(GI-1, GI-2, VI-VDI-SI-1,2)

DATE: 01.09.2022 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) XYZ Ltd. uses two types of raw materials – 'Material A' and 'Material B' in the production process and has provided the following data for the year ended on 31st March, 2021:

Particulars	Material A (Rs.)	Material B (Rs.)
Opening stock as on 01.04.2020	30,000	32,000
Purchase during the year	90,000	51,000
Closing stock as on 31.03.2021	20,000	14,000

(i) You are required to calculate:
  (a) The inventory turnover ratio of 'Material A' and 'Material B'.
  (b) The number of days for which the average inventory is held for both materials 'A' and 'B'.

(ii) Based on above calculations, give your comments.
(Assume 360 days in a year.)

(5 Marks)

(b) The Accountant of KPMR Ltd. has prepared the following budget for the coming year 2022 for its two products 'AYE' and 'ZYE':

Particulars	Product 'AYE'	Product 'ZYE'
Production and Sales (in Units)	4,000	3,000
	Amount (in Rs.)	Amount (in Rs.)
Selling Price per unit	200	180
Direct Material per unit	80	70
Direct Labour per unit	40	35
Variable Overhead per unit	20	25
Fixed Overhead per unit	10	10

After reviewing the above budget, the management has called the marketing team for suggesting some measures for increasing the sales. The marketing team has suggested that by promoting the products on social media, the sales quantity of both the products can be increased by 5%. Also, the selling price per unit will go up by 10%. But this will result in increase in expenditure on variable overhead and fixed overhead by 20% and 5% respectively for both the products.
You are required to prepare flexible budget for both the products:
(i) Before promotion on social media,
(ii) After promotion on social media.

(5 Marks)

(c) A skilled worker is paid a guaranteed wage rate of Rs. 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) A product passes through Process-I and Process-II.

Particulars pertaining to the Process-I are:

Materials issued to Process-I amounted to Rs. 80,000, Wages Rs. 60,000 and manufacturing overheads were Rs. 52,500. Normal Loss anticipated was 5% of input, 9,650 units of output were produced and transferred out from Process-I to Process-II. Input raw materials issued to Process-I were 10,000 units.

There were no opening stocks.

Scrap has realizable value of Rs. 5 per unit.

You are required to prepare:

(i) Process-I Account

(ii) Abnormal Gain/Loss Account

(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 metres of leather sheets and one metre of cotton cloth. 2,000 metre of leather sheets and 1,000 metre of cotton cloths are purchased at Rs. 3,20,000 and Rs. 15,000 respectively. Freight paid on purchases is Rs. 8,500.

(2) Stitching and finishing need 2,000 man hours at Rs. 80 per hour.

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

(4) G Ltd. have 4 machines at a total cost of Rs. 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 Rs. 45,000 and Rs. 72,000 respectively. G Ltd. pays Rs. 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 Rs. 18,000.

(7) During the month, 35 kgs of scrap (cuttings of leather and cotton) are sold at Rs. 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.

You are required to prepare a cost sheet in respect of above for the month of September 2021 showing:

(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) AZ company has prepared its budget for the production of 2,00,000 units. The variable cost per unit is Rs. 16 and fixed cost is Rs. 4 per unit. The company fixes its selling price to fetch a profit of 20% on total cost.

You are required to calculate:

(i) Present break-even sales (in Rs. and in quantity).

(ii) Present profit-volume ratio.

(iii) Revised break-even sales in Rs. and the revised profit-volume ratio, if it reduces its selling price by 10%.

(iv) What would be revised sales- in quantity and the amount, if a company desires a profit increase of 20% more than the budgeted profit and selling price is reduced by 10% as above in point (iii).

(10 Marks)

Question 3

(a) ABC Ltd. has furnished the following information regarding the overheads for the month of June 2020 :

(i)	Fixed Overhead Cost Variance	Rs. 2,800 (Adverse)
(ii)	Fixed Overhead Volume Variance	Rs. 2,000 (Adverse)
(iii)	Budgeted Hours for June, 2020	2,400 hours
(iv)	Budgeted Overheads for June, 2020	Rs. 12,000
(v)	Actual rate of recovery of overheads	Rs. 8 Per Hour

From the above given information

Calculate:

(1) Fixed Overhead Expenditure Variance

(2) Actual Overheads Incurred

(3) Actual Hours for Actual Production

(4) Fixed Overhead Capacity Variance

(5) Standard hours for Actual Production

(6) Fixed Overhead Efficiency Variance

(10 Marks)

(b) An automobile company purchases 27,000 spare parts for its annual requirements. The cost per order is Rs. 240 and the annual carrying cost of average inventory is 12.5%. Each spare part costs Rs. 50.

