(CA ALL INTERMEDIATE BATCHES)

DATE: 31.12.2020 **MAXIMUM MARKS: 100** **TIMING: 3¼ Hours**

PAPER : COSTING

Answer to questions are to be given only in English except in the case of candidates who have opted for Hindi Medium. If a candidate who has not opted for Hindi Medium. His/her answer in Hindi will not be valued.
Question No. 1 is compulsory.
Candidates are also required to answer any Four questions from the remaining Five Questions.
In case, any candidate answers extra question(s)/sub-question(s) over and above the required number, then only the requisite number of questions first answered in the answer book shall be valued and subsequent extra question(s) answered shall be ignored.
Wherever necessary, suitable assumptions may be made and disclosed by way of note.

Question 1:

(a) M Ltd. has an annual fixed cost of Rs. 98,50,000. In the year 20X8-X9, sales amounted to Rs. 7,80,60,000 as compared to Rs. 5,93,10,000 in the preceding year 20X7-X8. Profit in the year 20X8-X9 is Rs. 37,50,000 more than that in 20X7-X8.

Required:

(i) CALCULATE Break-even sales of the company;
(ii) DETERMINE profit/ loss on a forecasted sales volume of Rs. 8,20,00,000.
(iii) If there is a reduction in selling price by 10% in the financial year 20X8-X9 and company desires to earn the same amount of profit as in 20X7-X8, COMPUTE the required sales amount?

(5 Marks)

(b) Sanziet Life care Ltd. operates in life insurance business. Last year it has launched a new term insurance policy for practicing professionals 'Professionals Protection Plus'. The company has incurred the following expenditures during the last year for the policy:

Policy development cost	Rs. 11,25,000
Cost of marketing of the policy	Rs. 45,20,000
Sales support expenses	Rs. 11,45,000
Policy issuance cost	Rs. 10,05,900
Policy servicing cost	Rs. 35,20,700
Claims management cost	Rs. 1,25,600
IT cost	Rs. 74,32,000
Postage and logistics	Rs. 10,25,000
Facilities cost	Rs. 15,24,000
Employees cost	Rs. 5,60,000
Office administration cost	Rs. 16,20,400

Number of policy sold- 528
Total insured value of policies- Rs. 1,320 crore
Required:

(i) CALCULATE total cost for Professionals Protection Plus' policy segregating the costs into four main activities namely (a) Marketing and Sales support, (b) Operations, (c) IT and (d) Support functions.
(ii) CALCULATE cost per policy.
(iii) CALCULATE cost per rupee of insured value.

(5 Marks)

(c) A factory uses job costing. The following data are obtained from its books for the year ended 31st March, 2018:

	Amount (Rs.)
Direct materials	9,00,000
Direct wages	7,50,000
Selling and distribution overheads	5,25,000
Administration overheads	4,20,000
Factory overheads	4,50,000
Profit	6,09,000

PREPARE a Job Cost sheet indicating the Prime cost, Cost of Production, Cost of sales and the Sales value.

(5 Marks)

(d) 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.

(5 Marks)

Question: 2

(a) Following information is available regarding process A for the month of February, 20X9:

Production Record:

Units in process as on 01.02.20X9 (All materials used, 25% complete for labour and overhead)	4,000
New units introduced	16,000
Units completed	14,000
Units in process as on 28.02.20X9	6,000
(All materials used, 33-1/3% complete for labour and overhead)	
Cost Records:	
Work-in-process as on 01.02.20X9	(Rs.)
Materials	6,00,000
Labour	1,00,000
Overhead	1,00,000
	8,00,000
Cost during the month	
Materials	25,60,000
Labour	15,00,000
Overhead	15,00,000
	55,60,000
Presuming that average method of inventory 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 A.	

(10 Marks)

(b) A Ltd. produces a product 'Exe' using a raw material Dee. To produce one unit of Exe, 2 kg of Dee is required. As per the sales forecast conducted by the company, it will able to sale 20,000 units of Exe in the coming year. The following is the

information regarding the raw material Dee:

(i) The Re-order quantity is 200 kg. less than the Economic Order Quantity (EOQ).

