TEST PAPER - 01

(Chapters Covered – Basic Costing, Cost Sheet, Material Cost and Employee Cost)

COST ACCOUNTING

Time Allowed: 3 Hours **Full Marks: 100**

Section A contains Question Number 1. All parts of this question are compulsory. Working notes should form part of the relevant answer.

SECTION-A

1. **Choose the correct answer from the given alternatives (you may write only the Roman number and the alphabet chosen for your answer)** **(2×15 = 30 Marks)**

(i) Which of the following is not an element of works overhead?

(a) Factory repairman's wages
(b) Sales manager's salary
(c) Plant manager's salary
(d) Product inspector's salary

(ii) The sum of direct labour and factory overhead is termed as:

(a) Variable cost
(b) Conversion cost
(c) Sunk cost
(d) Fixed cost

(iii) There were 5000 workers in a factory on 1st April, 2016. New entrants in service during the year 2016-17 were 250 and separations were 130. Calculate Labour Turnover Rate using Flux Method.

(a) 2.75%
(b) 3.75%
(c) 5.75%.
(d) 6.75%

(iv) For the purpose of cost sheet preparation, costs are classified based on:

(a) Variability
(b) Functions
(c) Nature
(d) Relevance

(v) A work measurement study was carried out in a firm for 10 hours. The information generated was: Units produced 350; Idle time 15%; Performance rating 120%; and Relaxation Allowance 10% of standard time. What is the standard time for each unit produced?

(a) 1.333 minutes
(b) 2.223 minutes
(c) 1.943 minutes
(d) 2.333 minutes

(vi) Cost which relates to an item where the input has an explicit physical relationship with the output is known as:

(a) Opportunity cost
(b) Imputed cost
(c) Engineered cost
(d) Managed cost

(vii) The allotment of whole items of cost of centers or cost unit is called:

(a) Cost allocation
(b) Cost apportionment
(c) Overhead absorption
(d) None of these

(viii) Prime Cost = ₹12,50,000; Works Cost = ₹20,00,000 and office overheads are 30% of factory overheads. What is the Cost of Production?

(a) ₹20,75,000
(b) ₹22,25,000
(c) ₹22,75,000
(d) None of the above.

(ix) At the economic ordering quantity level, the following is true:

(a) The carrying cost is minimum
(b) The ordering cost is minimum
(c) The purchase price is minimum
(d) The ordering cost is equal to the carrying cost

(x) Time and motion study is conducted by the:

(a) Payroll department
(b) Time-keeping department
(c) Engineering department
(d) Personnel department

(xi) Material with invoice value ₹10,000 was received in the Stores Dept. The transport cost was ₹200. Since the material leaked in transit, damage to other goods of ₹350 had to be paid to the transporter. What would be the material cost?

(a) ₹10,200
(b) ₹10,800
(c) ₹10,600
(d) ₹10,400

(xii) Cost units of Automobile Industry is:

(a) Number of calls
(b) Cubic meter
(c) Bed Night
(d) Number of vehicle

(xiii) A Company buys in lots of 6,250 units, which is a 3 month's supply. The cost/unit is ₹2.40. Each order costs ₹45 and the inventory carrying cost is 15% of the average inventory value. Calculate the EOQ.

(a) 2,000 units
(b) 2,500 units
(c) 3,000 units
(d) None of the above.

(xiv) 10,000 units of material 'X' are consumed per year having per unit cost of 20. Cost of processing an order is ₹50 while annual interest rate is 5%. If annual carrying cost per unit of material 'X' is 15% (other than interest), calculate the EOQ and number of orders per year.

(a) 250 units 40 orders
(b) 400 units 25 orders
(c) 500 units 20 orders
(d) None of the above

(xv) When a direct worker is paid on a monthly fixed salary basis, the following is true:

(a) There is no idle time lost
(b) Idle time cost is separated and treated as overhead
(c) There is no idle time cost
(d) The salary is fully treated as factory overhead cost

SECTION-B

Answer any five questions from question number 2 to 8. 14x5=70

2 (a) A company requires 1,00,000 units of an item annually. The cost per unit is ₹10. Ordering cost is 500 per order and inventory carrying cost is 50% per unit per annum.

(i) Find the Economic Order Quantity (EOQ).

(ii) The supplier offers a discount of 3% for order quantity 4500-5999 and 3.5% for order quantity 6000 and above.

Work out a statement comparing the total inventory management costs for the EOQ, 4500 and 6000 units of order and comment on your findings. Advise the company on how much to order. **(7 marks)**

2 (b) Mohan and Sohan are two workers who produce the same product using the same material. Their normal wage rate is also same. Mohan is paid bonus according to the Rowan Plan, while Sohan is paid bonus according to Halsey Premium Plan. The time allowed to make the product is 1,000 hours. Mohan takes 600 hours while Sohan takes 800 hours to complete the product. The factory overhead rate is 10 per man-hour actually worked. The factory cost for the product for Mohan is ₹72,800 and for Sohan it is ₹76,000.

