

**THE OPEN UNIVERSITY OF SRI LANKA**  
**DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING**  
**Bachelor of Software Engineering**  
**ECM5360 Management and Professional Issues**



**Final Examination - 2015/2016**

**(CLOSED BOOK)**

**Date: 3<sup>rd</sup> DECEMBER 2016**

**Time: 09.30 – 12.30 hrs.**

**Answer ANY FIVE (05) questions ONLY. All Questions carry equal marks.**

- Q1 “Organizations are organized and coordinated efforts and relationships of individuals and groups with the aim of achieving common objectives”
- (i) What is an Organization?
  - (ii) What are the main elements of an Organization?
  - (iii) Why Organizations are needed for a county?
- Q2 (a) What are the causes of changes in demand?
- (b) Using the demand and supply analysis explain the likely changes in the respective market, under the following conditions. Use illustrations to explain your answer.
- I. Price of motor vehicles have gone up, market for motor vehicles
  - II. Price of sugar has gone down, market for tea.
  - III. When the prices of inputs needed to produce paddy goes up, the impact of it on the market for paddy.
- Q3 “Marketing is a social and managerial process by which individuals and groups obtain what they need and want through creating, offering, and exchanging products of value with others”.
- Explain briefly why Marketing is needed for an Organization?
- Q4 (i) Describe strategic management process briefly explaining different steps.
- (ii) What are main areas usually coming under human resource management? Explain briefly.
- (iii) Why are the informal groups formed in organizations? Discuss merits and demerits of informal groups.

Q5 The Trial Balance of Perera Enterprises a sole proprietorship run by Mr. Perera as on March 31, 2016 is as follows.

	Rs.	Rs.
Sales		800,000
Capital		600,000
Purchase	385,000	
Goods Carrying Cost	40,000	
Inventory as at 01.04.2015	30,000	
Land and Building at cost	500,000	
Plant and Machinery at cost	350,000	
Motor vehicle at cost	250,000	
Provision of Depreciation as at 01.04.2015		
Land and Building		250,000
Plant and Machinery		140,000
Motor vehicle		240,000
Debtors	120,000	
Provision of doubtful debts as at 01.04.2015		16,000
Drawings	15,000	
Cash in Hand	20,200	
Salary paid	180,000	
Rent paid	120,000	
Insurance paid	50,400	
Water Bill paid	24,400	
Other expenses		
Creditors		12,000
Bank Overdraft		27,000
	2,085,000	2,085,000

Additional Information:

A. Inventory as at 31.03.2016 was valued at Rs.18,000.

B. Depreciation rates are as follows

Land and Building	10%
Plant and Machinery	20%
Motor vehicle	5%

C. Provision for bad debt should 10% of the year end debtor balance

You are required to prepare following two statements.

(i) Trading profit & loss account for the year ended 31.03.2016.

(ii) Balance sheet as at 31.03.2016

Q6 An appliance manufacturer produces two models of microwave ovens, H and W. Both models require fabrication and assembly work. H needs 4 hours of fabrication and 2 hours of assembly. W needs 2 hours of fabrication and 6 hours of assembly. Availability of time in a given period for fabrication and assembly are 600 hours and 480 hours respectively. Expected profits from H and W are Rs. 4000/- and 3000/- respectively.

- (i) Formulate a Linear Programming model using above information for maximization of profits.
- (ii) Determine the quantities of H and W that will maximize the profits.

- Q7
- (a) State the requirements for an effective inventory management system.
  - (b) What are the costs involved in keeping inventory of goods?
  - (c) Explain with the aid of a sketch the Economic Order Quantity Model of inventory management indicating assumptions.
  - (d) Show that Economic Order Quantity (Q) for the above model is given by the following equation with usual notation.

$$Q = \sqrt{\frac{2AD}{h}}$$

- (v) A local distributor for a tire company expects to sell 9,600 steel belted radial tires of a certain size and tread design in the coming year. Annual carrying cost is Rs. 320/- per tire, and ordering cost is Rs. 1,500/-. Determine economic order quantity, frequency of ordering and the total annual cost.
- Q8
- (a) Describe the purpose of critical path method used in planning and coordinating projects.
  - (b) A project consists of activities A - J as given in the Table below.

Activity	Immediate Predecessor	Estimated Time (days)
A	-	5
B	-	8
C	A	6
D	-	9
E	C	5
F	D	5
G	F	2
H	B	4
I	H	5
J	E, G, I	6

- (i) Neatly draw the activity network diagram showing all event times.
- (ii) Find out the critical activities and minimum project duration.