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TEST-2
CA INTER
(06-02-2022)
COST AND MANAGEMENT ACCOUNTING

Topics Covered:
1. Material Cost   2. Labour Cost

Roll No ………………
Total No. of Question: 15   **Total No. of Printed Pages: 5**
Time allowed: 3 hours   **Maximum Marks: 100**

Q.1   A company uses three raw materials A, B and C for a particular product for which the following data apply:

Raw Material	Usage per unit of product (kgs)	Re-order Quantity (kgs)	Price per kg Re.	Delivery period (in weeks)			Re-order level (Kgs)	Minimum level (Kgs)
A	10	10,000	0.10	1	2	3	8,700	
B	8	5,000	0.30	3	4	5	4,750	
C	5	10,000	0.15	2	3	4		2,000

Weekly production varies from 225 to 325 units, averaging 250 units of the said product. What would be the following quantities:
(i) Minimum Stock of A?   (ii) Maximum Stock of B?
(iii) Re-order level of C   (iv) Average Stock level of A?   {10}

Q.2   RST Limited has received an offer of quantity discount on its order of materials as under:

Price per tone	Tonnes number
Rs. 9,600	Less than 50
Rs. 9,360	50 and less than 100
Rs. 9,120	100 and less than 200
Rs. 8,880	200 and less than 300
Rs. 8,640	300 and above

The annual requirement for the material is 600 tonnes. The ordering cost per order is Rs.12,500 and the stock holding cost is estimated at 25% of the material cost per annum. ***Required***:
(i) Compute the most economical purchase level.
(ii) Compute EOQ if there are no quantity discounts and the price per tonne is Rs. 10,500.   {6+2}

Q.3 G Ltd. produces a product which has a monthly demand of 4,000 units. The product requires a component X which is purchased at Rs.40. For every finished product, two units of component X is required. The ordering cost is Rs. 120 per order and the holding cost is 20% p.a. **You are required to calculate:**
*   Economic order quantity.   {3+3}
*   If the minimum lot size to be supplied is 20,000 units, what is the extra cost the company has to incur?

Q.4 P Limited, manufacturer of a special product, follows the policy of EOQ (Economics Order Quantity) for one of its components. The components details are as follows:

Purchase Price Per Component	Rs. 200
Cost of an order	100
Annual Cost of Carrying one Unit in Inventory	10% of Purchase Price
Total Cost of Inventory and Ordering Per Annum	Rs.4,000

The company has been offered a discount of 5% on the price of the component provided the lot size is 2,000 components at a time. **You are required to:**

*   Compute the EOQ.
*   Advise whether the quantity discount offer can be accepted.
    (Assume that the inventory carrying cost does not vary according to the discount policy)
*   Would your advice differ if the company is offered 10% discount on a single order?   {3+2+2}

Q.5 A manufacturer of Surat purchased three Chemicals A, B and C from Bombay. The invoice gave the following information:

Chemical A	3,000 kg. @ Rs.4.20 per kg.	Rs.12,600
Chemical B	5,000 kg. @ Rs. 3.80 per kg.	19,000
Chemical C	2,000 kg. @ Rs. 4.75 per kg.	9,500
Sales Tax		2,466
Railway Freight		2,000
	Total Cost	45,566

A shortage of 200 kg. in Chemical A, of 180 kg. in Chemical B and of 150 kg. in Chemical C was noticed due to breakages. At Surat, the manufacturer paid Octroi Duty @ Re.1.50 per kg. He also paid cartage Rs.252 for Chemical A, Rs. 635 for Chemical B and Rs 352 for Chemical C. ***Calculate*** the stock rate that you would suggest for pricing issue of chemicals assuming a provision of 8% towards further deterioration.   {6}

Q.6 The annual demand for a product is ₹38,400 and inventory carrying cost per unit per annum is 25% of the average inventory cost. If the cost of procurement is ₹ 75, the unit cost is ₹ 6. ***Determine*-
    (i)   Economic order quantity (EOQ);
    (ii)   Number of orders per annum; and
    (iii)   Time between two consecutive orders.

{3+1+1}

Q.7 Oil India is a bulk distributor of high octane petrol. A periodic inventory of petrol on hand is taken when books are closed at the end of each month. The following summary of information is available for the month.

Sales	₹60,45,000
General administration cost	₹275,000
Opening stock: 1,00,000 litres @ ₹35 per litre	₹35,00,000
Purchases (including freight inward)	
June 1 2,00,000 litres @ ₹28.85 per litre	
June 25 1,00,000 litres @ ₹34.03 per litre	
June 30 Closing stock 1,40,000 litres.	

Compute the following data by the FIFO, Weighted Average Method and LIFO method of inventory costing:
    (a) Value of inventory on June 30.
    (b) Amount of cost of goods sold for June.
    (c) Profit or loss for June.   {3+2+2}

Q.8 IPL Limited uses a small casting in one of the finished products. The castings are purchased from a foundry. JPL Limited purchases 43,200 castings per year at a cost of ₹900 per casting.
The castings are used evenly throughout the year in the production process on a 360 – day – per – year basis. The company estimates that it costs ₹8,000 to place a single purchase order and about ₹350 to carry one casting in inventory for a year. The high carrying costs result from the need to keep the castings in carefully controlled temperature and humidity conditions, and from the high cost of insurance.

