(GI-1, GI-2, GI-3, GI-4, VI-1 & SI-1)

DATE: 25.09.2019 **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) ASJ manufacturer produces a product which requires a component costing Rs. 1,000 per unit. Other information related to the component are asunder:

Usage. of component	1,500 units per month
Ordering cost	Rs. 75 per order
Storage cost rate	2% per annum
Obsolescence rate	1% per annum
Maximum usage	400 units per week
Lead Time	6-8 weeks

The firm has been offered a quantity discount of 5% by the supplier on the purchase of component, if the order size is 6,000 units at a time.

You are required to compute:

(i) Economic Order Quantity(EOQ)

(ii) Re-order Level and advise whether the discount offer be accepted by the firm or not.

(5 Marks)

(b) PQR manufacturers – a small scale enterprise, produces a single product and has adopted a policy to recover the production overheads of the factory by adopting a single blanket rate based on machine hours. The annual budgeted production overheads for the year 2017-18 are Rs. 44,00,000 and budgeted annual machine hours are 2,20,000.

For a period of first six months of the financial year 2017-18, following information were extracted from the books:

Actual production overheads	Rs. 24,88,200
Amount included in the production overheads:	
Paid as per court's order	Rs. 1,28,000
Expenses of previous year booked in current year	Rs. 1,200
Paid to workers for strike period under an award	Rs. 44,000
Obsolete stores written off	Rs. 6,700

Production and sales data of the concern for the first six months are as under:

Production:	
Finished goods	24,000 units
Works-in-progress (50% complete in every respect)	18,000 units
Sale:	
Finished goods	21,600 units

The actual machine hours worked during the period were 1,16,000 hours. It is revealed from the analysis of information that ¼ of the under/ over absorption was due to defective production policies and the balance was attributable to increase/decrease in costs.

Required:

(i) DETERMINE the amount of under/over absorption of production overheads for the six-month period of 2017-18.

(ii) EXAMINE the accounting treatment of under/ over absorption of production overheads, and

(iii) CALCULATE the apportionment of the under/ over absorbed overheads over the items.

(5 Marks)

(c) A manufacturing company disclosed a net loss of Rs. 3,47,000 as per their cost accounts for the year ended March 31,20X8. The financial accounts however disclosed a net loss of Rs. 5,10,000 for the same period. The following information was revealed as a result of scrutiny of the figures of both the sets of accounts.

		(Rs.)
(i)	Factory Overheads under-absorbed	40,000
(ii)	Administration Overheads over-absorbed	60,000
(iii)	Depreciation charged in Financial Accounts	3,25,000
(iv)	Depreciation charged in Cost Accounts	2,75,000
(v)	Interest on investments not included in Cost Accounts	96,000
(vi)	Income-tax provided	54,000
(vii)	Interest on loan funds in Financial Accounts	2,45,000
(viii)	Transfer fees (credit in financial books)	24,000
(ix)	Stores adjustment (credit in financial books)	14,000
(x)	Dividend received	32,000

PREPARE a memorandum Reconciliation Account.

(5 Marks)

(d) Following details have been provided by M/s AR Enterprises:

(i) Opening works-in-progress - 3000 units (70% complete)

(ii) Units introduced during the year - 17000 units

(iii) Cost of the process (for the period) - Rs. 33,12,720

(iv) Transferred to next process - 15000 units

(v) Closing works-in-progress - 2200 units (80% complete)

(vi) Normal loss is estimated at 12% of total input (including units in process in the beginning). Scraps realise Rs. 50 per unit. Scraps are 100% complete.

Using FIFO method, compute:

(i) Equivalent production

(ii) Cost per equivalent unit

(5 Marks)

Question 2:

(a) Humara - Apna' bank offers three products, viz., deposits, Loans and Credit Cards. The bank has selected 4 activities for a detailed budgeting exercise, following activity based costing methods.

The bank wants to know the product wise total cost per unit for the selected activities, so that prices may be fixed accordingly.

