THE OPEN UNIVERSITY OF SRI LANKA

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

BACHELOR OF SOFTWARE ENGINEERING

FINAL EXAMINATION 2010/2011

ECM5360 Management and Professional Issues

Date: 27th March 2011	Time: 1400 –1700hrs

This paper contains 8 questions. *Answer any 5 questions*. All questions carry equal marks.

Q1   (a) What is meant by "Planning" as a function of management process?

(b) What are the types of plans formulated at various levels in an organization? Explain each type in briefly.

(c) State common steps of planning and briefly explain each step.

Q2   (a) What is meant by "Organizing" as an element of managerial process?

(b) Coordination and control is an important aspect in an organization structure. State and describe the factors affecting the coordination and control in an organization.

(c) Name two types of organizational structures and illustrate each of them.

Q3   (a) What are the major functions coming under typical Human Resource Management system? Describe them briefly.

(b) What are the sources of human resources available for recruitment? Explain how recruitment is done in each case.

(c) Describe different types of approaches to Job Analysis.

Q4   The management decision making is considered to be a systematic analysis of problems and is governed by accepted principles.

(a) State the sequential steps in decision making process and explain them very briefly.

(b) Explain the conditions that influence the decision making process.

(c) State common decision making models with brief description.

Q5 (a) What are the assumptions made in Economic Order Quantity model (EOQ) used in inventory management?

(b) Show that Economic Order Quantity (Q^*) is given by the following formula.

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

A – Ordering cots (Rs/order)
D– Annual demand (units)
h – inventory holding cost (Rs/year/unit)

(c) The maintenance department of a hospital uses 816 cases of liquid cleanser annually. The costs involved are as follows:
Ordering cost per order – Rs. 1200, Holding cost per unit per year – Rs. 400

(i) Calculate Economic Order Quantity.
(ii) If the discounts are offered on the basis of quantity ordered as given below, find the order quantity that gives minimum total cost.

Quantity	Price (Rs)
1 – 49	200
50 – 79	180
80 – 99	170
More than 100	160

Q6 (a) How does financial accounting differ from cost accounting?

(b) Explain

(i) Prime cost
(ii) Factory cost
(iii) Office cost
(iv) Total cost

(c) Prepare a cost sheet from the following details.

Raw Materials	(Rs.)
Opening Stock	20,000
Purchases	100,000
Closing stock	40,000
Direct wages	40,000
Chargeable expenses	8,000
Machine hrs worked	16,000
Machine hour rate	2
Office Overhead	10% of works cost
Selling Overhead	1.50 per unit
Units Produced	4,000
Units Sold	3600 @ Rs. 50 each

Find the prime cost, works cost, cost of production, cost of goods sold and profit.

Q7 (a) Explain the following terms.

   (i) Trial Balance
   (ii) Profit and Loss Account
   (iii) Balance Sheet

(b) Following is a Trial Balance extracted from Sunil's Books of accounts as at 31.12.1994

	Dr.	Cr.
Purchases	30,000	
Sales		48,000
Stocks on 01.01.1994	12,000	
Carriage inwards	3,000	
Rates & Insurance	1,800	
Salaries	5,000	
Motor Vehicle	10,350	
Buildings	22,500	
Furniture	16,000	
Discount Allowed	200	
Discounts received		800
Debtors	14,850	
Creditors		13,250
Bank loan		20,000
Mortgage loan		4,000
Cash & Bank	18,250	
Drawings	450	
Rent	1,650	
Capital		50,000
	136,050	136,050

Stock at 31.12.1994 was valued as Rs. 16,350

Prepare the following.

(i) Trade and Profit and Loss account for the year ended 31.12.1994.
(ii) The Balance Sheet as at 31.12.1994.

Q8 (a) What are the vital stages involved in project management?

(b) Explain the following.

   (i) Critical path method

   (ii) Programme evaluation and review technique.

   (iii) Slack time

(c)   Draw the Network diagram for the activities given below for a Heating system.

Activity	Description	Immediate Predecessor	Duration (Days)
A	Check electrical service to furnace	None	2.0
B	Change filters	None	1.0
C	Check Ducts	None	3.0
D	Oil the motor bearings	B	0.5
E	Check the motor belts	D	0.5
F	Clear vents	C	0.5
G	Check electrical wiring to thermostats	A	2.0
H	Test Motor	A, E, F	0.5
I	Test Thermostats	G, H	0.5
J	Check Building Insulation	F	2.0

(i)   Find the time taken to complete the project.

(ii)   Show the critical path in the network.

(iii) Find slack time to each activity.