(ii) Maximum consumption per day is 20 kg. more than the average consumption per day.

(iii) There is an opening stock of 2,000 kg.

(iv) Time required to get the raw materials from the suppliers is 4 to 8 days.

(v) The purchase price is Rs. 125 per kg.

There is an opening stock of 1,800 units of the finished product Exe.

The rate of interest charged by bank on Cash Credit facility is 13.76%.

To place an order company has to incur Rs. 720 on paper and documentation work. From the above information COMPUTE the followings in relation to raw material Dee:

(a) Re-order Quantity

(b) Maximum Stock level

(c) Minimum Stock level

(d) Impact on the profitability of the company by not ordering the EOQ.
[Take 364 days for a year]

(10 Marks)

Question 3:

(a) The following figures have been extracted from the cost records of a manufacturing unit:

	(Rs.)
Stores: Opening balance	32,000
Purchases of material	1,58,000
Transfer from work-in-progress	80,000
Issues to work-in-progress	1,60,000
Issues to repair and maintenance	20,000
Deficiencies found in stock taking	6,000
Work-in-progress: Opening balance	60,000
Direct wages applied	65,000
Overheads applied	2,40,000
Closing balance of W.I.P.	45,000

Finished products: Entire output is sold at a profit of 10% on actual cost from work-in- progress. Wages incurred Rs. 70,000, overhead incurred Rs. 2,50,000.

Items not included in cost records: Income from investment Rs. 10,000, Loss on sale of capital assets Rs. 20,000.

Draw up Store Control account, Work-in-progress Control account, Costing Profit and Loss account, Profit and Loss account and Reconciliation statement.

(10 Marks)

(b) ABC Hospital runs a Critical Care Unit (CCU) in a hired building. CCU consists of 35 beds and 5 more beds can be added, if required.

Rent per month - Rs. 75,000

Supervisors – 2 persons – Rs. 25,000 Per month – each

Nurses – 4 persons – Rs. 20,000 per month – each

Ward Boys – 4 persons – Rs. 5,000 per month – each

Doctors paid Rs. 2,50,000 per month – paid on the basis of number of patients attended and the time spent by them

Other expenses for the year are as follows:

Repairs (Fixed) – Rs. 81,000

Food to Patients (Variable) – Rs. 8,80,000

Other services to patients (Variable) – Rs. 3,00,000

Laundry charges (Variable) – Rs. 6,00,000

Medicines (Variable) – Rs. 7,50,000

Other fixed expenses – Rs. 10,80,000
Administration expenses allocated – Rs. 10,00,000
It was estimated that for 150 days in a year 35 beds are occupied and for 80 days only 25 beds are occupied.
The hospital hired 750 beds at a charge of Rs. 100 per bed per day, to accommodate the flow of patients. However, this does not exceed more than 5 extra beds over and above the normal capacity of 35 beds on any day.
You are required to –

(a) Calculate profit per Patient day, if the hospital recovers on an average Rs. 2,000 per day from each patient.
(b) Find out Breakeven point for the hospital.

(10 Marks)

Question 4:

(a) BBC Ltd. manufactures Ordinary Portland Cement (OPC). The standard data for the raw materials that are used to manufacture OPC are as follows:

Material	Composition (%)	Rate per Metric Ton (Rs.)
Limestone	65	565
Silica	20	4,800
Alumina	5	32,100
Iron ore	5	1,800
Others	5	2,400

During the month of February 20X8, A Ltd. produced 500 MT OPC. Actual data related with the consumption and costs are as follows:

Raw Material	Quantity (MT)	Total Cost (Rs.)
Limestone	340	1,90,400
Silica	105	5,09,250
Alumina	25	8,12,500
Iron ore	30	53,400
Others	23	51,750

You are required to COMPUTE the following variances related with the production of OPC for the month of February 20X8:

(i) Material Price Variance
(ii) Material Mix Variance
(iii) Material Yield Variance
(iv) Material Cost Variance.

