



March 6, 2009

COST ACCOUNTING

(MARKS 100)

Module D

(3 hours)

Q.1 ABC has recently established a new unit in Multan. Its planning for the first year of operation depicts the following:

- (i) Cash sales 600,000 units
- (ii) Credit sales 1,200,000 units
- (iii) Ending inventory Equivalent to 15 days sales
- (iv) Number of working days in the year 300
- (v) Expected purchase price Rs. 450 per unit
- (vi) Manufacturer offers 2% discount on purchase of 500 units or more as bulk quantity discount. The company intends to avail this discount.
- (vii) Carrying costs include:
 - Financial cost of investment in inventory @ 16% per annum.
 - Godown rent of Rs. 10,000 per month.
- (viii) Ordering costs are Rs. 300 per order.

Required:

Compute the Economic Order Quantity (EOQ) and the estimated carrying costs and ordering costs for the first year of operation.

(10)

Q.2 The following information pertains to a week's work for three employees of a company:

Employees	L	M	N
Total hours worked	60	65	70
Hours of indirect work (included in total hours)	20	10	5
Basic hourly wage rate (Rupees)	60	80	50
Output in units	192	175	150
Time allowed per unit (hours)	0.25	0.4	0.60

Bonus is paid @ 60% of basic wage rate for all time saved. The normal working week is 45 hours. The first five hours of overtime are paid at basic rate plus 40% and the rest at basic rate plus 60%.

Required:

You are required to calculate the following for each employee.

- (a) Basic wages including overtime.
- (b) Amount of bonus earned and gross wages.
- (c) Direct wages per unit, when overtime is worked:
 - (i) due to labour shortage.
 - (ii) specifically at the customer's request, to expedite delivery.

(15)

- Q.3 A chemical is manufactured by passing through two processes X and Y using two types of direct material, A and B. In process Y, a by-product is also produced which is then transferred to process Z where it is completed. For the first week of a month, the actual data has been as follows:

		Process		
		X	Y	Z
Output of main product	(kgs)	9,400	8,000	
Output of byproduct	(kgs)		1,400	1,250
Direct material - A (9,500 units)	(Rs.)	123,500		
Direct material - B added in process	(kgs)	500	300	20
Direct material - B added in process	(Rs.)	19,500	48,100	1,651
Direct wages	(Rs.)	15,000	10,000	500
Scrap value	(Rs. per unit)	5	10	6
Normal loss of units in process	(%)	4	5	5

The factory overheads are budgeted @ 240% of direct wages and are absorbed on the basis of direct wages. Actual factory overheads for the week, amounted to Rs. 65,000. Estimated sales value of the by-product at the time of transfer to process Z was Rs. 22 per unit.

Required:

Prepare the following:

- Process accounts for X, Y and Z.
- Abnormal loss and abnormal gain accounts.
- Factory overhead account.

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- Q.4 Following information has been extracted from the financial records of ATF Limited:

Production during the year	units	35,000
Finished goods at the beginning of the year	units	3,000
Finished goods at the end of the year	units	1,500
Sale price per unit	Rs.	200
Fixed overhead cost for the year	Rs.	1,000,000
Administration and selling expenses	Rs.	200,000
Annual budgeted capacity of the plant	units	40,000

The actual cost per unit, incurred during the year, was as follows:

	Rupees
Material	70
Labour	40
Variable overheads	30

Company uses FIFO method for valuation of inventory. The cost of opening finished goods inventory determined under the absorption costing method system was Rs. 450,000. Fixed overhead constituted 16% of the total cost last year.

Required:

- Prepare profit statements for the year, under absorption and marginal costing systems.
- Prepare reconciliation between the net profits determined under each system.

(12)

- Q.5 The expenses of the production and service departments of a company for a year are as follows:

Department	Expenses before distribution of service department costs Rs. '000'	Service provided (%age)	
		Deptt. X	Deptt. Y
Production department – A	500	50	40
– B	400	30	50
Service department – X	100	-	10
– Y	60	20	-

Required:

Allocate the service departments expenses to production departments by:

- Repeated distribution method
- Simultaneous equation method

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- Q.6 A soft drink company is planning to produce mineral water. It is contemplating to purchase a plant with a capacity of 100,000 bottles a month. For the first year of operation the company expects to sell between 60,000 to 80,000 bottles. The budgeted costs at each of the two levels, are as under:

Particulars	Rupees	
	60,000 bottles	80,000 bottles
Material	360,000	480,000
Labour	200,000	260,000
Factory overheads	120,000	150,000
Administration expenses	100,000	110,000

The production would be sold through retailers who will receive a commission of 8% of sale price.

Required:

- (a) Compute the break-even point in rupees and units, if the company decides to fix the sale price at Rs. 16 per bottle.
- (b) Compute the break-even point in units if the company offers a discount of 10% on purchase of 20 bottles or more, assuming that 20% of the sales will be to buyers who will avail the discount.

(16)

- Q.7 A company produces three products using the same raw material. The raw material is in short supply and only 3,000 kilograms shall be available in April 2009, at a cost of Rs. 1,500 per kilogram.

The budgeted costs and other data related to April 2009 are as follows:

Products	X	Y	Z
Maximum demand (units)	1,000	800	1,200
Selling price per unit (Rs.)	3,750	3,500	4,500
Material used per unit (kg)	1.6	1.2	1.8
Labour hours per unit (Rs. 75 per hour)	12	16	15

(4)

Required:

- (a) Determine the number of units that should be produced by the company to earn maximum profit
- (b) Determine the number of units to be produced if finished products are also available from an external supplier at the following prices per unit:

	Rupees
X	3,450
Y	3,100
Z	3,985

(17)

(THE END)