Paper 8- Cost Accounting

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Full Marks: 100 **Time allowed: 3 hours**

Section - A

1. Objective Questions

(a) Multiple choice questions: **[1x10=10]**

(i) _____ is the process of charging to the cost units by means of rates.
(a) Cost Apportionment
(b) Cost Allocation
(c) Cost Absorption
(d) None of the above

(ii) _____ is a document prepared by the store keeper to initiate the process of purchase by the purchasing department.
(a) Purchase Order
(b) Purchase Requisition
(c) Material Requisition Note
(d) Material Transfer Note

(iii) _____ refers to the recording of details of work done and the time spent by an employee on each job or process.
(a) Time Booking
(b) Time Keeping
(c) Time Rate System
(d) None of the above

(iv) _____ is the capacity for which plant is designed to operate. It does not give allowance for waiting, delays and shut-down.
(a) Maximum capacity
(b) Idle capacity
(c) Excess capacity
(d) Practical capacity

(v) The objective of _____ is to bring uniformity and consistency in the principles and methods of determining the Research, and Development Costs with reasonable accuracy and presentation of the same.
(a) CAS 20
(b) CAS 17
(c) CAS 19
(d) CAS 18

(vi) _____ is a system of accounting, whereby cost and financial accounts are kept in the same set of books.
(a) Cost control accounts
(b) Non-Integrated accounting system

(c) Integrated accounting system
(d) None of the above

(vii) _____ is one of the basic costing methods applicable to an organisation where goods result from a sequence of repetitive operations or processes to which costs are charged before being averaged over the units produced during the period.
(a) Batch Costing
(b) Job Costing
(c) Operating Costing
(d) Process costing

(viii) Fixed cost is ₹50,000 and P/V ratio is 25%. Compute breakeven point in sales value.
(a) ₹2,00,000
(b) ₹1,50,000
(c) ₹1,40,000
(d) ₹1,66,667

(ix) Standard price of material per kg is ₹30, standard usage per unit of production is 6 kg. Actual usage of production 200 units is 1250 kgs, all of which was purchase at the rate of ₹35 per kg. Material cost variance is
(a) ₹4,500 (A)
(b) ₹7,750 (A)
(c) ₹7,750 (F)
(d) ₹4,500 (F)

(x) _____ is the budget which, by recognising the difference in behaviour between fixed and variable costs in relation to fluctuations in output, turnover, or other variable factors, is designed to change appropriately with such fluctuations.
(a) Production Budget
(b) Master Budget
(c) Functional Budget
(d) Flexible Budget

(b) Match the following: **[1x5=5]**

	Column 'A'		Column 'B'
1.	Notional Cost	A	CAS 14
2.	Process of classifying Material	B	Direct allocation
3.	Labour turnover	C	Imputed Cost
4.	Royalties	D	Replacement method
5.	Pollution Control Cost	E	FSN Analysis

(c) State whether the following statements are true or false: [5x1=5]

(i) A budget manual is the summary of all functional budgets.
(ii) Standard costing is an ideal name given to the estimate making.
(iii) Marginal cost is aggregate of Prime Cost and Variable cost.
(iv) Contact costing is variant of job costing.
(v) The balancing in costing profit and loss account represents under or over absorption of overheads.

(d) Fill in the blanks: [1x5=5]

(i) The users of _____ information are generally internal management, officials and senior executives of the company.
(ii) _____ is the process of classifying the materials based on their movement from inventory for a specified period.
(iii) Remuneration paid to non-executive directors shall not form part of _____ but shall form part of _____.
(iv) _____ are expenses relating to manufacture of a product or rendering a service, which can be identified or linked with the cost object other than direct material cost and direct employee cost.
(v) _____ is the process of booking costs against a particular Cost Account code under a particular cost center or directly under a cost unit, as the case may be.

Section - B

Answer any five from the following. Each question carries 15 marks (5x15=75)

2. (a) The Purchase Department of S Ltd. has received an offer of quantity discounts on its orders of materials as under:

Price per tonne (₹)	**Tonnes**
1,180	500 and less than 1,000
1,160	1,000 and less than 2,000
1,140	2,000 and above

The annual requirement for the material is 5,000 tonnes. The delivery cost per order is ₹1,000 and the stock holding cost is estimated at 20% of material cost per annum.
You are required to advise the Purchase Department the most economical purchase level. **[8]**

2. (b) Ashima Manufacturing Ltd. have three departments which are regarded as production departments. Service departments' costs are distributed to these production departments using the 'Step Distribution Method' of distribution. Estimates of factory overhead costs to be incurred by each department in the forthcoming year as follows. Data required for distribution is also shown against each department.

Department	Factory Overhead (₹)	Direct labour hours	No. of Employees	Area in sq. m.
Production:				
X	93,000	4,000	100	3,000
Y	54,000	3,000	125	1,500
Z	73,000	4,000	85	1,500
Service:				
P	45,000	1,000	10	500
Q	75,000	5,000	50	1,500
R	1,05,000	6,000	40	1,000
S	30,000	3,000	50	1,000

The overhead costs of the four service departments are distributed in the same order, viz. P, Q, R and S respectively on the following basis.