You are required:

(i) to find the normal rate of wages;

(ii) to find the cost of materials; and

(iii) to prepare a statement comparing the factory cost of the products as made by both the workers. **(7 marks)**

3 (a) From the following particulars with respect to a particular item of materials of a manufacturing company, Calculate the Best Quantity to order:

Ordering Quantities (ton)	Price per ton (Rs.)
Less than 250	6.00
250 but less than 800	5.90
800 but less than 2,000	5.80
2,000 but less than 4,000	5.70
4,000 and above	5.60

The annual demand for the material is 4,000 tons. Stock holding costs are 25% of material cost p.a. The delivery cost per order is Rs. 6. **(7 marks)**

3 (b) M/s Sun (India) Ltd. is an export-oriented unit manufacturing communication equipment of a standard size. It has to send a tender price quotation (in rupee terms) to its foreign buyer in the UK. Company submits the following figures relating to year 2023:

Output: 50,000 units

Expenses Incurred	₹	Expenses Incurred	₹
Local Raw Material Consumed	20,00,000	Excise Duty	4,00,000
Imports of Raw Material	2,00,000	Administrative Office Expenses	4,00,000
(Actual Consumption)		Salary of the Managing Director	2,00,000
Direct Labour in works	17,00,000	Fees of Directors	40,000
Direct Expenses	3,00,000	Expenses on Advertising	3,20,000
Indirect Labour in works	4,00,000	Selling Expenses	5,00,000
Stores and Spare Parts	1,40,000	Packing and Distribution Expenses	3,40,000
Fuel	3,00,000		
Depreciation on Plant	2,00,000		
Salaries of Works Personnel	2,00,000		

Other information:

(i) Local raw material now costs 10% more.
(ii) A profit margin of 20% on sales is maintained.
(iii) The Government grants subsidy of ₹40 per unit of export.

Required: Prepare a statement showing tender price per unit to be submitted to the UK buyer. **(7 marks)**

4 (a) ZINTES LTD. a manufacturing company has its factories at two locations. Rowan plan is in use at location A and Halsey plan at location B. Standard time and basic rate of wages are same for a job which is similar and is carried out on similar machinery. Time allowed is 60 hours.

Job at location A is completed in 36 hours while at B, it has taken 48 hours. Conversion costs at respective places are Rs.1224 and Rs.1500. Overheads amount to Rs.20 per hour.

Required:

(i) Find out the normal wage rate, and
(ii) Compare conversion costs. **(6 marks)**

4 (b) ZOXIN LTD. Manufactures two types of pens Super pen and Normal pen. The cost data for the year ended on 31st March 2022 is as follows:

Direct Materials		8,00,000
Direct Wages		4,48,000
Production Overhead		1,92,000
	Total	**14,40,000**

It is further ascertained that:

1. Direct materials cost in Super Pen was twice as much as direct material in Normal Pen
2. Direct Wages for Normal Pen were 60% of those for Super Pen
3. Production overhead per unit was at the same rate for both the types
4. Administration overhead was 200% of direct labour for each
5. Selling cost was ₹ 1 per Super Pen
6. Production and sales during the year were as follow:

Production		**Sales**	
	No. of Units		**No. of Units**
Super Pen	40,000	Super Pen	36,000
Normal Pen	1,20,000		

7. Selling price was ₹ 30 per unit for Super Pen.

Required: Prepare a cost sheet for 'Super Pen' showing:

(i) Total work cost
(ii) Cost per unit and Total Cost
(iii) Profit per unit and Total Profit **(8 marks)**

5 (a) The following summarized information is available from the records of Oil Ltd. for the month of March, 2017:

Sales for the month:	₹19,25,000
Opening Stock as on 1 March, 2017:	1,25,000 litres @ ₹6.50 per litre
Purchases (including freight and insurance):	
March 5	1,50,000 litres @ ₹7.10 per litre
March 27	1,00,000 litres @ ₹7.00 per litre
Closing stock as on 31st March, 2017:	1,30,000 litres

Expenses for the month are ₹45,000. Pricing of material issues is being done at the end of the month after all receipts during the month.

On the basis of above information, calculate the following using FIFO and LIFO methods of pricing:

(i) Value of closing stock as on 31st March, 2017.
(ii) Cost of goods sold during March, 2017.
(iii) Profit or loss for March, 2017.

(7 marks)

5 (b) The existing Incentive system of SHRISTI LTD. is as under:

Normal working week : 5 days of 8 hours each plus 3 late shifts of 3 hours each

Rate of Payment : Day work : Rs.160 per hour

Late shift : Rs.225 per hour

Average output per operator for 49-hours week i.e. including 3 late shifts: 120 articles.

