)
- (b) Explain how the extended marketing mix elements could be used to gain competitive advantage for the company. (10 Marks)

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



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

Year 3 Semester II

SEMESTER END EXAMINATION

Research Methodology – LTRM3214

- This paper consists of SEVEN (07) questions on TEN (10) pages.
- Answer FOUR (04) 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: 2020.02.29

Pass mark: 50%

Time: 02 Hours

### Question 01: Compulsory

Underline the correct answer and attach the paper to the answer book.

1. Research is one of the ways of collecting accurate, sound and reliable information about the effectiveness of your interventions, thereby providing you with evidence of its effectiveness. Accordingly, the most specific definition of a research is:-
  - (a) Finding solutions to any problem
  - (b) Searching again, the discoveries made by previous researchers
  - (c) Working in a scientific way to search for truth of any problem
  - (d) None of the above
2. ....consists of groups and categories but follows a strict order. Imagine you have been asked to rate your lunch and the options are: disgusting, unappetizing, neutral, tasty, and delicious. Although we have words and not



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Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

numbers, it is obvious that these preferences are ordered from negative to positive, thus the data is qualitative. Accordingly, find the correct answer to fill in the blanks

- (a) Nominal data
  - (b) Ordinal data
  - (c) Continues data
  - (d) None of above
3. On the basis of nature of information, we can classify the Research in following types.
- (a) Qualitative Research, Cumulative Research and Quantitative Research
  - (b) Qualitative Research and Quadrant Research
  - (c) Qualitative Research, and Quantitative Research
  - (d) Cumulative Research and Quantitative Research
4. "Please select between which age category do you fall into?"
- Below 20 years
  - 21-30 years
  - 31-40 years
  - 41-50 years
  - 50 years and above
- Above question is an example for a:
- (a) Ratio scale
  - (b) Nominal scale
  - (c) Ordinal scale
  - (d) None of above
5. Under the first step of the Research process, what functions from below is performed?
- (a) Collecting funds to conduct the research
  - (b) Identifying the research problem
  - (c) Conducting a thorough literature review
  - (d) Looking into to the sources of data collection relevant to the research





Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

6. Anything that becomes a means of collecting information for your study is called as a:
- (a) Research Design
  - (b) Research Methodology
  - (c) Research Tool
  - (d) None of the above
7. Which of the following best describes a Type I error?
- (a) The null hypothesis is true, and it is mistakenly rejected
  - (b) The null hypothesis is false, and it is rejected
  - (c) The null hypothesis is false, but it is not rejected
  - (d) The null hypothesis is true, but the researcher fails to reject it
8. "Namalie" is an expert in researching, where her most novel research work revolves around analyzing current rate of economic development in Sri Lanka. As a result, her decision is to collect data from secondary data sources. Accordingly, out of the following, which method she cannot utilize for data collection?
- (a) Central Bank Report
  - (b) Data gathered through face to face interviews with financial experts in Sri Lanka
  - (c) Annual reports of renowned companies contributing to the Sri Lankan economy
  - (d) None of the above
9. A Research problem is:-
- (a) Similarly termed as a research question
  - (b) Formulated using research objectives
  - (c) Any question that the researcher wants to obtain answers
  - (d) Not involved in identifying research gaps
10. Refer to below statements.
- (1) Graphical presentation of data is an effective way of presentation of data by using statistical graphs.
  - (2) Graphical data presentation is interesting and attractive way of presentation.



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- (3) There are many types of graphical presentation namely, Bar graph: Pie chart: and Line chart:
- (4) Graphical presentation means is explaining research findings through a speech
- (a) Above 1,2, and 3 are correct  
(b) Above 1,2, and 4, are correct  
(c) Above 1, and 4 are correct  
(d) None of above is correct
11. Among the study designs classified based on the reference period of the study, a research investigating a phenomenon that has happened in the past is referred to as:
- (a) Prospective  
(b) Retrospective  
(c) Experimental  
(d) Semi-experimental
12. "Observation" is a primary data collection mechanism. What are the two categories of observation techniques which can be found?
- (a) Participant and non-participant  
(b) Available and not involved  
(c) Present and Involved  
(d) Non-participant and Absent
13. Attributes of a structured interview involves:-
- (a) Rigid contents and flexible structure  
(b) Rigid contents, rigidity in interview question and rigid participants  
(c) Rigid contents, rigidity in interview questions and rigid structure  
(d) None of the above





Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

14. Among the following what can be considered as important to consider when developing the research problem
- (a) Researchers' knowledge about the research process
  - (b) Availability and the easiness to collect data
  - (c) Ethical issues
  - (d) All of the above
15. Which is the most correct statement from the below statements of a research:-
- (a) Primary objective of a research can be ambiguous, or unclear, whereas it is necessary for the secondary objectives to be unambiguous and clear
  - (b) Wording the primary and the secondary objectives of a research properly is required to determine how the research is classified
  - (c) A study population of a research needs not to match the exact population from which a researcher taken information in conducting a research
  - (d) a and c only
16. A researcher collects data on the types of languages spoken by people in Sri Lanka. Accordingly, the variable "Types of Languages" can be best classified under the ..... scale.
- (a) Nominal Scale
  - (b) Ratio Scale
  - (c) Nominal and Ordinal Scale
  - (d) Nominal and Interval Scale
17. What is the most suitable statement regarding sources of literature as stated below?
- (a) Books provide you with good quality information, whereas the timeliness of the information becomes an issue when the date of information gathered and the date on which the book being published is different
  - (b) Journals are always regarded as good sources of literature despite the indexes ranking the journals
  - (c) Every piece of information provided in internet is sufficient for a researcher to draw into conclusions





Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- (d) None of the above
18. Which one of these sampling methods is a probability sampling method?
- (a) Quota Sampling
  - (b) Judgement Sampling
  - (c) Convenience Sampling
  - (d) Simple Random Sampling
19. Which of the following best describes a concept?
- (a) A concept is highly measurable and important to initiate a research
  - (b) Variables and concepts have similar attributes and is always measurable though the values might vary
  - (c) Concepts must be operationalized into measurable terms with the use of indicators
  - (d) Indicators are a set of criteria reflective of a variable
20. Which of the following statements explains the attributes of a ratio scale?
- (a) Do have the characteristics of a nominal scale and ordinal scale only
  - (b) Have the characteristics of nominal scale, whereas considered to be the most advanced scale, which has true zero, similar to that of an interval scale
  - (c) Most advanced scale among the four measurement scales, but lacks the ability to be ranked according to an order
  - (d) Comprises of equal, ordered, categories anchored by a true zero
21. The purpose of research is to discover answers to questions through the application of scientific procedure.
- (a) True
  - (b) False
22. Collecting the Research Data should be done before carrying out an extensive Literature Survey



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- (a) True
- (b) False

23. Visual displays help in the presentation of inferences and conclusions and represent ways of organizing, summarizing, simplifying, or transforming data.

- (a) True
- (b) False

24. Literature Survey in a research means giving a questionnaire to respondents and collecting data.

- (a) True
- (b) False

25. The researcher should frame the items in a questionnaire in such a way that it provides consistency or reliability.

- (a) True
- (b) False

(01\* 25 Marks)

## Question 02

(a) The word "Research" is composed of two syllables, "Re" and "Search". The dictionary defines the former as a prefix meaning again, or over again and the latter as a verb meaning to examine closely and carefully. Together they form a noun describing a careful, systematic, patient study and investigation in some field of knowledge, undertaken to establish facts and principles.

Moreover, any research can be classified into few categories. Accordingly identify and explain different types of research. (20 Marks)

(b) Briefly explain what is meant by a research design (05 Marks)



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

### Question 03

Research process is comprised of an eight-step model. List down the eight steps under the model and explain FOUR steps in detail. (25 Marks)

### Question 04

The "literature review" is an integral part of the research process and makes a valuable contribution to almost every operational step. It has value even before the first step; that is when you are merely thinking about a research question that you may want to find answers to. Accordingly, explain how to review literature, the importance of literature review and the major sources that can be utilized as existing literature. (25 Marks)

### Question 05

- (a) Briefly explain the difference between a concept and a variable (05 Marks)
- (b) Explain with an example how you can convert a concept into a variable (05 Marks)
- (c) Identify the four types of measurement scales and explain them with relevant examples (07.5 Marks)
- (d) Identify and explain two major sources of data with examples (07.5 Marks)





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

### Question 06

Some of the commonly used study designs in quantitative studies can be classified by examining them from three different perspectives such as:-

- (i) Based on the number of contacts with the study population
- (ii) Based on the reference period of the study
- (iii) Based on the nature of the investigation.

Accordingly, briefly explain the types of study designs as per the above classification.

(25 Marks)

### Question 07

"Aruni" is an undergraduate student awaiting to complete her final year dissertation. She is interested in conducting a research in the field of transportation. Accordingly, she has decided her dissertation topic as "Factors affecting the passenger perception towards railway transportation in Colombo City Limits".