The following information is made available to formulate the budget:

Activity	**Present Cost**	**Estimation for the budget period**

	(Rs.)	
ATM Services:		
(a) Machine Maintenance	4,00,000	All fixed, no change.
(b) Rents	2,00,000	Fully fixed, no change.
(c) Currency Replenishment Cost	1,00,000 7,00,000	Expected to double during budget period. (This activity is driven by no. of ATM transactions)
Computer Processing	5,00,000	Half this amount is fixed and no change is expected. The variable portion is expected to increase to three times the current level. (This activity is driven by the number of computer transactions)
Issuing Statements	18,00,000	Presently, 3 lakh statements are made. In the budget period, 5 lakh statements are expected. For every increase of one lakh statement, one lakh rupees is the budgeted increase. (This activity is driven by the number of statements)
Computer Inquiries	2,00,000	Estimated to increase by 80% during the budget period. (This activity is driven by telephone minutes)

The activity drivers and their budgeted quantifies are given below:

Activity Drivers	Deposits	Loans	Credit Cards
No. of ATM Transactions	1,50,000	---	50,000
No. of Computer Processing Transactions	15,00,000	2,00,000	3,00,000
No. of Statements to be issued	3,50,000	50,000	1,00,000
Telephone Minutes	3,60,000	1,80,000	1,80,000

The bank budgets a volume of 58,600 deposit accounts, 13,000 loan accounts, and 14,000 Credit Card Accounts.

Required:

(i) CALCULATE the budgeted rate for each activity.

(ii) PREPARE the budgeted cost statement activity wise.

(iii) COMPUTE the budgeted product cost per account for each product using (i) and (ii) above.

(10 Marks)

(b) XYZ Construction Company took a contract for construction of a stadium on 1st April, 2017 at a price of Rs. 160 lakhs. The relevant information for the year ended 31st March, 2018 are as under:

	Amount (Rs. In '000)
Material purchased for the contract	6,800
Direct wages paid	3,450
Salaries	200
Direct wages prepaid at the end of the year	50
Salaries outstanding at the end of the year	100
Material returned to stores	150
Material at site as on 31st March, 2018	175
Payment received from the contractee (80% of work certified)	9,440
Work done but not certified	500

A plant was purchased for Rs. 12,00,000 on 1st November, 2017 and was in use at the site upto 31st March, 2018. Depreciation is to be charged on plant @ 15% per annum on straight line basis. Material costing Rs. 50,000 was stolen from the site. You are required to:

(i) Prepare contract account for the year ended 31st March, 2018 showing the profit to be taken to Profit & Loss Account.

(ii) Prepare Balance Sheet showing the relevant items.

(10 Marks)

Question 3:

(a) A company processes a raw material in its Department 1 to produce three products, viz. A, B and X at the same split-off stage. During a period 1,80,000 kgs of raw materials were processed in Department 1 at a total cost of Rs. 12,88,000 and the resultant output of A, B and X were 18,000 kgs, 10,000 kgs and 54,000 kgs respectively. A and B were further processed in Department 2 at a cost of Rs. 1,80,000 and Rs. 1,50,000 respectively.

X was further processed in Department 3 at a cost of Rs. 1,08,000. There is no waste in further processing. The details of sales affected during the period were as under:

	A	**B**	**X**
Quantity Sold (kgs.)	17,000	5,000	44,000
Sales Value (Rs.)	12,24,000	2,50,000	7,92,000

There were no opening stocks. If these products were sold at split-off stage, the selling prices of A, B and X would have been Rs. 50, Rs. 40 and Rs. 10 per kg respectively.

Required:

(i) PREPARE a statement showing the apportionment of joint costs to A, B and X.

(ii) PRESENT a statement showing the cost per kg of each product indicating joint cost and further processing cost and total cost separately.

(iii) PREPARE a statement showing the product wise and total profit for the period.

(iv) STATE with supporting calculations as to whether any or all the products should be further processed or not

(10 Marks)

(b) Aaradhya Ltd. manufactures a commercial product for which the standard cost per unit is as follows:

	(Rs.)
Material:	
5 kg. @ Rs. 4 per kg.	20.00
Labour:	
3 hours @ Rs.10 per hour	30.00
Overhead	
Variable: 3 hours @ Rs.1	3.00
Fixed: 3 hours @ Rs.0.50	1.50
Total	54.50

During Jan. 20X8, 600 units of the product were manufactured at the cost shown below:

	(Rs.)
Materials purchased:	
5,000 kg. @ Rs.4.10 per kg.	20,500
Materials used:	
3,500 kg.	
Direct Labour:	

1,700 hours @ Rs. 9	15,300
Variable overhead	1,900
Fixed overhead	900
Total	38,600

The flexible budget required 1,800 direct labour hours for operation at the monthly activity level used to set the fixed overhead rate.

