CA INTERMEDIATE

SUBJECT- COSTING

Test Code – CIM 8724

(Date :)

(Marks - 100)

QUESTION 1 IS COMPULSORY. ATTEMPT ANY 4 OUT OF REMAINING 5 QUESTIONS.

WORKING NOTES SHOULD FORM PART OF ANSWERS.

QUESTION 1(A) (5 MARKS)

Star study centre provides coaching classes to school students. The study centre has taken an auditorium of 250 seat capacity on rent of **Rs.**3,75,000 per month. It has also hired some renowned teachers for taking classes. A teacher takes **Rs.**3,000 per hour. The study centre has decided to conduct a batch of 2-hour per day for 3 days a week for 4 months.

REQUIRED

(i) CALCULATE the total cost per batch.

(ii) COMPUTE the minimum fee to be charged per student in a batch, if the centre operates at 60% capacity.

(iii) DETERMINE the fee per student if the study centre desires to earn a profit of 50% and study centre operates at 50% capacity.

QUESTION 1(B) (5 MARKS)

From the following information, **CALCULATE employee turnover rate** using –

(i) Separation Method, (ii) Replacement Method,

(iii) New Recruitment Method, and (iv) Flux Method:
No. of workers as on 01.01.2019 = 3,600

No. of workers as on 31.12.2019 = 3,790

During the year, 40 workers left while 120 workers were discharged. 350 workers were recruited during the year, of these 150 workers were recruited because of exits and the rest were recruited in accordance with expansion plans.

QUESTION 1(C) (5 MARKS)

C.T. Ltd. manufactures and sells a single product X whose selling price is Rs. 100 per unit and the variable cost is Rs. 60 per unit.

(i) If the Fixed Costs for this year are Rs. 24,00,000 and the annual sales are at 60% margin of safety, **CALCULATE the rate of net return on sales**, assuming an income tax level of 40%.

(ii) For the next year, it is proposed to add another product line Y whose selling price would be Rs. 150 per unit and the variable cost Rs. 100 per unit. The total fixed costs are estimated at Rs. 28,00,000. The sales mix of X : Y would be 5 : 3. **COMPUTE the break- even sales** in units for both the products.

QUESTION 1(D) **(5 MARKS)**

A Factory is engaged in the production of chemical Bomex and in the course of its manufacture a by-product Cromex is produced which after further processing has a commercial value. For the month of April 2019 the following are the summarised cost data:

	Joint Expenses (Rs.)	Separate Expenses (Rs.)	
		Bomex	Cromex
Materials	1,00,000	6,000	4,000
Labour	50,000	20,000	18,000
Overheads	30,000	10,000	6,000
Selling Price per unit		100	40
Estimated profit per unit on sale of Cromex			5
Number of units produced		2,000 units	2,000 units

The factory uses net realisable value method for apportionment of joint cost to by-products.

You are required to prepare statements showing :

(i) Joint cost allocable to Cromex

(ii) Product wise and overall profitability of the factory for April 2019.

QUESTION 2(A) **(10 MARKS)**

Following are the data of three product lines of a departmental store for the year 2019-20:

	Soft drinks	**Fresh produce**	**Packaged food**
Revenues	Rs. 39,67,500	Rs. 1,05,03,000	Rs. 60,49,500
Cost of goods sold	Rs. 30,00,000	Rs. 75,00,000	Rs. 45,00,000
Cost of bottles returned	Rs. 60,000	Rs. 0	Rs. 0
Number of purchase orders placed	360	840	360
Number of deliveries received	300	2,190	660
Hours of shelf-stocking time	540	5,400	2,700
Items sold	1,26,000	11,04,000	3,06,000

Additional information related with the store are as follows:

Activity	**Description of activity**	**Total Cost**	**Cost-allocation base**
Bottles returns	Returning of empty bottles	Rs. 60,000	Direct tracing to soft drink line
Ordering	Placing of orders for purchases	Rs. 7,80,000	1,560 purchase orders
Delivery	Physical delivery and receipt of goods	Rs. 12,60,000	3,150 deliveries
Shelf stocking	Stocking of goods on store shelves and on-going restocking	Rs. 8,64,000	8,640 hours of shelf-stocking time
Customer Support	Assistance provided to customers including check-out	Rs. 15,36,000	15,36,000 items sold

Required:

CALCULATE the total cost and operating income using Activity Based Costing method.

QUESTION 2(B) **(10 MARKS)**

XYZ a manufacturing firm, has revealed following information for September ,2019:

	1st September	30th September
	(Rs.)	(Rs.)
Raw Materials	2,42,000	2,92,000
Works-in-progress	2,00,000	5,00,000

The firm incurred following expenses for a targeted production of 1,00,000 units during the month :

	(Rs.)
Consumable Stores and spares of factory	3,50,000
Research and development cost for process improvements	2,50,000
Quality control cost	2,00,000
Packing cost (secondary) per unit of goods sold	2
Lease rent of production asset	2,00,000
Administrative Expenses (General)	2,24,000
Selling and distribution Expenses	4,13,000
Finished goods (opening)	Nil
Finished goods (closing)	5000 units

Defective output which is 4% of targeted production, realizes Rs. 61 per unit.

