

TIME ALLOWED : 3Hours

Maximum Marks:100

**Question 1****Answer the following:**

(a) TSK Limited manufactures a variety of products. The annual demand for one of its products-Product 'X' is estimated as ₹ 1,35,000 units. Product 'X' is to be manufactured done in batches. Set up cost of each batch is ₹ 3,375 and inventory holding cost is ₹ 5 per unit. It is expected that demand of Product 'X' would be uniform throughout the year.

**Required:**

- (i) Calculate the Economic Batch (EBQ) for Product 'X'
- (ii) Assuming that the company has a policy of manufacturing 7,500 units of Product 'X' per batch, calculate the additional cost incurred as compared to the cost incurred as per Economic Batch Quantity (EBQ) as computed in (i) above. **(5 Marks)**

(b) PQR Limited has replaced 72 workers during the quarter ended 31<sup>st</sup> March 2022. The labour rates for the quarter are as follows:

Flux method	16%
Replacement method	8%
Separation method	5%

You are required to ascertain:

- (i) Average number of workers on roll (for the quarter),
- (ii) Number of workers left and discharged during the quarter,
- (iii) Number of workers recruited and joined during the quarter,
- (iv) Equivalent employee turnover rates for the year.

(c) A skilled worker is paid a guaranteed wage rate of ₹ 150 per hour. The standard time allowed for a job is 10 hours. He took 8 hours to complete the job. He has been paid the wages under Rowan Incentive Plan.

You are required to:

- (i) Calculate an effective hourly rate of earnings under Rowan Incentive Plan.
- (ii) Calculate the time in which he should complete the job. If the worker is placed under Halsey Incentive Scheme (50%) and he wants to maintain the same effective hourly rate of earnings.

**(5 Marks)**

(d)

Journalize the following transactions assuming the cost and financial accounts are integrated

Particulars	Amount
Direct Materials issued to production	₹ 5,88,000
Allocation of Wages (Indirect)	₹ 7,50,000
Factory Overheads (Under absorbed)	₹ 2,25,000
Administrative Overheads (Under absorbed )	₹ 1,55,000
Deficiency found in stock of Raw material (Normal)	₹ 2,00,000

(5 Marks)

### Question 2

(a) G Ltd. Manufactures leather bags for office and school purposes.

The following information is related with the production of leather bags for the month of September, 2021.

(1) Leather sheets and cotton clothes are the main inputs and the estimated requirement per bag is two meters of leather sheets and one meter of cotton cloth. 2,000 meter of leather sheets and 1,000 meter of cotton cloths are purchased at ₹ 3,20,000 and ₹ 15,000 respectively. Freight paid on purchases is ₹ 8,500.

(2) Stitching and finishing need 2,000 man hours at ₹ 10 per labour hour is incurred

(3) Other direct costs of ₹ 10 per labour hour is incurred.

(4) G Ltd. Have 4 machines at a total cost of ₹ 22,00,000. Machines have a life of 10 years with a scrap value of 10% of the original cost. Depreciation is charged on a straight line method.

(5) The monthly cost of administration and sales office staffs are ₹ 45,000 and ₹ 72,000 respectively. G Ltd. Pays ₹ 1,20,000 per month as rent for a 2,400 sq. feet factory premises. The administrative and sales office occupies 240 sq. feet and 200 sq. feet respectively of factory space.

(6) Freight paid on delivery of finished bags is ₹ 18,000.

(7) During the month, 35kg of scrap (cuttings of leather and cotton) are sold at ₹ 150 per kg.

(8) There are no opening and closing stocks of input materials. There is a finished stock of 100 bags in stock at the end of the month.