COMPUTE:

(a) Material price variance, (b) Material Usage variance; (c) Labour rate variance; (d) Labour efficiency variance; (e) Variable overhead expenditure variance; (f) Variable overhead efficiency variance; (g) Fixed overhead expenditure variance; (h) Fixed overhead volume variance; (i) Fixed overhead capacity variance; and (j) Fixed overhead efficiency variance.

(10 Marks)

Question 4:

(a) PH Gems Ltd. is manufacturing readymade suits. It has annual production capacity of 2,000 pieces. The Cost Accountant has presented following information for the year to the management:

Particulars	**Amount (Rs.)**	**Amount (Rs.)**
Sales 1,500 pieces @ Rs. 1,800 per piece		27,00,000
Direct Material	5,94,200	
Direct Labour	4,42,600	
Overheads (40% Fixed)	11,97,000	22,33,800
Net Profit		4,66,200

Evaluate following options:

(i) If selling price is increased by Rs. 200, the sales will come down to 60% of the total annual capacity.

(ii) The company can earn a profit of 20% on sales if the company provide TIEPIN with ready-made suit. The cost of each TIEPIN is Rs. 18. Calculate the sales to earn a profit of 20% on sales. Should the company increase its selling price?

(10 Marks)

(b) Nakata Ltd a Vehicle manufacturer has prepared sales budget for the next few months, and the following draft figures are available:

Month	**No. of vehicles**
October	40,000
November	35,000
December	45,000
January	60,000
February	65,000

To manufacture a vehicle a standard cost of Rs. 5,71,400 is incurred and sold through dealers at a uniform selling price of Rs. 8,57,100 to customers. Dealers are paid 15% commission on selling price on sale of a vehicle.

Apart from other materials four units of Part - X are required to manufacture a vehicle. It is a policy of the company to hold stocks of Part-X at the end of each month to cover 40% of next month's production. 48,000 units of Part-X are in stock as on 1st October.

There are 9,500 nos. of completed vehicles are in stock as on 1st October and it is policy to have stocks at the end of each month to cover 20% of the next month's sales.

You are required to

(i) PREPARE Production budget (in nos.) for the month of October, November, December and January.

(ii) PREPARE a Purchase budget for Part-X (in units) for the months of October, November and December.

(iii) CALCULATE the budgeted gross profit for the quarter October to December.

(10 Marks)

Question 5:

(a) Following data have been extracted from the books of M/s. ABC Private Limited:

(i)	Salary (each employee, per month)	Rs. 30,000
(ii)	Bonus	25% of salary
(iii)	Employer's contribution to PF, ESI etc.	15% of salary
(iv)	Total cost at employees' welfare activities	Rs. 6,61,500 per annum
(v)	Total leave permitted during the year	30 days
(v)	No. of employees	175
(vii)	Normal idle time	70 hours per annum
(viii)	Abnormal idle time (due to failure of power supply)	50 hours
(ix)	Working days per annum	310 days of 8 hours

You are required to calculate:

1. Annual cost of each employee
2. Employee cost per hour
3. Cost of abnormal idle time, per employee

(10 Marks)

(b) From the following data of Arnav Metallic Ltd., CALCULATE Cost of production:

		Amount (Rs.)
(i)	Repair & maintenance paid for plant & machinery	9,80,500
(ii)	Insurance premium paid for inventories	26,000
(iii)	Insurance premium paid for plant & machinery	96,000
(iv)	Raw materials purchased	64,00,000
(v)	Opening stock of raw materials	2,88,000
(vi)	Closing stock of raw materials	4,46,000
(vii)	Wages paid	23,20,000
(viii)	Value of opening Work-in-process	4,06,000
(ix)	Value of closing Work-in-process	6,02,100
(x)	Quality control cost for the products in manufacturing process	86,000
(xi)	Research & development cost for improvement in production process	92,600
(xii)	Administrative cost for:	
	- Factory & production	9,00,000
	- Others	11,60,000
(xiii)	Amount realised by selling scrap generated during the manufacturing process	9,200
(xiv)	Packing cost necessary to preserve the goods for further processing	10,200
(xv)	Salary paid to Director (Technical)	8,90,000

(10 Marks)

Question 6:

(a) DISCUSS on (a) Discretionary Cost Centre and (b) Investment Centre.

(5 Marks)

(b) DESCRIBE the three advantages of Cost-plus contract.

(5 Marks)

(c) STATE the advantages of Zero-based budgeting.

(5 Marks)

(d) DESCRIBE Operation costing with two examples of industries where operation costing is applied.

(5 Marks)

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