

THE OPEN UNIVERSITY OF SRI LANKA
DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
BACHELOR OF SOFTWARE ENGINEERING-LEVEL 5
FINAL EXAMINATION 2011/2012



ECM5360- MANAGEMENT AND PROFESSIONAL ISSUES

Date: 05th March 2012

Time: 9.30 - 12.30 hrs

Answer any five Questions. All Questions carry equal marks.

1. (a) State and briefly describe key components of Human Resource Management process. (6marks)
- (b) (i) What is meant by "job analysis"?
(ii) State two methods of job analysis and briefly describe them. (7marks)
- (c) (i) What are the sources of recruitment? State merits and demerits of each.
(ii) State three methods of recruitment and briefly indicate the benefits and relative costs of each method. (7marks)
2. (a) Briefly explain the steps that should be followed before implementing a corporate plan in an Organization. (8marks)
- (b) What are the precautions that should be taken in order to make the plans effective? (6marks)
- (c) How does the SWOT analysis contribute to improvement of productivity of an organization? (6marks)

3. (a) Explain the following.
- Trial Balance
 - Suspense account
 - Prime entry books
 - Gross profit and Net profit

(8marks)

- (b) Trial Balance of Don Somapala Company as at 31st March 2010 is given below.

| | Debit | Credit |
|-------------------------------------|---------|---------|
| Capital | | 42,140 |
| Drawing | 13,600 | |
| Loan from Sirisena | | 10,000 |
| Bank | 5,800 | |
| Cash | 460 | |
| Sales | | 88,400 |
| Purchases | 46,300 | |
| Sales return | 5,700 | |
| Purchase return | | 3,100 |
| Stock at 1 st April 2009 | 8,500 | |
| Carriage Inwards | 2,400 | |
| Carriage outwards | 1,600 | |
| Trade debtors | 15,300 | |
| Trade Creditors | | 7,200 |
| Motor vehicles | 23,100 | |
| Fixtures and fittings | 12,400 | |
| Wages and salaries | 6,800 | |
| Rent | 4,100 | |
| Electricity | 3,200 | |
| Telephone and postage | 1,700 | |
| Discounts allowed | 830 | |
| Discounts received | | 950 |
| | 151,790 | 151,790 |

Prepare the following.

- (i) Trading and profit and loss account for the year ended 31st March 2010.

(6marks)

- (ii) The Balance sheet at that date.

(6marks)

4. (a) Explain briefly, what marketing is. (6marks)
- (b) What are the main stages of a product life cycle? Explain them briefly with a suitable diagram. (8marks)
- (c) How do you extend the product life cycle at the decline stage of a product? (6marks)
5. (a) What are the vital stages involved in Project Management? (6marks)
- (b) ABC company has already launched their latest project to introduce a new product to the market. Project activities, preceding activities and duration for each activity are given in the table below.

| Activity | Description | Required predecessor | Duration (months) |
|----------|---------------------|----------------------|-------------------|
| A | Product design | None | 5 |
| B | Market research | None | 1 |
| C | Production analysis | A | 2 |
| D | Product model | A | 3 |
| E | Sales brochure | A | 2 |
| F | Cost analysis | C | 3 |
| G | Product testing | D | 4 |
| H | Sales training | B,E | 2 |
| I | Pricing | H | 1 |
| J | Project report | F,G,I | 1 |

- (i) Draw the Network diagram of the project.
- (ii) Find the critical path of the project.
- (iii) What is the project duration?
- (iv) If the activity 'D' is delayed by one month, what would be the outcome?
- (v) How long the activity 'F' can be delayed without affecting the project duration.
- (vi) If you delay the activity 'E' by one month, how long can you delay the activity 'I'?
- (vii) If the activity 'H' takes 5 months to train sales people, what would be the critical path?

(14marks)

6. (a) Explain the following with particular reference to costing.

- Contribution
- Break-even point
- Variable cost
- Margin of safety in terms of Rupees and volume of sales

(8marks)

(b) A factory manufacturing fans has a capacity of producing 250 fans per month. Variable cost of a fan is Rs 4000/=, which is sold at Rs 5000/= . Fixed overhead cost is Rs 120,000/= per month.

Find the following.

- (i) Contribution
- (ii) Break-even point
- (iii) The profit if the amount of fans sold is 90% of the capacity
- (iv) The margin of safety in terms of Rupees and sales volume.

(12marks)

7. (a) Explain in what situations the "Transportation method" could be used as a tool in management decision making.

(6marks)

(b) Four markets M1, M2, M3 and M4 are to be supplied with a certain product from three production plants, P1, P2, and P3. The costs involved in supplying the product from the plant to the markets are given in the table below. Also given in the table are the demand from different markets and the plant capacities to supply the product.

| | | Markets | | | | Supply |
|--------|----|---------|----|----|----|--------|
| | | M1 | M2 | M3 | M4 | |
| Plant | P1 | 7 | 3 | 8 | 6 | 60 |
| | P2 | 4 | 2 | 5 | 10 | 100 |
| | P3 | 2 | 6 | 5 | 1 | 40 |
| Demand | | 20 | 50 | 50 | 80 | |

- (i) Determine an initial feasible supply schedule using one of the common methods. (7marks)
- (ii) Check your schedule for optimality and improve the schedule for minimum total cost. (7marks)
8. (a) Briefly explain merits and demerits of maintaining inventories of raw materials in a production plant. (5marks)
- (b) (i) What are the costs that a company would incur in maintaining inventories?
- (ii) What are the assumptions made in the simple Economic Order Quantity Model used to predict the size of optimum inventory?
- (iii) Derive an expression for the simple Economic Order Quantity model in terms of annual holding cost per item (h), Ordering cost per order (A), and Annual demand (D). (9marks)
- (c) A company stores a bought-out product for re-sale in the retail market. The following information is available.
 Forecast sales (annual): 8,000 units
 Holding cost: Rs. 0.20 per unit per year
 Ordering cost: Rs. 180 per order
- (i) Find the economic order quantity.
- (ii) If the product can be purchased according to the following schedule of price, what is the order quantity the company should select?
- | Lot size | Unit Price (Rs.) |
|---------------|------------------|
| 1 - 999 | 22 |
| 1,000 - 1,499 | 20 |
| 1,500 - 1,999 | 19 |
| 2,000 or more | 18.50 |
- (6marks)

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