(10 Marks)

(b) Dream house (P) Ltd. is engaged in building two residential housing projects in the city. Particulars related to two housing projects are as below:

	HP-1 (Rs.)	HP-2 (Rs.)
Work in Progress on 1st April 2018	7,80,000	2,80,000
Materials Purchased	6,20,000	8,10,000
Land purchased near to the site to open an office	-	12,00,000
Brokerage and registration fee paid on the above purchase	-	60,000
Wages paid	85,000	62,000
Wages outstanding as on 31st March, 2019	12,000	8,400
Donation paid to local clubs	5,000	2,500
Plant hire charges paid for three years effecting from 1st April 2018	72,000	57,000
Value of materials at site as on 31st March, 2019	47,000	52,000
Contract price of the projects	48,00,000	36,00,000
Value of work certified	20,50,000	16,10,000
Work not certified	1,90,000	1,40,000

A concrete mixture machine was bought on 1st April 2018 for Rs. 8,20,000 and used for 180 days in HP-1 and for 100 days in HP-2. Depreciation is provided @ 15% p.a. (this machine can be used for any other projects).
PREPARE contract account for the two housing projects showing the notional profit or loss on each project for the year ended 31st March, 2019.

(10 Marks)

Question 5:

(a) S Ltd. has prepared budget for the coming year for its two products A and B.

	Product A (Rs.)	**Product B (Rs.)**
Production & Sales unit	6,000 units	9,000 units
Raw material cost per unit	60.00	42.00
Direct labour cost per unit	30.00	18.00
Variable overhead per unit	12.00	6.00
Fixed overhead per unit	8.00	4.00
Selling price per unit	120.00	78.00

After some marketing efforts, the sales quantity of the Product A & B can be increased by 1,500 units and 500 units respectively but for this purpose the variable overhead and fixed overhead will be increased by 10% and 5% respectively for the both products.
You are required to PREPARE flexible budget for both the products:
(a) Before marketing efforts.
(b) After marketing efforts.

(10 Marks)

(b) GZ Ld. pays the following to a skilled worker engaged in production works. The following are the employee benefits paid to the employee:

(a)	Basic salary per day	Rs. 1,000
(b)	Dearness allowance (DA)	20% of basic salary
(c)	House rent allowance	16% of basic salary
(d)	Transport allowance	Rs. 50 per day of actual work
(e)	Overtime	Twice the hourly rate (considers basic and DA), only if works more than 9 hours a day otherwise no overtime allowance. If works for more than 9 hours a day then overtime is considered after 8th hours.
(f)	Work of holiday and Sunday	Double of per day basic rate provided works atleast 4 hours. The holiday and Sunday basic is eligible for all allowances and statutory deductions.
(g)	Earned leave & Casual leave	These are paid leave.
(h)	Employer's contribution to Provident fund	12% of basic and DA
(i)	Employer's contribution to Pension fund	7% of basic and DA

The company normally works 8-hour a day and 26-day in a month. The company provides 30 minutes lunch break in between.
During the month of August 2020, Mr. Z works for 23 days including 15th August and a Sunday and applied for 3 days of casual leave. On 15th August and Sunday he worked for 5 and 6 hours respectively without lunch break.
On 5th and 13th August he worked for 10 and 9 hours respectively. During the month Mr. Z worked for 100 hours on Job No. HT200. You are required to CALCULATE:
(i) Earnings per day.
(ii) Effective wages rate per hour of Mr. Z.
(iii) Wages to be charged to Job No. HT200.

(10 Marks)

Question 6:

(a) DISCUSS short notes on (i) Discretionary Cost Centre and (ii) Investment Centre.
(5 Marks)

(b) STATE the advantages of Zero-based budgeting.
(5 Marks)

(c) Distinguish between cost control and cost reduction.
(5 Marks)

(d) Discuss the treatment of by-product cost in Cost Accounting.
(5 Marks)

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