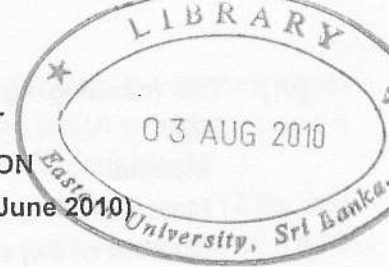


EASTERN UNIVERSITY, SRI LANKA  
 FACULTY OF COMMERCE AND MANAGEMENT  
 THIRD YEAR'S SECOND SEMESTER EXAMINATION  
 IN BACHELOR BUSINESS ADMINISTRATION 2008/2009 (June 2010)  
 DAF 3113 COST ACCOUNTING



No. of questions: 05

No. of pages: 06

Time: 3.00 hrs

Calculators are permitted

Answer all questions

01. (i) "The scope of financial accounting is not sufficient to address the issues relating with managerial decision making". Explain the limitations of financial accounting. (03 Marks)

(ii) Classify the following costs X, Y and Z based on the information given at two activity levels. And explain which basis you select for this classification.

Cost type	Activity levels	
	100 units	200 units
X	Rs. 5000	Rs.5000
Y	Rs.12000	Rs.20000
Z	Rs.7000	Rs.14000

(02 Marks)

(iii) Medical Aid industry manufactures product A. One unit of A requires 10Kgs of material Z. Reorder quantity for Z is 1000 kg. Weekly production of A varies from 175 units to 225 units averaging 200 units. Delivery period of Z is 1 to 3 weeks. Based on the information calculate required various stock levels for the material Z to manage inventory levels. (04 Marks)

(iv) Find out optimum order quantity for a product for which the price breaks are as follows.

Quantity	Unit cost (Rs.)
$0 \leq Q_1 < 1000$	10.00
$1000 \leq Q_2$	9.75

The monthly demand for the product is 200 units, the cost of storage is 20% of the unit cost and cost of ordering is Rs.350 per order.

(05 Marks)

(v) The following is a summary of the receipts and issue of material in a factory during January 2010.

January 01	-	Opening balance 250 units @ Rs.20 per unit
10	-	Received from supplier 200 units @ Rs. 24 per unit
12	-	Issue 150 units
20	-	Received from supplier 225 units @ Rs. 26 per unit
23	-	Issue 180 units
25	-	Issue 200 units
29	-	Received from supplier 300 units @ Rs. 27 per unit

This revealed that on the 27th there was a shortage of 20 units. Prepare the stores ledger accounts under the Weighted Average Method of pricing issues. (04 Marks)

(vi) The following figures are taken from the records of company for the year 2008 – 2009.

Material	X	Y	Z
Material turn over ratio	27 times	3 times	16 times
Number of days the average inventory is held.	14 days	122 days	23 days

Categorize the materials with justifications based on its moving speed.

(02 Marks)

(Total: 20 Marks)

02. (i) Ramkumar industry has the following information regarding the wage payment during the first week of January 2010.

Employee	A	B
Time allowed – hours (per 100 units)	35	40
Wage per unit	Rs.2	Rs.3
Hourly rate	Rs.7	Rs.8
Actual time taken in hours	25	48
Actual units produced	100	150

Calculate the earnings of each employee using following methods of wage payment.

1. Halsey premium bonus scheme (50% of time saved)

2. Rowan premium bonus scheme

(04 Marks)

(ii) BingLx (pvt) Ltd has three production departments A, B and C with two service departments of D and E. From the following figures extracted from the records of the company.

	Rs.
Rent and rates	25000
General lighting	3000
Indirect wages	7500
Electric power for machinery	7500
Depreciation of machinery	50000
General expenses	50000
Total	143000

Item	Total	A	B	C	D	E
Direct expenses Rs.	50000	15000	10000	15000	7500	2500
Value of machinery Rs.	1250000	300000	400000	500000	25000	25000
Floor space (Sq.mt.)	10000	2000	2500	3000	2000	500
H.P of machines	150	60	30	50	10	-
No. of light points	60	10	15	20	10	5
Production hours worked		6226	4028	4066	-	-

The expense of service departments D and E are to be apportioned as follows:

Service department	A	B	C	D	E
D	20%	30%	40%	-	10%
E	40%	20%	30%	10%	-

1. Calculate overhead absorption rate of production departments using simultaneous equation method or repeated distribution method for the secondary distribution.