Delivery from the foundry generally takes 5 days, but it can take as much as 10 days. The days of delivery time and percentage of their occurrence are shown in the following tabulation:

Delivery time (days)	5	6	7	8	9	10
Percentage of occurrence	65	10	8	7	5	5

Required:
(i) Compute the economic order quantity (EOQ).
(ii) Assuming the company is willing to assume a 25% risk of being out of stock. What would be the safety stock? The re-order point?
(iii) Assume the company is willing to assume a 10% risk of being out of stock. What would be the safety stock: The re- order point?
(iv) Assume 10% stock–out risk. What would be the total cost of ordering and carrying inventory for one year?   {8}

Q.9 The Stock Control Policy of a company is that, each stock is ordered twice a year. The quantum of each order being one-half of the year's forecast demand.

The materials manager, however, wishes to introduce a policy in which for each item of stock, reorder levels and EOQ is calculated.

For one of the items X, the following information is available:

Forecast annual demand	3,600 units
Cost /unit	₹ 100
Cost of placing an order	₹ 40
Stock holding cost	20% of average stock value
Lead time	1 month

It is estimated by the materials manager that for item X, a buffer stock of additional 100 units should be provided to cover fluctuations in demand.
If the new policy is adopted, calculate for stock item X.
1) The reorder level & EOQ that should be set by the material manager:
2) The anticipated reduction in the value of the average stock investment.
3) The anticipated reduction in total inventory costs in the first and subsequent years. {9}

Q.10 The annual demand for an item of raw material is 4,000 units and the purchase price is expected to be ₹90 per unit. The incremental cost of processing an order is ₹135 and the cost of storage is estimated to be ₹12 per unit. What is the optimal order quantity and total relevant cost of this order quantity?

Suppose that ₹135 as estimated to be the incremental cost of processing an order is incorrect and should have been ₹ 80. All other estimates are correct. What is the difference in cost on account of this error?

Assume at the commencement of the period that a supplier offers 4,000 units at a price of ₹86. The materials will be delivered immediately and placed in the stores. Assume that the incremental cost of placing the order is zero and original estimated of ₹135 placing an order for the economic batch is correct. ***Should*** the order be accepted? {9}

Q.11 In a factory, Ram and Sham produce the same product using the same input of same material and at the same normal wage rate.
Bonus is paid to both of them in the form of normal time wage rate adjusted by the proportion which time saved bears to the standard time for the completion of the product. The time allotted to the product is fifty hours. Ram takes thirty hours and Sham takes forty hours to produce the product. The Factory Cost of the product for Ram is ₹3,100 and for Sham ₹3,280. The Factory Overhead Rate is ₹12 per man-hour.
Calculate (i) Normal Wage Rate; (ii) Cost of material used for the product and (iii) the input of material if the unit material cost is ₹ 16. {5}

Q.12 The management of Sunshine Ltd wants to have an idea of the profit lost/foregone as a result of labour turnover last year.

Last year sales accounted to ₹ 66,00,000 and the P/V ratio was 20%. The total number of actual hours worked by the direct labour force was 3.45 lakhs. As a result of the delays by the Personnel Department in filling vacancies due to labour turnover, 75,000 potentially productive hours were lost. The actual direct labour hours included 30,000 hours attributable to training new recruits, out of which half of the hours were unproductive. The costs incurred consequent on labour turnover revealed on analysis the following:

	₹
Settlement cost due to leaving	35,420
Recruitment costs	20,525
Selection costs	12,750
Training costs	16,105

Assuming that the potential production lost due to labour turnover could have been sold at prevailing prices, **_ascertain_** the profit foregone/lost year on account of labour turnover. {5}

Q.13 A worker is allowed 60 hours to complete the job on a guaranteed wage of ₹10 per hour. Under the Rowan Plan, he gets on effective hourly wage of ₹12 per hour. For the same saving as time, **_how_** much he will get under the Halsey Plan? {3}

Q.14 From the following data provided to you **_find out_** the Labour Turnover Rate by supplying:
(a) Flux Method   (b) Replacement Method   (c) Separation Method.
No. of workers on the payroll

At the beginning of the month	500
At the end of the month	600

During the month, 5 workers left, 20 persons were discharged and 75 workers were recruited. Of these, 10 workers were recruited in the vacancies of those leaving, while the rest engaged for an expansion scheme. {6}

Q.15 In an engineering concern the employees are paid incentive bonus in addition to their normal wages to hourly rates Incentive bonus is calculated in proportion of time take to time allowed of the time saved. The following details are made available in respect of employees A, B and C for the first week of December, 2002:

	Employee		
	A	B	C
Wage rate per hour (Rs.)	15	10	8
Unit produced	6,000	3,000	4,800
Time allowed for every 100 units (Hours)	0.8	1.5	1.0
Actual time taken (hours)	42	40	48

You are required to work out for each employee:
(i) the amount of bonus earned; and
(ii) the amount of wages received. {6}