After a thorough literature survey, she has identified some factors that affect the passenger perception towards railway transportation such as Reliability, Safety, Security, Convenience, Punctuality, Comfortability and Environmental Standards.

Furthermore, as per the Ceylon Government Railway statistics Aruni has found that around 5500 passengers travel using railway in Colombo city limits, whereas due to the limitation of time she optioned to collect data only from 600 passengers who use rail transport on a daily basis and is easily accessible for "Aruni" when collecting data.

As per the criteria set out by "Aruni's" university only six months are given to complete her dissertation, which is dated from 1<sup>st</sup> March 2020 to 1<sup>st</sup> September 2020. Based on the above information answer the following questions.

- (a) As per the scenario, identify the dependent and the independent variables of the above study. (02 Marks)
- (b) Build up a conceptual framework for the above scenario (06 Marks)



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- (c) Identify the population, sample size and a possible sampling technique for the given scenario along with proper justification of your answer on the selected sampling technique. (03 Marks)
- (d) As per the given deadline for the above dissertation, develop a suitable time plan (07 Marks)
- (e) As per your point of view comment on the ethical considerations, that needs to be considered by Aruni when conducting her research (07 Marks)

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



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM55I

Year 3 Semester II

SEMESTER END EXAMINATION

Airport Planning and Management – LTAM3210

- This paper consists of SEVEN (07) questions on FOUR (04) pages.
- Answer FOUR (04) 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: 2020.02.27

Pass mark: 50%

Time: 02 Hours

---

**Question 01: (Compulsory)**

- (a) Write down the definition of Flight Information Region (FIR) and list down 03 (Three) neighboring FIRs to the Colombo FIR. (05 Marks)
- (b) Briefly explain the 03 (Three) types of Air traffic control (ATC) services provided by Airport and Aviation Services Sri Lanka (AASL). (07 Marks)
- (c) Differentiate between Throughput capacity and Practical capacity of an airport. (05 Marks)
- (d) When aircraft depart and arrive "on time" according to their respective schedules, the aircraft is said to have experienced no delay. List down factors that affects delay and explain strategies that can be adopted to reduce delays. (08 Marks)



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

### Question 02

- (a) Briefly explain what is meant by Runway Configuration. (05 Marks)
- (b) Explain how pilots make use of Visual Approach Slope Indicators (VASI) and Precision Approach Path Indicators (PAPI) when approaching to land in an airport. (10 Marks)
- (c) Apart from airfield lightings and markings there are different types of signs that are installed on airfields in order to provide more precise and accurate information for pilots to navigate the aircraft in the airfield. These signs fall into different categories. Identify 2(two) main categories and explain 2(two) signs each for the category identified by you with graphical illustrations. (10 marks)

### Question 03

- (a) Airports and airlines have formalized their relationship through "Airport Service Level Agreements (SLA)" Explain the objectives and elements of an airport service level agreement. (09 Marks)
- (b) Explain the different relationships airport management hold with concessionaires that serve the airport. (10 Marks)
- (c) Briefly explain 2(two) environmental impacts of airports. (06 Marks)

### Question 04

- (a) List down 5(five) possible security threats present in the aviation system. (05 Marks)
- (b) Aviation is a system that is vulnerable to security threats with the changing environment of the industry. Explain the different techniques and methods used by commercial airports to provide airport security. (10 Marks)

Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- (c) Explain the difference between private and government owned airports in terms of the ownership style. In your view what type of an ownership style is more suitable for Mattala Rajapaksha International Airport? (10 Marks)

**Question 05**

- (a) Differentiate between aeronautical charges and non-aeronautical charges with examples. (06 Marks)
- (b) Briefly explain the residual cost approach and compensatory cost approach used by airports for financial management. (06 Marks)
- (c) Financing of large scale airport projects is always a concern for airport owners and operators due to the large amounts of capital required. Explain different sources of financing available for airport infrastructure. (13 Marks)

**Question 06**

- (a) Explain 3(three) types of airport terminal configurations with the use of appropriate graphical illustrations. In your view, what is the terminal configuration that best suit an airport like Bandaranaike International Airport? (13 Marks)
- (b) What is meant by an Airport master plan? Explain the elements of an airport master plan with examples. (12 Marks)

Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

**Question 07**

- (a) Briefly explain the importance of an Aerodrome Safety Inspection Programme for an airport. (05 Marks)
- (b) Birds and other wildlife striking an aircraft in operation in vicinity of airport cause serious damage to aircraft and loss of human life. List down controlling techniques used by airports to avoid bird attractions. (05 Marks)
- (c) Airports today are in the midst of a technological, functional, architectural, and cultural evolution, in response to the changing needs of populations and cities around the world. Explain strategies that airports must adopt in order to thrive in the twenty-first century. (15 Marks)

