



EASTERN UNIVERSITY, SRI LANKA
 FACULTY OF COMMERCE AND MANAGEMENT
 THIRD YEAR'S SECOND SEMESTER EXAMINATIONS

IN B.COM / B.COM SPECIALISATION IN ACCOUNTING AND FINANCE AND ENTERPRISE
 DEVELOPMENT – 2008/2009 (June 2010)
 DAF 3114 COST ACCOUNTING

No. of questions: 05

Calculators are permitted

No. of pages: 06

Answer all questions

Time: 3.00 hrs

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. Halsy 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)

- (i) The following balances were extracted from the book of the Toys industry as on 1st January 2009.

	Debit	credit
Stores Ledger control account	8500	-
Work in progress control account	6500	-
Finished goods control account	7100	-
Costs ledger control account	-	22000
Works overhead account	-	100
	<u>22100</u>	<u>22100</u>

The following transactions took place during 2009.

	Rs
Purchased	40000
Store issued :Production	38000
:Works repair	1000
Wages :Productive (direct)	45000
:Unproductive	4500
Works repairs	800
Works expenses (rent, light etc)	15000
Works overhead recovered	21000
Administration expenses	4500

Administrative overhead recovered	5000
Finished goods in stock on 31 December, 2009	5000
Work in Progress on 31 December, 2009	3100
Goods sold	130000

Required:

1. Show the necessary control accounts
2. Costing profit and loss account

(14 Marks)

(ii) From the following figures prepare a reconciliation statement

	Rs
Net profit as per financial records	128755
Net profit as per costing records	172400
Works over head under – recovered in costing	3120
Administrative over head recovered in excess	1700
Depreciation charges in financial records	11200
Depreciation recovered in costing	12500
Interest received but not included in costing	8000
Obsolescence loss charged in financial records	5700
Income tax provided in financial books	40300
Bank interest credited in financial books	750
Stores adjustments (credit financial books)	475
Depreciation of stock charged in financial books	6750

(06 Marks)

(Total: 20 Marks)

5. (i) LBx Ltd manufactures four products currently made and sold by your company. Details of the four products and relevant information are given for one period.

Product	A	B	C	D
Output in units	120	100	80	120
Cost per unit:				
Direct material	Rs.40	Rs,50	Rs.30	Rs.60
Direct labour	Rs.28	Rs,21	Rs.14	Rs.21
Machine hours (per unit)	4	3	2	3
No. of set-ups	6	5	4	6
No. of Store requisition	20	20	20	20
No. of Orders executed	12	10	8	12

The production overhead is currently absorbed by using a machine rate, and the total of the production overhead for the period has been analysed.

	Overhead (Rs)
Machine department costs (rent, business, rates, depreciation and supervision)	Rs.10430
Set-up cost	Rs.5250
Stores receiving cost	Rs.3600
Inspection/quality control at each set-up of machine	Rs.2100
Material handling and dispatch	Rs.4620
Total production overhead	<u>Rs.26000</u>

Required to calculate cost per unit of each product based on:

1. Traditional method of charging overheads
2. Activity based costing methods.
3. Show the differences from your figures in (1) and (2) above and comment briefly about the implication on profitability and pricing of product.

(10 Marks)

- (ii) The following data relate to actual output, costs and variances for the four-week 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:

1. Prepare a standard product cost sheet for each cost item
2. Prepare a standard product cost for one unit of product XY

(06 Marks)

- (iii) Power Recreation assembles two types of engines that is snow mobile engine and boat engine at its plant.

	Snow mobile engine	Boat engine
Selling price (Rs.)	80000	100000
Variable cost per unit (Rs.)	56000	62500
Contribution margin per unit (Rs.)	24000	37500

Assume that only 600 machine hours are available daily for assembling engines. Additional capacity cannot be obtained in short run. Power Recreation can sell as many engines as it produced. The constraining resource then is machine hours. It takes two machine hours to produce one snow mobile engine and five machine hours to produce one boat engine. What product mix should Power Recreation managers choose to maximize its operating income?

(04 Marks)

(Total: 20 Marks)