November 2018 - Suggested Answers

*Question No. **1** is compulsory*

*Answer any **four** questions from the remaining **five** questions*

Que. 1(a) : [5 Marks]

M/s. SJ Private Limited manufactures 20,000 units of a product per month. The cost of placing an order is Rs. 1,500. The purchase price of the raw material is Rs. 100 per kg. The re-order period is 5 to 7 weeks. The consumption of raw materials varies from 200 kg to 300 kg per week, the average consumption being 250 kg. The carrying cost of inventory is 9.75% per annum.

You are required to calculate :

(i) Re-order quantity

(ii) Re-order level

(iii) Maximum level

(iv) Minimum level

(v) Average stock level

Ans. 1(a) :

This question is from Material Cost Topic. It is a simple question.

It is similar to Q. 38 from page 49 of our classroom notes - Volume I.

Note : Annual consumption is missing in this question. It can be calculated using average weekly consumption as follows :

Annual consumption = 250 kg per week x 52 weeks = 13,000 kgs.

(i) Reorder quantity (EOQ) = Using Square Root Formula we get -

EOQ = 2,000 kgs.

(ii) Reorder Level = (Max. Usage Rate x Max. Lead Time)

= (300 kg./week x 7 weeks) = 2,100 kgs.

(iii) Maximum Level = Reorder Level - (Min. Usage Rate x Min. Lead Time) + EOQ

= 2,100 - (200 kg./week x 5 weeks) + 2,000 = 3,100 kgs.

(iv) Minimum Level = Reorder Level - (Av. Usage Rate x Av. Lead Time)

= 2,100 - (250 kg./week x 6 weeks) = 600 kgs.

(v) Average Stock Level =

(a) 1/2 x (Max. Level + Min. Level)

= 1/2 x (3,100 + 600) = 1,850 kgs and

(b) Min. Level + (1/2 x EOQ)

= 600 kgs. + (1/2 x 2,000) = 1,600 kgs.

Que. 1(b) : [5 Marks]

A manufacturing concern has provided following information related to fixed overheads :

	Standard	Actual
Output in a month	5000 units	4800 units
Working days in a month	25 days	23 days
Fixed overheads	Rs. 5,00,000	Rs. 4,90,000

Compute :

(i) Fixed overhead variance

(ii) Fixed overhead expenditure variance

(iii) Fixed overhead volume variance

(iv) Fixed overhead efficiency variance

Ans. 1(b) :

This question is from Standard Costing Topic.

It is similar to Q. 20 from page 113 of our classroom notes - Volume III.

Note : Standard data given in the question is for output level of 5,000 units. It should be understood as budgeted data. Hence, budgeted output is 5,000 units.

Working : SRR/Unit = Rs. 5,00,000 / 5,000 units = Rs. 100/unit

(i) Fixed OH Variance [Assumed to be Cost Variance]

= (SRR/Unit x Actual Output) - Actual Overheads

= (100 x 4,800 units) - 4,90,000 = ₹ 10,000 (A)

(ii) Fixed OH Expenditure Variance = Budgeted OH - Actual OH

= 5,00,000 - 4,90,000 = ₹ 10,000 (F)

(iii) Fixed OH Volume Variance = SRR/Unit x (Bud. Output - Actual Output)

= 100 x (5,000 units - 4,800 units) = ₹ 20,000 (A)

(iv) Fixed OH Efficiency Variance = SRR/Hour x (Std. hours - Actual hours)

Note : In absence of information regarding labour hours, this answer cannot be calculated. ICAI should give the marks to all the students, who attempted this question.

However, ICAI suggested answer has used the following formula to calculate efficiency variance -

Efficiency Variance = Standard Fixed OH - Bud. Fixed OH for Actual days

= (100 x 4,800 units) - (5,00,000 / 25 days x 23 days)

= 4,80,000 - 4,60,000 = ₹ 20,000 (F)

Note : As per my opinion, this answer is wrong. Because, it assumes that Capacity Variance is Zero. We can get the above answer as balancing figure, after calculating Calendar Variance and assuming Capacity Variance as NIL.

Que. 1(c) : [5 Marks]

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 – 15,000 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 are100% complete.

Using FIFO method, compute :

(i) Equivalent production

(ii) Cost per equivalent unit

Ans. 1(c) :

This question is from Process Costing Topic.

It is similar to Q. 36 from page 101 of our classroom notes - Volume II.