(i) Cost of Raw Material Consumed

(ii) Prime Cost

(iii) Works/Factory cost

(iv) Cost of Production

(v) Cost of Goods Sold

(vi) Cost of Sales

( 10 Marks)

(b) PNME Ltd. manufactures two types of Masks-‘Disposable Masks’ and ‘Cloth Masks’. The cost data for the year ended 31<sup>st</sup> March, 2022 is as follows:

	₹
Direct Materials	12,50,000
Direct Wages	7,00,000
Production Overhead	4,00,000
<b>Total</b>	<b>23,50,000</b>

It is further ascertained that:

- Direct Material cost per unit of Cloth Mask was twice as much of Direct material cost per unit of Disposable Mask.
- Direct wages per unit for Disposable Mask were 60% of those for Cloth Mask.
- Production overhead per unit was at same rate for both the types of the masks.
- Selling cost was ₹ 2 per Cloth Mask.
- Selling price was ₹ 35 per unit of cloth Mask
- No of units of Cloth Masks sold – 45,000
- No. of units of Production of
 

Cloth Masks:	50,000
Disposable Masks:	1,50,000

You are required to prepare a cost sheet for Cloth Masks showing:

(i) Cost per unit and Total Cost.

(ii) Profit per unit and Total Profit.

(10 Marks)

### Question No 3

Beta Limited produces 50,000 Units,45,000 Units and 62,000 Units of product ‘A’, ‘B’ and ‘C’ respectively. At present the company follows absorption costing method and absorbs overhead on the basis of direct labour hours. Now, the company wants to adopt Activity Based Costing

The information provided by Beta Limited is follows:

	Product A	Product B	Product C
Floor Space Occupied	5,000 Sq.Ft.	4,500 Sq.Ft.	6,200 Sq.Ft.
Direct Labour Hours	7,500 Hours	7,200 Hours	7,800 Hours
Direct Machine Hours	6,000 Hours	4,500 Hours	4,650 Hours
Power consumption	32%	28%	40%

Overhead for year are as follows:

₹

Rent & Taxes	8,63,500
Electricity Expenses	10,66,475
Indirect labour	13,16,250
Repair & Maintenance	1,28,775
	33,75,000

**Required:**

- (i) Calculate the overhead rate per labour hour under Absorption Costing
- (ii) Prepare a cost statement showing overhead cost per unit for each product – 'A', 'B' and 'C' As per Activity based Costing. **(5 Marks)**

**(b)**

In a manufacturing company, the overhead is recovered as follows: Factory Overheads: a fixed percentage basis on direct wages and Administrative overheads: a fixed percentage basis on factory cost.

The company has furnished the following data relating to two jobs undertaken by it in a period:

	Job 1 (₹)	Job (₹)
Direct materials	1,80,000	75,000
Direct wages	84,000	60,000
Selling price	3,33,312	2,25,000
Profit percentage on total cost	12%	20%

You are required to:

- (i) Compute the percentage recovery rates of factory overheads and administrative overheads.
- (ii) Calculate the amount of factory overheads, administrative overheads and profit for each of the two jobs.
- (iii) Using the above recovery rates, determine the selling price to be quoted for job3. Additional data pertaining to job 3 is as follows:

Direct materials	₹ 68,750
Direct wages	₹ 22,500
Profit percentage on selling price	15%

**(10 Marks)**

- (c) How does the high employee turnover increase the cost of production? Explain. **(5 Marks)**

**Question No 4**

(a)

The following information is available from SN Manufacturing Limited's for the month of April 2023.

	April 1	April 30
Opening and closing inventories data:		
Stock of finished goods	2,500 units	?
Stock of raw materials	₹ 42,500	₹ 38,600
Work-in progress	₹ 42,500	₹ 42,800
<b>Others data are:</b>		
Raw materials Purchased		₹ 6,95,000
Carriage inward		₹ 36,200
Direct wages paid		₹ 3,22,800
Royalty paid for production		₹ 35,800
Purchases of special designs, moulds and patterns (estimated life 12 Production cycles)		₹ 1,53,600
Power, fuel and haulage (factory)		₹ 70,600
Research and development costs for improving the production process (amortized)		₹ 31,680
Primary packing cost (necessary to maintain quality)		₹ 6920
Administrative Overhead		₹ 46,765
Salary and wages for Supervisor and foremen		₹ 28,000

**Other information:**

Opening stock of finished goods is to be valued at ₹ 8.05 per unit.

