

EASTERN UNIVERSITY, SRI LANKA

FACULTY OF COMMERCE AND MANAGEMENT

THIRD YEAR - FIRST SEMESTER EXAMINATION IN COMMERCE (SPECIALIZATION IN

ACCOUNTING AND FINANCE) 2016/ 2017 (OCTOBER 2018)

(PROPER/ REPEAT)

DAF 3034 ADVANCED MANAGEMENT ACCOUNTING

Answer all questions

Time: 03 Hours

Calculator is permitted

01. Welcome Limited is considering the manufacture of a new product. The Accountant has prepared the following estimate of profit in the first year of manufacturing 10,000 units:

	Rs.	Rs.
Sales 9,000 units @ Rs. 320		2,880,000
Cost of goods sold:		
Labour 40,000 hours @ Rs. 35 per hour	1, 400,000	
Materials and other variable costs	650,000	
Depreciation	450,000	
	<u>2, 500,000</u>	
Less: Closing stock	<u>250,000</u>	<u>2, 250,000</u>
Net profit		<u>630,000</u>

The product is expected to have a life of four years. Annual sales volume is expected to be constant over the period at 9,000 units. Production which was estimated at 10,000 units in the first year would be only 9,000 units each in year two and three and 8,000 units in year four. Debtors at the end of each year would be 20 per cent of sales during the year; creditors would be 10 percent of materials and other variable costs. If sales differed from the forecast level, stocks would be adjusted in proportion.

Depreciation relates to machinery which would be purchased especially for the manufacture of the new product and is calculated on the straight line basis assuming

that the machinery would last for four years and have no terminal scrap value. No depreciation costs are included in labour cost.

There is a high level of confidence concerning the accuracy of all the above estimates except the annual sales volume. Cost of capital is 20 percent per annum. You should assume that debtors are realized and creditors are paid in the following year. No price charges in the prices of inputs or outputs are expected over the next four years.

You are required to show whether the manufacture of the new product is worth undertaking. Ignore taxation.

(Total 20)

02. i. Distinguish between responsibility centers and decentralization.

(02)

ii. Define the following terms.

- a. Market based transfer price
- b. Variable cost transfer price
- c. Full cost transfer price
- d. Negotiated transfer price

(08)

iii. Use Simplex Method to solve the following linear programming problem:

$$\text{Maximization } Z = 30X_1 + 20X_2$$

Subject to the constraints:

$$-X_1 - X_2 \geq -8$$

$$-6X_1 - 4X_2 \leq -12$$

$$5X_1 + 8X_2 = 20$$

$$X_1 \geq 0, X_2 \geq 0$$

(10)

(Total 20)

03. i. Old Mutual Ltd (OML), a light engineering company is concerned about the erratic changes in its short term financial position. The following financial information is provided:

	2016 (Rs.)	2017 (Rs.)
Sales	783,000	853,000
Cost of goods sold	630,000	670,000
Cash (overdraft)	17,000	(22,000)
Debtors	93,400	126,800
Creditors	19,700	39,200
Stocks	106,500	194,000

- a. Calculate net working capital for 2016 and 2017.

(04 Marks)

- b. Calculate the length (in days) of OML's operating cycle and cash cycle for 2016 and 2017. Assume 365 days a year and calculated days to be rounded up. Comment on your results.

(05 Marks)

- c. What are the methods a company can adopt to improve its cash cycle? Is there an impact from cash cycle on profitability of an organization? Critically explain your answer.

(05 Marks)

- ii. Critically discuss the various approaches that can be used by management for Working Capital Financing.

(06 Marks)

(Total 20 Marks)

04. i. Five Jobs ($J_1 - J_5$) are to be assigned to five operators O_1, O_2, O_3, O_4 and O_5 . The number of hours each operator would take to perform each job is given in the table below:

	Plant				
	O_1	O_2	O_3	O_4	O_5
J_1	9	11	14	11	7
J_2	6	15	13	13	10
J_3	12	13	6	8	8
J_4	11	9	10	12	9
J_5	7	12	14	10	14

Find the optimal assignments schedule and total minimum time required.

(10 Marks)

- ii. Supply, Demand and transportation cost (per unit) for transportation problem shown in the table below.

To destination \ To origin	D_1	D_2	D_3	Origin Supply
O_1	45	40	50	500
O_2	10	20	25	950
O_3	20	45	30	950
Destination Demand	350	1000	900	

- Determine the initial basic solution using matrix Minima rule.
- Find the optimal solution using the MODI method.

(10 Marks)

(Total 20 Marks)

05. i. Distinguish among scorekeeping, attention directing and problem solving.

(05 Marks)

ii. "Why are there ethical dilemmas? I thought accountants had standards that specified what is ethical behaviour." Discuss this quote.

(05 Marks)

iii. The table below gives the activities with time and cost estimates of a construction project.

Activity	Preceding Activity	Times (days)		Costs (Rs)	
		Normal	Crash	Normal	Crash
A	-	10	8	12,000	14,400
B	-	12	12	4,000	4,000
C	A	6	4	6,000	8,800
D	A	6	3	8,000	8,900
E	B, C	3	2	6,000	8,400
F	D, E	5	3	6,000	12,000

- Draw the project Network for the above data.
- Find the total float and free float for each non-critical activity.
- Crash the relevant activities step by step and determine the project completion time 20 days with optimum costs.

(10 Marks)

(Total 20 Marks)