At present, the order size is 3,000 spare parts.

(Assume that number of days in a year = 360 days)

Find out:

(i) How much the company's cost would be saved by opting EOQ model?

(ii) The Re-order point under EOQ model if lead time is 12 days.

(iii) How frequently should orders for procurement be placed under EOQ model?

(10 Marks)

Question 4:

(a) Following details are related to the work done in Process-I by ABC Ltd. during the month of May 2019 :

	(Rs.)
Opening work in process (3,000 units)	
Materials	1,80,500
Labour	32,400
Overheads	90,000
Materials introduced in Process-I (42,000 units)	36,04,000
Labour	4,50,000
Overheads	15,18,000

Units Scrapped	:	4,800 units
Degree of completion	:	
Materials	:	100%
Labour & overhead	:	70%
Closing Work-in-process	:	4,200 units
Degree of completion	:	
Materials	:	100%
Labour & overhead	:	50%

Units finished and transferred to Process-II : 36,000 units
Normal loss:
4% of total input including opening work-in-process
Scrapped units fetch Rs. 62.50 per piece.
Prepare:
(i) Statement of equivalent production.
(ii) Statement of cost per equivalent unit.
(iii) Process-I A/c
(iv) Normal Loss Account and
(v) Abnormal Loss Account

(10 Marks)

(b) Following are the particulars of two workers 'R' and 'S' for a month:

Particulars	R	S
(i) Basic Wages (Rs.)	15,000	30,000
(ii) Dearness Allowance	50%	50%
(iii) Contribution to EPF (on basic wages)	7%	7.5%
(iv) Contribution to ESI (on basic wages)	2%	2%
(v) Overtime (hours)	20	-

The normal working hours for the month are 200 hrs. Overtime is paid at double the total of normal wages and dearness allowance. Employer's contribution to State Insurance and Provident Fund are at equal rates with employees' contributions.

Both workers were employed on jobs A, B and C in the following proportions :

Jobs	A	B	C
R	75%	10%	15%
S	40%	20%	40%

Overtime was done on job 'A'.
You are required to :
(i) Calculate ordinary wage rate per hour of 'R' and 'S'.
(ii) Allocate the worker's cost to each job 'A', 'B' and 'C'.

(6 Marks)

(c) Discuss any four objectives of 'Time keeping' in relation to attendance and payroll procedures.

(4 Marks)

Question 5:

(a) SEZ Ltd. built a 120 km. long highway and now operates a toll road to collect tolls. The company has invested Rs. 900 crore to build the road and has estimated that a total of 120 crore vehicles will be using the highway during the 10 years toll collection tenure. The other costs for the month of "June 2020" are as follows:
(i) Salary:
- Collection personnel (3 shifts and 5 persons per shift) - Rs. 200 per day per person.
- Supervisor (3 shifts and 2 persons per shift) - Rs. 350 per day per person.

- Security personnel (2 shifts and 2 persons per shift) - Rs. 200 per day per person.
- Toll Booth Manager (3 shifts and 1 person per shift) - Rs. 500 per day per person.

(ii) Electricity - Rs. 1,50,000
(iii) Telephone - Rs. 1,00,000
(iv) Maintenance cost - Rs. 50 lakhs
(v) The company needs 30% profit over total cost.

Required:
(1) Calculate cost per kilometre.
(2) Calculate the toll rate per vehicle.

(10 Marks)

(b) ABC Ltd. is engaged in production of three types of Fruit Juices: Apple, Orange and Mixed Fruit.
The following cost data for the month of March 2020 are as under:

Particulars	**Apple**	**Orange**	**Mixed Fruit**
Units produced and sold	10,000	15,000	20,000
Material per unit (Rs.)	8	6	5
Direct Labour per unit (Rs.)	5	4	3
No. of Purchase Orders	34	32	14
No. of Deliveries	110	64	52
Shelf Stocking Hours	110	160	170

Overheads incurred by the company during the month are as under :

	(Rs.)
Ordering costs	64,000
Delivery costs	1,58,200
Shelf Stocking costs	87,560

Required:
(i) Calculate cost driver's rate.
(ii) Calculate total cost of each product using Activity Based Costing.

(6 Marks)

(c) Describe the various levels of activities under 'ABC' methodology.

(4 Marks)

Question 6

(a) Briefly explain the 'techniques of costing'.

(5 Marks)

(b) Narrate the terms 'Joint Products' and 'By-Products' with an example of each term.

(5 Marks)

(c) Discuss the steps involved in setting labour time standards.

(5 Marks)

(d) What is 'Budgetary Control System' and discuss the components of the same.

(5 Marks)

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