Department	Basis
P	Number of employees
Q	Direct labour hours
R	Area in square metres
S	Direct labour hours

You are required to:

(a) Prepare a schedule showing the distribution of overhead costs of the four service departments to the three production departments; and

(b) Calculate the overhead recovery rate per direct labour hour for each of the three production departments. **[7]**

3. (a) State the objectives and any five functions of the Cost Accounting Standards Board. **[5]**

3. (b) From the accounts of A Co. Ltd. the following Manufacturing, Trading and Profit and Loss Account for the year ended 31st December, 2022, is extracted:

Particulars	₹	Particulars	₹
To Raw Materials:		By Raw Materials:	
Opening stock	59,000	Closing stock	64,000
Raw Materials Purchases	3,73,000		
To Wages paid	5,62,000	By Work-in-Progress:	
		Materials 8,000	
		Wages 11,000	
		Factory expenses 6,600	25,600
To Wages accrued	34,000	By Cost of goods manufactured (18,000 units)	13,19,900
To Factory expenses	3,81,500		
	14,09,500		14,09,500
To Cost of goods manufactured	13,19,900	By Sales (15,200 units)	18,24,000
To Administration expenses	2,45,000	By Finished Stock (2,800 units)	2,35,200
To Selling and Distribution expenses	3,28,000	By Interest on Investments	2,600
To Preliminary expenses written-off	18,000	By Dividend earned	11,000
To Goodwill written-off	17,000		
To Net Profit transferred to Appropriation A/c	1,44,900		
	20,72,800		20,72,800

The following procedure is adopted in connection with the costing of the product:

(a) Factory expenses are allocated to production at 60% of direct labour cost.

(b) Administration expenses are applied at ₹12 per unit over the units produced.

(c) Selling and distribution expenses are charged so as to work out at 20% of selling price.

Prepare Costing Profit and Loss Account and the Statement of Reconciliation between the profit or loss as per the two accounts. **[5+5]**

4. (a) The normal expenses attributable to Machine 1 and the normal hours for which the machine is expected to be utilised in the year 2023 are indicated below:

Particulars	**₹**	**₹**
Fixed Expenses		4,000
Variable:		
Power	1,500	
Repairs	900	
Lubricants	600	3,000
Total		7,000
Predetermined normal hours of working:		
To make ready		200 hours
Running on jobs		800 hours
Total		1,000 hours

From the data furnished below, compute the cost of Job No. 1993:

	₹
Materials consumed: 10 units at ₹5 per unit	50
Machine labour:	
To make ready: 2 hours at ₹1 per hour	2
Running on jobs: 8 hours at ₹1 per hour	8
	60

Note: Wherever a job to be put on the machine, the machine is cleared, any tools or jigs already on the machine are removed and new tools, etc. suitable for the particular job are fixed before commissioning the machine for the job and the time involved is to be charged to the job as 'make ready' time. Hence, fixed expenses are absorbed on the basis of total normal working hours & variable expenses are absorbed on the basis of running working hours. **[7]**

4. (b) Following information is available regarding process 1 for the month of February 2022:

Production Record	
Units in process as on 31st Jan. 2022	8,000
(All material used 25% complete for labour and overhead)	
Net units started in process	32,000
	40,000
Production report shows following results:	
Units completed	28,000
Units in process on 28th February 2022	12,000
(All material used, $33\frac{1}{3}$% complete for labour and overhead)	
Cost records	
Work-in-process as on 31.1.22:	
Material	₹2,400
Labour	₹400
Overhead	₹400
Cost of February 2022:	
Material	₹10,240
Labour	₹6,000
Overhead	₹6,000
Total cost to be accounted for	₹25,440

Presuming that average method of inventory costing is used, prepare:

(i) Statement of equivalent production.

(ii) Statement showing cost for each element.

(iii) Statement of apportionment of cost.

(iv) Process cost account for process 1. **[2+2+2+2]**

5. (a) ASK Institute is a school having five buses each plying in different directions for the transport of its school students. In view of a larger number of students availing of the bus service the buses work two shifts daily both in the morning and in the afternoon. The buses are garaged in the school. The work-load of the students has been so arranged that in the morning the first trip picks up senior students and the second trip plying an hour later picks up the junior students. Similarly, in the after-noon the first trip takes the junior students and an hour later the second trip takes the senior students home.

The distance travelled by each bus one way is 8 km. The school works 25 days in a month and remains closed for vacation in May, June and December. Bus fee, however, is payable by the students for all 12 months in a year.