Closing stock is valued at cost of production (excluding administrative expenses) Cost of goods sold, excluding administrative expenses amounts to Rs. 78,26,000. Direct employees cost is 1/2 of the cost of material consumed.

Selling price of the output is Rs. 110 per unit.

You are required to :

(i) Calculate the Value of material purchased

(ii) Prepare cost sheet showing the profit earned by the firm.

QUESTION 3(A) **(10 MARKS)**

ABS Enterprises produces a product and adopts the policy to recover factory overheads applying blanket rate based on machine hours. The cost records of the concern reveal the following information:

Budgeted production overheads	Rs.	10,35,000
Budgeted machine hours	Rs.	90,000
Actual machine hours worked	Rs.	45,000
Actual production overheads	Rs.	8,80,000
Production overheads (actual) include-		
Paid to worker as per court's award	Rs.	50,000
Wages paid for strike period	Rs.	38,000
Stores written off	Rs.	22,000
Expenses of previous year booked in current year	Rs.	18,500
Production -		
Finished goods		30,000 units
Sale of finished goods		27,000 units

The analysis of cost information reveals that 1/3 of the under absorption of overheads was due to defective production planning and the balance was attributable to increase in costs.

<u>You are required:</u>

(i) To find out the amount of under absorbed production overheads.

(ii) To give the ways of treating it in Cost Accounts.

(iii) To apportion the under absorbed overheads over the items.

QUESTION 3(B) **(10 MARKS)**

A group of 'Health Care Services' has decided to establish a Critical Care Unit in a metro city with an investment of Rs. 85 lakhs in hospital equipments. The unit's capacity shall be of 50 beds and 10 more beds, if required, can be added.

Other information for a year are as under:

	(Rs.)
Building Rent	2,25,000 per month
Manager Salary (Number of Manager-03)	50,000 per month to each one
Nurses Salary (Number of Nurses-24)	18,000 per month to each Nurse
Ward boy’s Salary (Number of ward boys’ -24)	9,000 per month per person
Doctor’s payment (Paid on the basis of number of patients attended and time spent by them)	5,50,000 per month
Food and laundry services (variable)	39,53,000
Medicines to patients (variable)	22,75,000 per year
Administrative Overheads	28,00,000 per year
Depreciation on equipments	15% per annum on original cost

It was reported that for 200 days in a year 50 beds were occupied, for 105 days 30 beds were occupied and for 60 days 20 beds were occupied.

The hospital hired 250 beds at a charge of Rs. 950 per bed to accommodate the flow of patients. However, this never exceeded the normal capacity of 50 beds on any day.

Find out:

(i) Profit per patient day, if hospital charges on an average Rs. 2,500 per day from each patient.

(ii) Break even point per patient day (Make calculation on annual basis)

QUESTION 4(A) **(10 MARKS)**

APFL Ltd. deals in plumbing materials and also provides plumbing services to its customers. On 12th August, 2019, APFL received a job order for a students' hostel to supply and fitting of plumbing materials. The work is to be done on the basis of specification provided by the hostel owner. Hostel will be inaugurated on 5th September, 2019 and the work is to be completed by 3rd September, 2019. Following are the details related with the job work:

Direct Materials

APFL uses a weighted average method for the pricing of materials issues.

Opening stock of materials as on 12th August 2019:

- 15mm GI Pipe, 12 units of 15 feet size @ Rs.600 each
- 20mm GI Pipe, 10 units of 15 feet size @ Rs.660 each
- Other fitting materials, 60 units @ Rs. 26 each
- Stainless Steel Faucet, 6 units @ Rs. 204 each
- Valve, 8 units @ Rs. 404 each

Purchases:

On 16th August 2019:

- 20mm GI Pipe, 30 units of 15 feet size @ Rs. 610 each
- 10 units of Valve @ Rs. 402 each

On 18th August 2019:

- Other fitting materials, 150 units @ Rs. 28 each
- Stainless Steel Faucet, 15 units @ Rs. 209 each

On 27th August 2019:

- 15mm GI Pipe, 35 units of 15 feet size @ Rs.628 each
- 20mm GI Pipe, 20 units of 15 feet size @ Rs.660 each
- Valve, 14 units @ Rs. 424 each

Issues for the hostel job:

On 12th August 2019:

- 20mm GI Pipe, 2 units of 15 feet size
- Other fitting materials, 18 units

On 17th August 2019:

- 15mm GI Pipe, 8 units of 15 feet size
- Other fitting materials, 30 units On 28th

August 2019:

- 20mm GI Pipe, 2 units of 15 feet size
- 15mm GI Pipe, 10 units of 15 feet size
- Other fitting materials, 34 units
- Valve, 6 units

On 30th August:

- Other fitting materials, 60 units
- Stainless Steel Faucet, 15 units

Direct Labour:

Plumber: 180 hours @ Rs. 50 per hour (includes 12 hours overtime) Helper: 192 hours @ Rs.35 per hour (includes 24 hours overtime) Overtimes are paid at 1.5 times of the normal wage rate.