During the month of April, 1,52,000 units were produced and 1,52,600 units were sold. The closing stock of finished goods is to be valued at the relevant month's cost of production. The company follows the FIFO method.

Selling and distribution expenses are to be charged at 20 paisa per unit.

Assume that one production cycle is completed in one month.

**Required:**

- (i) Prepare 8 cost sheet for the month ended on April 30, 2023, showing the various elements of cost (raw material consumed, prime cost, factory cost, cost of production, cost of goods sold, and cost of sales)
- (ii) Calculate the selling price per unit if profit is charged at 20 percent on sales.

**(10 Marks)**

(b) Write down the treatment of following items associated with purchase of materials.

- (i) Cash discount
- (ii) IGST
- (iii) Demurrage

(iv) Shortage

(v) Basic Custom Duty

**(5 Marks)**

(c) Explain the treatment of Overtime Premium in following situations:

(i) SV & Co. wants to grap some special orders, and overtime is required to meet the same.

(ii) Dept. X has to work overtime to make up a shortfall in production due to some fault of management in dept. Y.

(iii) SLtd. has to work overtime regularly throughout the year as a policy due to the workers' shortage.

(iv) Due to flood in Odisha, RS Ltd. Has to work overtime to complete the job.

(v) A customer requested the company MN Ltd. To expedite the job because of his urgency of work.

**(5 Marks)**

### **Question No 5**

**(a)**

SMC Company Limited is producing a particular design of toys under the following existing incentive system:

Normal working hours in the week	48 hours
Late shift hours in the week	12 hours
Rate of payment	Normal working ₹ 150 per hour Late shift: 300 per hour

Average output per operator for 60 hours per week (including late shift hours ) 80 toys.

The company's management has now decided to implement a system of labour cost payment with either the Rowan Premium Plan or the Halsey Premium Plan in order to increase output, eliminate late shift overtime, and reduce the labour cost.

The following information is obtained.

The standard time allotted for ten toys is seven and half hours.

Time rate ₹ 150 per hour (as usual).

Assuming that the operator works for 48- hours in a week and produces 100 toys, you are required to calculate the weekly earnings for one operator under-

**(5 Marks)**

**(b)**

MM Ltd. Uses 7500 valves per month which is purchased at a price of ₹ 1.50 per unit. The carrying cost is estimated to be 20% of average inventory investment on an annual basis. The cost to place an order and getting the delivery is ₹ 15. It takes a period of 1.5 months to receive a delivery from the date of placing an order and a safety stock of 3200 valves is desired.

You are required to determine:

- (i) The Economic Order Quantity (EOQ) and the frequency of orders.
  - (ii) The re-order point.
  - (iii) The Economic Order Quantity (EOQ) if the value cost ₹ 4.50 each instead of 1.50 each.
- (Assume a year consists of 360 days)

(5Marks)

(c)

The following data are available from the books and records of A Ltd. For the month of April 2022.

Particulars	Amount (₹)
Stock of raw materials on 1 <sup>st</sup> April 2022	10,000
Raw materials purchased	2,80,000
Manufacturing wages	70,000
Depreciation on plant	15,000
Expenses paid for quality control check activities	4,000
Lease Rent of production Assets	10,000
Administrative Overheads (production )	15,000
Expenses paid for quality control check activities	1,000
Stock of raw materials on 30 <sup>th</sup> April 2022	40,000
Primary packing cost	8,000
Research & development cost (Process related)	5,000
Packing cost for redistribution of finished goods	1,500
Advertisement expenses	1,300

Stock of finished goods as on 1<sup>st</sup> April 2022 was 200 units having a total cost of ₹ 28,000. The entire opening stock of finished goods has been sold during the month. Production during the month of April,2022 was 400 units.

You are required to:

- I. Prepare a Cost Sheet for the above period showing the:
  - (i) Cost of Raw Material consumed
  - (ii) Prime Cost
  - (iii) Factory Cost
  - (iv) Cost of Production
  - (v) Cost of goods sold

(vi) Cost of sales

II. Calculate selling price per unit, if sale is made at a profit of 20% on sales.

**(10 Marks)**