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EASTERN UNIVERSITY, SRI LANKA

Eastern University, Sri Lanka
Faculty of Science
Third Year Second Semester Examination in Bachelor of Science 2012/2013
(October - 2015)
Proper/Repeat
OC 301: Introduction to Cost Accounting

Answer all questions **Time: 02 hours**
Non programmable calculator is permitted

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01. i. What is meant by costing methods? Explain with examples.

(03 Marks)

ii. A company requires raw material X for its manufacturing activities. The following information is given to you.

Normal usage in units	1000
Minimum usage in units	400
Maximum usage in units	2000
Reorder quantity in units	1200
Re-order period (weeks)	6 to 8

Required to calculate;

a. Re – order level
b. Minimum stock level
c. Maximum stock level
d. Average stock level **(05 Marks)**

iii. Calculate the earnings of workers A and B under Straight Piece Rate System and Taylor's Differential Piece Rate System from the following particulars.

Standard time allowed 50 units per hour.

Normal time rate per hour Rs.100.

Differentials rate to be applied.

80% of Piece rate below standard.

120% of Piece rate at or above standard.

In a day of 8 hours A produced 300 units and B produced 450 units.

(06 Marks)

vi. The standard hour of job is 100 hours. The job has been completed by Gupta in 60 hours, Ram in 70 hours and Kumar in 95 hours. The bonus system applicable to the job is as follows :

Percentage of time Saved to time allowed	Bonus
Saving up to 10%	10% of time saved
11% to 20%	15% of time saved
21 % to 40%	20% of time saved
41 % to 100%	25% of time saved

The rate of pay is Rs. 2 per hour. Calculate the total earning of each worker and also rate of earning per hour. **(06 Marks)**

(Total: 20 Marks)

02. i. Assume you have a product with the following parameters:

Annual Demand 7000 units

Holding cost per year Rs.1.22 per unit

Ordering cost Rs.900 per order

Calculate is the EOQ for this product?

(05 Marks)

ii. The following figures are taken from the records of company for the year 2014.

Material	Opening Stock (kg)	Purchases (kg)	Closing stock (kg)
X	14500	215000	23500
Y	30000	21000	42000
Z	25650	315400	9250
W	12650	20400	14000

Calculate the material turnover ratio of the above materials and express in number of days the average inventory is held. Based on material turnover ratio classify the above material.

(06 Marks)

iii. The following information is extracted related to a material from stores ledger during January 2015.

September	
01	Opening balance 100 units @ Rs.17.00
03	Purchased 400 units @ Rs. 20.00
09	Issued 350 units
12	Purchased 150 units @ Rs. 21.00
14	Issued 200 units
14	Purchase 450 units @ Rs. 19.00
19	Issued 400 units
27	Purchase 520 units @ Rs. 18.00

Prepare store ledger accounts using FIFO method.

(06 Marks)

iv. A company has three production departments X, Y and Z, and two service department A and B. The following data are extracted from the company for a particular given period.

Overheads	**Amount (Rs.)**
Rent and rates	42000
Lighting and electricity	5200
Indirect wages	52000
Power	21500
Depreciation of machinery	120000
Other expenses	65000
Total	**413800**

The following are further details which are also available

Details	X	Y	Z	A	B	Total
Direct Material (Rs.)	50000	15000	45000	12000	13000	135000
Floor space (Sq. mts.)	14000	2500	3500	4000	2700	1300
Light points (Nos.)	260	90	80	50	25	15
Direct wages (Rs.)	130000	55000	45000	15000	12000	3000
Horse power of machines	215	85	50	35	20	25
Cost of machinery (Rs.)	1200000	450000	302000	400000	22000	26000
Working hours						
Machine hours		12586	5000	1000	-	-
Labour hours		4000	12925	15240	1500	1350

The expense of service departments A and B are to be apportioned as follows:

Service department	X	Y	Z	A	B
A	20%	30%	40%	0	10%
B	30%	20%	30%	20%	0

Required:

a) Compute the overhead rates of production departments

b) Determine total cost of product with the material cost of Rs.5500 and direct labour cost of Rs.7500 which would consume 18 hours, 20 hours and 15 hours in department X, Y and Z.

(23 Marks)

(Total: 40 Marks)

03. i. A product passes through three processes – I, II and III. The details of expenses incurred on the three processes during the year were as under:

Processes	I	II	III
Units introduced	5,000		
Cost per unit	Rs. 80		
	Rs.	Rs.	Rs.
Sundry materials	14,000	18,466	8,000
Labour	18,000	83,000	55,000
Direct expenses	10,000	25,080	36,840
Selling price per unit of output	115	165	270

Administrative expenses during the year were Rs 78,000 and selling expenses were Rs. 39,500. These are not distributable to the processes.

Actual output of the three processes was: Process I - 4600 units, Process II-3,200 units and Process III-1,600 units. 70% of the output process I and 60% of the process II was passes on to the next process and the balance was sold. The normal loss of the three processes, calculated on the input of every process was: Process I - 4% Process II-10% and Process III-15%. The loss of the Process I was sold at Rs. 2 per unit, that of Process II at Rs. 8 per unit and of Process III at Rs.10 per unit.

Prepare the three process accounts and profit and loss account.

(20 Marks)

ii. Fancy maker's Ltd produces toys. The cost of Kids Laptop is comprised of the following: Selling price of Rs.7800 and variable costs of Rs.2500. Total fixed costs for Kids Laptop are Rs.583000.

a. What is the contribution margin per Kids' Laptop?
b. What is the total profit of Fancy Makers' Ltd when it sells 350 Laptops?
c. How many Laptops must Fancy Makers' Ltd sells to reach the breakeven point?
d. How many Laptops must Fancy Makers' Ltd sell to yield a profit of Rs.503500?
e. Assume the variable cost per unit increased by 10% and fixed cost increased to 625000, what is price that the company has to fix in order to earn the same target profit without changing the sales quantity in (d.).

(12 Marks)

iii. A transport company running 8 buses between two places 75 km apart. Seating capacity of each bus is 50 passengers. The following particulars were obtained from the books of March 2015.

Administrative expenses for the month	Rs. 25000
Insurance per bus per year	Rs. 35000
Rent for Garage per month	Rs. 5000
Driver wage per hour	Rs. 170
Cost of fuel per km	Rs. 17
Repairs and maintenance per km	Rs. 3
Vehicle runs 25 km per hour	

Actual passenger carried were 85% of seating capacity. Each bus make one round trip per day. And all the buses run 25 days of the month.

Calculate

a. total passenger km
b. cost per k

(08 Marks)

(40 Marks)