2. Determine the total cost of a product whose direct material cost and direct labour cost are Rs.250 and Rs.150 respectively and which would consume 4 hours, 5 hours and 3 hours in department A, B, and C respectively.

(12 Marks)

- (iii) In a manufacturing unit overhead was recovered at a pre-determined rate of Rs.20 per labour hour. The total factory overhead incurred and the labour hours actually worked were Rs.4500000 and 200000 labour hours respectively. During this period 40000 units were sold. At the end of the period 10000 units were held in stock while there was no opening stock of finished goods.

On analyzing the reasons, it was found that 60% of the unabsorbed overheads were due to defective planning and rests were attributable to increasing overheads.

Calculate the amount of overhead under/over absorbed. Explain, how would you treat this under/over absorbed overheads in cost accounts?

(04 Marks)

(Total: 20 Marks)

03. (i) Alpha Ltd design and make plastic gift containers. It has received an order for 50000 containers for the coming year. This order can be produced into several batches as they wish. The engineer have advised the production manager that the containers can be made with the batch size of 5000 units, 10000 units, 25000 units or 50000 units.

The following costs were identified

(a) *Product design and development cost:*

Engineers' time:	50 hours at Rs.600 per hour
Draughtsman's time	30 hours at Rs.300 per hour
Materials	Rs.3000
General overheads and Supervision	Rs. 40000

(b) *Setting up costs:*

To setting up of the production machine for one time, requires 20 hours of an engineer's time at Rs. 300 per hour.

(c) *Manufacturing costs:*

Operatives are paid an hourly rate of Rs.150 and production overheads are absorbed at the rate of Rs.250 per direct labour hour worked.

The direct material cost per container is Rs.125

If the batch size is 50000 containers are produced, extra maintenance cost of Rs.100000 and extra storage cost of Rs.150000 would be incurred.

The production machine has the capacity to produce 50 containers per hour.

Required:

1. Quantify the production hours (exclude setup hours) and number of setups required for each mentioned batch size.
2. Assign respective cost for each batch size and determine the optimum batch size which minimizes the production cost.

(08 Marks)

- (ii) A liquid fertilizer is manufactured by passing materials through two consecutive processes. The records show the following information for the month of April 2010.

Opening stock	4000 litres	216000
Closing stock	8000 litres	484000
Receipts to store	20000 litres	1220000

Further data for the month is given below,

	Process 1	Process 2
Direct labour	Rs.97600	Rs.120000
Direct expenses	Rs.85400	-
Overhead absorption rate	250% of direct labour	100% direct labour
Output	8000 litres	7500 litres
Opening stock of work in progress	-	-
Closing stock of work in progress	5600 litres	-
Normal loss	15% of input	10% of input
Scrap value of loss	-	-

In process 1 the closing stock of work in process has just passed through inspection, which is at the level of completion where materials and conversion costs are 100% and 75% completed respectively. In process 2 inspections is the final operations.

Required:

1. Prepare the relevant accounts to show the results of the processes for April 2010.
2. Show the cost per unit for each process

(12 Marks)

(Total: 20 Marks)

04. (i) Wally Lewis is manager of the engineering development division of Goldcoast Products. Lewis has just received a proposal signed by all 10 of his engineers to replace the workstations with network personal computers (networked PCs). Lewis is not enthusiastic about the proposal.

