

EASTERN UNIVERSITY, SRI LANKA

FACULTY OF COMMERCE AND MANAGEMENT

THIRD YEAR SECOND SEMESTER EXAMINATION IN COMMERCE (FEBRUARY 2011)

(SPECIAL REPEAT EXAMINATION)

DAF 3124 – MANAGEMENT ACCOUNTING

Answer all questions

Time: 03 Hours

Calculator is permitted

1. i. How does Management Accounting differ from Financial Accounting?  
(05 Marks)
- ii. A company is considering a capital investment proposal where two alternatives, involving differing degrees of mechanization, are being considered. Both investments would have a five-year life. In option 1, new machinery would cost Rs.278,000 and in option 2 Rs.805,000. Anticipated scrap values after 5 years are Rs.28,000 and Rs.150,000 respectively. Depreciation is provided on a straight line basis. Option 1 would generate annual cash inflows of Rs.100,000 and option 2, Rs.250,000.

Required:

Calculate the Accounting Rate of Return, based on average book value.

(06 Marks)

- iii. JK company has to select one of the following 2 projects.  
Machine A cost Rs.100,000 payable immediately. Machine B cost Rs.120,000,  $\frac{1}{2}$  payable immediately and  $\frac{1}{2}$  payable one year time. The expected cash inflows are as follow.

Year (at the end)	A	B
1	20,000	-
2	60,000	60,000
3	40,000	60,000
4	30,000	80,000
5	20,000	-

With 7% interest which machine should be selected?

(06 Marks)

- iv. Ram is currently considering an investment that gives a positive net present value

of Rs.3664 at 15%. At a discount rate of 20% it has a negative net present value of Rs.21,451. What is the internal rate of return of return of this investment?

(03 Marks)

(Total 20 Marks)

2. i. Write short notes on 'Working Capital Cycle'.

(05 Marks)

ii. The following information is obtained from a project. Estimate the net working capital required for the project. Add 10% to your computed figure to allow for contingencies.

Estimated cost per unit of production:

Raw material	Rs. 80
Direct labor	Rs. 30
Overheads (including depreciation, Rs.5)	<u>Rs. 65</u>
	<u>Rs.175</u>

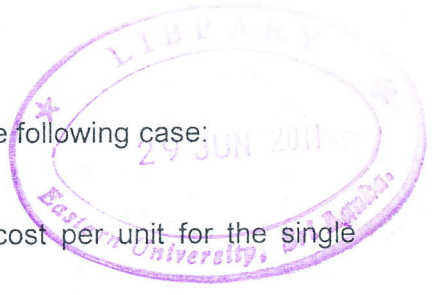
Additional information:

- i. Selling price Rs 200 per unit
- ii. Level of activity, 104,000 units of production per annum.
- iii. Raw material in stock, average 4 weeks
- iv. Work in progress (assume full unit of raw material required in the beginning of manufacturing, other conversion costs are 50%), average 2 weeks
- v. Finished goods in stock, average 4 weeks
- vi. Credit allowed by suppliers, average 4 weeks
- vii. Credit allowed to debtors, average 8 weeks
- viii. Lag in payment of wages, average 1.5 weeks
- ix. Cash in bank (desired to be maintained), Rs.25,000

You may assume that the production is carried on evenly throughout the year (52 weeks) and wages or overheads accrue similarly. All sales are on credit basis only.

(15 Marks)

(Total 20 Marks)



3. i. You are required to calculate the break even point in the following case:

The fixed cost for the year is Rs.80,000, variable cost per unit for the single product being made is Rs.4.

Estimated sales for the period are valued at Rs.200,000. The number of units involved coincides with the expected volume of output. Each unit sells at Rs.20.

Calculate break even point in rupees and units.

(08 Marks)

ii. A summary of the budgeted income statement of Rockland plc follows:

	Rs.
Net revenue	800,000
Less expenses, including Rs.400,000 of fixed expenses	880,000
Net loss	(80,000)

The manager believes that an additional outlay of Rs.200,000 for advertising will increase sales substantially.

Required

- a. At what sales volume will the store break even after spending Rs.200,000 on advertising?
- b. What sales volume will result in a net profit of Rs.40,000 after spending the Rs.200,000 on advertising?

(12 Marks)

(Total 20 Marks)

4 Questions i, ii and iii are Multiple Choice Question (MCQ).

i. The most profitable combination of x and y for a linear programming problem is likely to lie:

- a) On the X- axis
- b) In the middle of the feasible area
- c) At the co-ordinates (0,0)
- d) At the boundaries of feasible area

(02 Marks)

- ii. Linear programming (graphical) can be used in situation where:
- a) The organization manufactures only two products.
  - b) The organization manufactures more than two products.
  - c) The organization manufactures only one product.
  - d) All of the above.

(02 Marks)

- iii. In a given linear programming problem the constraint is that twice the production of the product denoted by  $x$  cannot exceed three times the production of the product denoted by  $y$ . The constraint will be expressed as:

- a)  $2x > 3y$
- b)  $2x \leq 3y$
- c)  $3x \geq 2y$
- d)  $3x < 2y$

(02 Marks)

- iv. A Company manufactures two different products A and B. Each unit of A requires 4 units of raw material, 3 units of labour, and 2 units of machine time. Each unit of B requires 2 units of raw material, 3 units of labour and 5 units of machine time. The company has a daily supply of 24 units of raw material, 21 units of labour and 30 units of machine time.

The company can get a per unit profit contribution of Rs.160 on product A and Rs.100 on product B. The demand for both products is strong enough, so that the company can sell as many units of these products.

The company's management team would like to determine how many units of each product should be manufactured in order to maximize total profit contribution.

Formulate a linear programming model that can aid in this decision making process. Graph the constraints of the model. Determine the coordinates of the corner points of the feasible region. Find the optimal strategy by evaluating the objective function at each corner point. Explain the optimal strategy and the optimal value of the objective function.

(14 Marks)

(Total 20 Marks)

5. i. The table below gives activities with time and cost estimates of a construction project.

Activity	Preceding Activity	Time (days)		Cost (Rs.)	
		Normal	Crash	Normal	Crash
A	-	20	17	6,000	7,200
B	-	25	25	2,000	2,000
C	A	10	8	3,000	4,400
D	A	12	6	4,000	7,000
E	B, C	5	2	3,000	4,200
F	D, E	10	5	3,000	6,000

You are required to:

- a. Draw up project network for the above data.

(6 Marks)

- b. Find the total float and free float for each non-critical activity.

(6 Marks)

- c. Consider the crashing the activity duration times step by step until the shortest duration is reached.

(8 Marks)

(Total 20 Marks)