Overheads:

Overheads are applied @ Rs. 13 per labour hour.

Pricing policy:

It is company's policy to price all orders based on achieving a profit margin of 25% on sales price.

<u>You are required to</u>

(a) CALCULATE the total cost of the job.

(b) CALCULATE the price to be charged from the customer.

QUESTION 4(B) **(10 MARKS)**

Alpha Ltd. is engaged in the production of a product A which passes through 3 different process - Process P, Process Q and Process R. The following data relating to cost and output is obtained from the books of accounts for the month of April 2017:

Particulars	Process P	Process Q	Process R
Direct Material	38,000	42,500	42,880
Direct Labour	30,000	40,000	50,000

Production overheads of Rs. 90,000 were recovered as percentage of direct labour.

10,000 kg of raw material @ Rs. 5 per kg. was issued to Process P. There was no stock of materials or work in process. The entire output of each process passes directly to the next process and finally to warehouse. There is normal wastage, in processing, of 10 %. The scrap value of wastage is Rs. 1 per kg. The output of each process transferred to next process and finally to warehouse are as under:

Process P = 9,000 kg

Process Q = 8,200 kg

Process R = 7,300 kg

The company fixes selling price of the end product in such a way so as to yield a profit of 25% selling price.

Prepare Process P, Q and R accounts. Also calculate selling price per unit of end product.

QUESTION 5(A) (10 MARKS)

In a manufacturing company the standard units of production of the year were fixed at 1,20,000 units and overhead expenditures were estimated to be:

Fixed	Rs. 12,00,000;	Variable	Rs. 6,00,000;
Semi-Variable	Rs. 1,80,000		

Actual production during the April, 2019 of the year was 8,000 units. Each month has 20 working days.

During the month there was one public holiday. The actual overheads amounted to:

Fixed	Rs. 1,10,000;	Variable	Rs. 48,000
Semi-variable	Rs. 19,200		

Semi-variable charges are considered to include 60 per cent expenses of fixed nature and 40 per cent of variable character.

CALCULATE the followings:

(i) Overhead Cost Variance

(ii) Fixed Overhead Cost Variance

(iii) Variable Overhead Cost Variance

(iv) Fixed Overhead Volume Variance

(v) Fixed Overhead Expenditure Variance

(vi) Calendar Variance.

QUESTION 5(B) (10 MARKS)

An electronic gadget manufacturer has prepared sales budget for the next few months. In this respect, following figures are available:

Months	**Electronic gadgets' sales**
January	5000 units
February	6000 units
March	7000 units
April	7500 units
May	8000 units

To manufacture an electronic gadget, a standard cost of Rs. 1,500 is incurred and it is sold through dealers at an uniform price of Rs. 2,000 per gadget to customers. Dealers are given a discount of 15% on selling price.

Apart from other materials, two units of batteries are required to manufacture a gadget. The company wants to hold stock of batteries at the end of each month to cover 30% of next month's production and to hold stock of manufactured gadgets to cover 25% of the next month's sale.

3250 units of batteries and 1200 units of manufactured gadgets were in stock on 1st January.

Required:

(i) Prepare production budget (in units) for the month of January, February, March and April.

(ii) Prepare purchase budget for batteries (in units) for the month of January, February and March and calculate profit for the quarter ending on March.

QUESTION 6 ATTEMPT ANY FOUR OUT OF FIVE QUESTIONS.

QUESTION 6(A) (5 MARKS)

Differentiate between cost control and cost reduction.

QUESTION 6(B) (5 MARKS)

Journalise the following transactions in cost books under Non-Integrated system of Accounting.

(i)	Credit Purchase of Material	Rs. 27,000
(ii)	Manufacturing overhead charged to Production	Rs. 6,000
(iii)	Selling and Distribution overheads recovered from Sales	Rs. 4,000
(iv)	Indirect wages incurred	Rs. 8,000
(v)	Material returned from production to stores	Rs. 9,000

QUESTION 6(C) (5 MARKS)

DISCUSS the Escalation Clause in a Contract.

QUESTION 6(D) (5 MARKS)

Explain 'Just In Time' (JIT) approach of inventory management.

QUESTION 6(E) (5 MARKS)

DISCUSS the impact of Information Technology (IT) on cost accounting system.