Data on workstations and networked PCs are:

	Workstations	Networked PCs
Original cost	Rs.300000	Rs.135000
Useful life	5 years	3 years
Current age	2 years	0 years
Remaining useful life	3 years	3 years
Accumulated depreciation	Rs.120000	Not acquired yet
Current book value	Rs.180000	Not acquired yet
Current disposal value (In cash)	Rs. 95000	Not acquired yet
Terminal disposal value (in cash 3 years from now)	Rs.0	Rs.0
Annual computer related cash operating cost	Rs.40000	Rs.10000
Annual non-computer related operating cost	Rs.880000	Rs.880000
Annual revenues	Rs.1000000	Rs.1000000

Lewis's annual bonus includes a component based on division operating income. He has a promotion possibility next year that would make him a group vice president of Goldcoast Products.

Required:

- Using differential cost analysis, compare the cost of workstations and networked PCs. (Consider the **cumulative results for three years** together, ignoring time value of money and income tax)
- Advise the management to select optimum proposal based on its profitability

(08 Marks)

- (ii) The following data relate to actual output, costs and variances for the four-weekly accounting period of a company that makes only one product. Opening and closing work in progress figures were the same.

Actual production of product XY	18000 units
Actual costs incurred:	
Direct materials purchased and used (150,000 kg)	Rs.210000
Direct wages for 32 000 hours	Rs.136000
Variable production overhead	Rs.38000

Variances:

Direct materials price	15000 F
Direct materials usage	9000 A
Direct labour rate	8000 A
Direct labour efficiency	16000 F
Variable production overhead expenditure	6000 A
Variable production overhead efficiency	4000 F

Variable production overhead varies with labour hours worked.

A standard marginal costing system is operated.

Required:

- Prepare a standard product cost sheet for each cost item
- Prepare a standard product cost for one unit of product XY

(07 Marks)

- (iii) Compute a conservative estimate of profit on a contract that is to be transferred to profit and loss account (which has been 80% complete) for the year ending 31 December 2009.

Total expenditure to date	Rs.170000
Estimated further expenditure to complete the contract	Rs.34000
Contract price	Rs.306000
Work certified	Rs.200000
Work not certified	Rs.17000
Cash received	Rs.163200

(05 Marks)

(Total: 20 Marks)

05. (i) What are the differences between marginal costing and absorption costing? (02 Marks)
- (ii) XY Ltd is manufacturing three household products A, B and C, and selling them in a competitive market. Details of current demand, selling price and cost structures are given below.

	A	B	C
Expected demand (units)	10000	12000	20000
Selling price per unit (Rs)	20	16	10
Variable cost per unit (Rs)			
Direct material (Rs.10/kg.)	6	4	2
Direct labour (Rs.15/hr)	3	3	1.50
Variable overheads	2	1	1
Contribution per unit (Rs.)	9	8	5.5
Fixed overhead per unit (Rs.)	5	4	2

The company is frequently affected by acute scarcity of raw material and high labour turnover. During the next period it is expected to have one of the following situations:

1. Raw materials available will be only 12100 kg.
2. Direct labour hours available will be only 5000 hrs.
3. It may be possible to increase sales of any one product by 25% without any additional fixed costs but by spending Rs.20000 on advertisement. There will be no shortage of materials or labour.

Suggest the best production plan in **each case** (separately) and the result out profit that the company would earn according to your suggestion. (14 Marks)

- (iii) Ashok Transport Company supplies the following details in respect of a truck of 5 tonnes capacity.

Cost of truck	Rs.90000
Estimated life	10 Years
Diesel, oil, grease	Rs.15 per trip each day
Repairs and maintenance	Rs.500 per month
Cleaners' wages	Rs.250 per month
Drivers' wages	Rs.500 per month
Insurance	Rs.4800 per year
Tax	Rs.2400 per year
General supervision charges	Rs.4800 per year

The truck carries goods to city covering a distance of 50 miles and returned on the same day. While going to the city usually full capacity (100%) of truck will be utilized and on return 20% of capacity is utilized. Assume that the truck runs on an average 25 days a month.

Required:

1. Total composite cost of tonne-miles for the month.
2. Operating cost per tonne-mile.

(04 Marks)

(Total: 20 Marks)