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





Faculty of Management and Social Sciences  
 Department of Logistics & Transport  
 BSc Hons in Logistics and Transportation  
 Course CODE: COM551

Year 3 Semester II

SEMESTER END EXAMINATION

Transport Contract and Regulations – LTTR3213

- This paper consists of SEVEN (07) questions on FOUR (04) pages.
- Answer FOUR (04) 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: 2020.02.25

Pass mark: 50%

Time: 02 Hours

**Question 01: (Compulsory)**

- (a) The shippers and consignees should pay special attention on INCOTERMS at the time of negotiating and entering into the international sale of goods contracts.
- (i) Why INCOTERMS are important in the International Trade? (04 Marks)
- (b) Write brief notes on following INCOTERMS explaining the costs, risk passing points and other important factors, the shippers and buyers should look at, in order to avoid losses.
- |       |     |            |
|-------|-----|------------|
| (i)   | DPU | (04 Marks) |
| (ii)  | FOB | (04 Marks) |
| (iii) | CIF | (04 Marks) |
| (iv)  | DDP | (04 Marks) |

Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

- (c) FCA is a better INCOTERM rule than ex-works, when a consignee is compelled to buy goods from the shipper's premises. Explain your answer as a consignee, comparing both INCOTERMS. (05 Marks)

### Question 02

- (a) The shipper has couriered the original bill lading from China to the consignee in Sri Lanka. The consignee has not received the original bill of lading. The consignee sends the copy of the bill of lading and wants the shipping line release the shipment on copy documents. Can the shipping line release shipment to the consignee? Explain your answer in detail, describing the functions of bill of lading. (10 marks)
- (b) The shipper in China has agreed to send shipment to Colombo on a SEA WAY BILL. The shipper has couriered the original documents from China to the consignee in Sri Lanka. The consignee has not received the original SEA WAY BILL. The consignee sends the copy of the SEA WAY BILL and wants the shipping line release the shipment on copy documents.  
Can the shipping line release shipment to the consignee? Explain your answer comparing the SEA WAY BILL and the BILL of Lading. (05 Marks)
- (c) Explain the limit of liability as per Hague Visby rules under following scenarios. You are requested to advise the documentation manager of a shipping line.
- (i) The shipping line issues the bill Lading to read as " 1 x 20' container said to contain 500 Table tops" and the cargo weight is 2000 Kgs. (05 Marks)
- (ii) The shipping line issues the bill of lading to read "1 x 20' container said to Contain Table tops " and the cargo weight is 2000 Kgs. (05 Marks)



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

### Question 03

- (a) What is a charter party? (02 Marks)
- (b) List down the main types of charter parties and briefly explain them. (12 Marks)
- (c) List down main expenses related to shipping and which party should bear up those expenses in different charter parties. (06 Marks)
- (d) The shipowner (A) charters his vessel to a Charterer (B). Charterer (B) is also the cargo owner. The shipowner (A) issues a bill of lading to the Charterer (B) for cargo on board. Explain the main functions of the bill of lading issued by the shipowner to a charterer, who is also the cargo owner. (05 Marks)

### Question 04

- (a) What is the Law of Agency? Explain your answer describing, The Agent, The Agency, and the Third party. (09 Marks)
- (b) Explain the main conditions required to be fulfilled when considering agency by necessity. (Support your answer with case law.) (08 Marks)
- (c) Explain the creation of agency by ratifications and the important points when considering ratification, (Support your answer with case law) (08 Marks)



Faculty of Management and Social Sciences  
Department of Logistics & Transport  
BSc Hons in Logistics and Transportation  
Course CODE: COM551

### Question 05

- (a) What is a "contract"? (05 marks)
- (b) What are the main elements required for formation of a legal contract? (Support your answer with case law) (20 marks)

### Question 06

- (a) Explain comprehensively, why irrevocable letters of credit are important for International trade. (10 marks)
- (b) Use diagrams to support your answer to show the opening of irrevocable Letter of credit, confirming bank and the movement of shipping documents when a shipper exports 1 x 20 Container of Ceylon tea to a buyer in London. (15 Marks)

### Question 07

Write short notes on any of **TWO (02)** selected topics. (12.5 marks for each)

- (a) Hague Visby Rules.  
(b) Bill of Exchange.  
(c) Innominate terms.  
(d) Maritime Liens.

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