In order to increase output and eliminate overtime, it was decided to switch on to a system of payment by results. The following information is obtained:

Time-rate (as usual) : Rs. 160 per hour

Basic time allowed for 15 articles : 5 hours

Piece-work rate : Add 20% to basic piece-rate

Premium Bonus : Add 50% to time

Required:

Prepare a Statement showing hours worked, weekly earnings, number of articles produced and labour cost per article for one operator under the following systems:

(i) Existing time-rate

(ii) Straight piece-work

(iii) Rowan system

(iv) Halsey premium system

Assume that 135 articles are produced in a 40-hour week under straight piece work, Rowan Premium System, the Halsey Premium System above and worker earns half the time saved under Halsey Premium System. **(7 marks)**

6 (a) ZION LTD uses three types of materials A, B and C for production of Product-P for which the following data apply:

Raw Material	Usage per unit of Product (kgs)	Reorder quantity (kgs)	Price per Kg (Re.)	Delivery Period (in weeks)			Reorder level (kgs)	Minimum level (kgs)
				Minimum	Average	Maximum		
A	10	10000	0.10	1	2	3	8000	?
B	4	5000	0.30	3	4	5	4750	1550
C	6	10000	0.15	2	3	4	?	2000

Weekly production varies from 175 to 225 units, averaging 200 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. **(7 marks)**

6 (b) Z Ltd. manufactured and sold 200 typewriters in the year 2017. Its summarized Trading and Profit & Loss Account for the year 2017 is as follows:

Output: 200 units

Particulars	Amount	Particulars	Amount
To Cost of Raw Material Consumed	1,20,000	By Sales	6,00,000
To Direct Wages	1,80,000		
To Manufacturing Charges	75,000		
To Gross Profit	2,25,000		
	6,00,000		**6,00,000**
To Management Expenses	90,000	By Gross Profit	2,25,000
To General Expenses	30,000		
To Rent, rates and taxes	15,000		
To Selling Expenses	45,000		
To Net Profit	45,000		
	2,25,000		**2,25,000**

For the year 2018, it is estimated that

(i) The output and sales will be 300 typewriters.
(ii) Price of material will rise by 25% compared to previous year level.
(iii) Wages per unit will rise by 10%.
(iv) Manufacturing charges will increase in proportion to the combined cost of material and wages.
(v) Selling expenses per unit will remain unchanged.
(vi) Other expenses will remain unaffected by the rise in output.

Required: Prepare a Cost Sheet showing the cost at which typewriters will be manufactured in 2018 and give price at which it should be marketed so as to show profit of 10% on selling price. **(7 marks)**

7 (a) M/s Peacock Ltd. is in the process of evaluation of employees' welfare scheme of the company. In this regard, it has selected three workers - K, L, and M to study their wage earnings. The company furnishes the following particulars for the month of April, 2023 as under:

		K	L	M
(i)	Job completed (Units)	10,000	8,000	14,400
(ii)	Out of above output rejected and unsaleable (Units)	400	160	1,600
(iii)	Time allowed for 100 units	2 Hrs. 36 Min.	3 Hrs.	1 Hr. 30 Min.
(iv)	Basic wage rate per hour (₹)	25	40	30
(v)	Time taken (Hours)	200	216	184

The normal working hours per month are fixed at 176 hours. Bonus is paid @ 60% of the basic wage rate for gross time worked and gross output produced without deduction for rejected output. The rate of overtime for first 20 hours is paid at time plus 1/3 and for next 20 hours is paid at time plus 1/2.

From the above information, you are asked by the management to calculate the following for each worker:

(i) Number of bonus hours and amount of bonus earned;
(ii) Total wages earned including basic wages, overtime premium and bonus;
(iii) Direct wages cost per 100 saleable units. **(7 marks)**

7 (b) The following information is provided by GA Ltd. For the year ended on 31st March 2017:

Particulars	Amount
Direct Material	30,00,000
Direct Wages	22,50,000
Factory Overhead	20,62,500
Office and Administration Overheads	8,50,000
Selling and Distribution Overheads	2,50,000
Sales	1,00,95,000

The following estimates have been made for the year 2017-18:

(a) Production and sales will be 30,000 units.

(b) Material prices per unit will increase by 25% but due to economy in consumption there will be a saving of 12% on the revised value.

(c) The wage rate per unit will increase by 20%.

(d) Factory overheads of ₹7,50,000 are fixed. The remaining factory overheads will be in the same proportion to materials consumed plus wages as in last year.

(e) The Office and Administrative overheads will increase by 20%.

(f) Selling and Distribution overheads per unit will be reduced by 20%.

(g) Percentage of profit on cost desired = 5% plus rate of profit on cost in the last year.

You are required to prepare a statement showing total cost and profit both in value (to the nearest rupee) and on per unit basis for the year 2017-18. **(7 marks)**

8 (a) List out the various measures to reduce the Labour Turnover (Any Four) **(4 marks)**

8 (b) State two main differences between Scrap and Spoilage. **(5 marks)**

8 (c) What is the role of a Cost Accountant in manufacturing organization? **(5 marks)**