The details of expenses for a year are as under:

Driver's salary	₹4,500 per month per driver
Cleaner's salary	₹3,500 per month
(Salary payable for all 12 months)	
(one cleaner employed for all the five buses)	
Licence fee, taxes, etc.	₹ 8,600 per bus per annum

Insurance	₹10,000 per bus per annum
Repairs & maintenance	₹35,000 per bus per annum
Purchase price of the bus	₹15,00,000 each
Life of each bus	12 years
Scrap value of buses at the end of life	₹3,00,000
Diesel cost	₹45.00 per litre

Each bus gives an average mileage of 4 km. per litre of diesel.
Seating capacity of each bus is 50 students.
The seating capacity is fully occupied during the whole year.
Students picked up and dropped within a range up to 4 km. of distance from the school are charged half fare and fifty per cent of the students travelling in each trip are in this category. Ignore interest. Since the charges are to be based on average cost you are required to:

(i) Prepare a statement showing the expenses of operating a single bus and the fleet of five buses for a year.
(ii) Work out the average cost per student per month in respect of –
   a. students coming from a distance of up to 4 km. from the school
   b. students coming from a distance beyond 4 km. from the school. **[4+4]**

5. (b) Super Ltd. undertook a contract for ₹50,00,000 with effect from 1st July, 2021. On 30th June, 2022, when the accounts were closed, the following details relating to the contract were gathered:

Particulars	₹
Materials purchased	10,00,000
Wages paid	4,50,000
General expenses	1,00,000
Plant purchased	5,00,000
Materials at site (on 30th June, 2022)	2,50,000
Wages accrued (on 30th June, 2022)	50,000
Cash received	15,00,000
Work certified	20,00,000
Work not certified (at cost)	1,50,000
Depreciation on plant	50,000

The contract contained an escalation clause which reads as follows:
'In the event of increase in both the material cost and the wage cost by more than 5%, the contract price would increase by 25% of the increase in both the material cost and the wage cost beyond 5%.'
It was found that, since the date of signing the agreement, both the material cost and the wage cost increased by 25%. The value of the work certified did not take into account the effect of the escalation clause. Calculate the amount of cost escalation and prepare the Contract Account. **[2+5]**

6. (a) Ashis Ltd. has a production capacity of 20,00,000 units per year. Normal capacity utilisation is reckoned as 90%. Standard variable production costs are ₹11 per unit. The fixed cost is ₹36,00,000 per year. Variable selling costs are ₹3 per unit and fixed selling costs are ₹27,00,000 per year. The unit selling price is ₹20. In the year just ended on

31st March 2022, the production was 16,00,000 units and sales were 15,00,000 units. The closing inventory on 31.3.22 was 2,00,000 units. The actual variable production costs for the year were ₹3,50,000 higher than the standard.

(i) Calculate the profit for the year ending on 31.3.2022:

(A) by the absorption costing method, and

(B) by the marginal costing method.

(ii) Explain the difference in the profits. **[6+2]**

6. (b) Powerful Ltd. has the option of buying one machine. Two machines are available, Machine Electrode and Machine Force. From the information given below, calculate- (i) the break-even point for each; (ii) the level of sales at which both are equally profitable, and (iii) the range of sales at which one is more profitable than the other:

Particulars	Machine Electrode	Machine Force
Output p.a. (units)	1,00,000	1,00,000
Fixed costs p.a. (₹)	3,00,000	1,60,000
Profit at full capacity (₹)	3,00,000	2,40,000

Both the machines will produce identical products. The annual market demand for such product is 1,00,000 units @ ₹10 per unit. **[2+3+2]**

7. (a) Following information is given regarding standard composition and standard rates of a gang workers:

Standard composition	Standard hourly rate
100 Men	₹0.625
50 Women	₹0.400
50 Boys	₹0.350

According to given specifications, a week consists of 40 hours and standard output for a week is 1,000 units.

In a particular week, gang consisted of 130 men, 40 women and 30 boys and actual wages were paid as follows:

Men @ ₹0.6 per hour

Women @ ₹0.425

Boys @ ₹0.325 per hour

Two hours were lost in the week due to abnormal sale time. Actual production was 960 units in the week.

Find out-

(i) Labour rate variance,

(ii) Labour mix variance,

(iii) Labour idle time variance,

(iv) Labour yield variance,

(v) Labour efficiency variance,

(vi) Labour cost variance. **[8]**

7. (b) The following are the estimated sales of S Ltd. for eight months ending 30.11.2022:

Months	Estimated Sales (units)
April 2022	1,20,000
May 2022	1,30,000
June 2022	90,000
July 2022	80,000
August 2022	1,00,000
September 2022	1,20,000
October 2022	1,40,000
November 2022	1,20,000

As a matter of policy, the company maintains the closing balance of finished goods and raw materials as follows:

Stock item	Closing balance of a month
Stock item	50% of the estimated sales for the next month
Raw Materials	Estimated consumption for the next month

Every unit of production requires 2 kg. of raw material costing ₹5 per kg.

Prepare Production Budget (in units) and Raw Material Purchase Budget (in units and cost) of the company for the half year ending 30 September, 2022. **[7]**

8. Write short notes on any three of the following: **[3x5=15]**

(a) Explain the concept of Sunk Cost and Engineered Cost.

(b) Describe the requisites of a good Cost Accounting System.

(c) State the requisites of Material Control System.

(d) State the limitations of Absorption Costing.