Note : The % completion given in the question is common for all i.e. for material, labour and overheads. You need to prepare only one column in the statement of equivalent production.

Brief Answers :

(i) Equivalent Production = 15,060 units

(ii) Cost per equivalent unit = Rs. 212

Detailed Answers :

1. Statement of equivalent production (FIFO Method) :

Particulars	Total units	Equivalent Units	
		%	Units
Input:			
- Opening W.I.P.	3,000		
- Introduced	17,000		
Total Input	20,000		
Output:			
A) Completed & transferred –			
- Out of opening WIP	3,000	30%	900
- Out of introduced	12,000	100%	12,000
Subtotal (A)	15,000		
B) Normal Loss (12% x 20,000)	2,400	--	--
C) Abnormal Loss (Bal. Fig.)	400	100%	400
D) Closing W.I.P.	2,200	80%	1,760
Total	20,000		15,060

2. Statement of Cost :

Particulars	Rs.
Cost incurred during the period	33,12,720
Less : Realisable value of normal loss (2,400 units x Rs. 50)	(1,20,000)
Net Cost	31,92,720
(÷) Equivalent units	15,060
Cost per Equivalent Unit	212

Que. 1(d) : [5 Marks]

M/s. SD Private Limited commenced a contract on 1st July 2017 and the company closes its account for the year on 31st March every year. The following information relates to the contract as on 31st March 2018.

(i) Material issued Rs. 9,48,000

(ii) Direct wages Rs. 4,57,200

(iii) Prepaid direct wages as on 31.3.2018 Rs. 1,08,000

(iv) Administration charges Rs. 7,20,000

(v) A supervisor, who is paid Rs. 50,000 per month, has devoted two- third of his time to this contract.

(vi) A plant costing Rs. 7,85,270 has been on the site for 185 days, its working life is estimated at 9 years and its scrap value is Rs. 75,000.

The contract price is Rs. 42 lakhs. On 31st March 2018 two-third of the contract was completed. The Architect issued certificate covering 50% of the contract price and the contractor had been paid Rs. 15.75 lakhs on account.

Assuming 365 days in a year, you are required to :

(i) Prepare a Contract Account showing work cost

(ii) Calculate Notional Profit or Loss as on 31st March 2018.

Ans. 1(d) :

This question is from Contract Costing Topic.

It is similar to Q. 9 from page 30 of our classroom notes - Volume II.

Note : In this question, "cost of work uncertified" is missing.

Contract A/c for the period from 01.07.17 to 31.03.18 (9 months)

Particulars		Rs.	Particulars	Rs.
To Material issued		9,48,000	By Work certified [42,00,000 x 50%]	21,00,000
To Direct Wages	4,57,200		By Cost of work uncertified	5,89,300
(-) Prepaid Wages	1,08,000	3,49,200	[see working below]	
To Administrative Charges		7,20,000		
To Salary to supervisor [50,000 p.m. x 9 mths. x 2/3]		3,00,000		
To Depreciation of plant $\left(\frac{7,85,270-75,000}{9\text{ Years}} \times \frac{185}{365}\right)$		40,000		
∴ Total cost till date		23,57,200		
To Notional Profit [Bal. figure]		3,32,100		
Total		**26,89,300**	**Total**	**26,89,300**

Working Note for Cost of work uncertified :

Work uncertified = $\frac{2}{3} - \frac{1}{2} = \frac{1}{6}$ i.e. Work done – work certified

Cost incurred till date = ₹ 23,57,200 (this cost is for 2/3 work done)

∴ Cost of work uncertified (for 1/6 portion) = 23,57,200 x $\frac{3}{2}$ x $\frac{1}{6} = 5,89,300$

Que. 2(a) : [10 Marks]

Following details are provided by M/s ZIA Private Limited for the quarter ending 30 Sept. 2018 :

(i)	Direct expenses	Rs. 1,80,000
(ii)	Direct wages being 175% of factory overheads	Rs. 2,57,250
(iii)	Cost of goods sold	Rs. 18,75,000
(iv)	Selling & distribution overheads	Rs. 60,000
(v)	Sales	Rs. 22,10,000
(vi)	Administration overheads are 10% of factory overheads	

Stock details as per Stock Register :

Particulars	30.06.2018	30.09.2018
Raw material	2,45,600	2,08,000
Work-in-progress	1,70,800	1,90,000
Finished goods	3,10,000	2,75,000

You are required to prepare a cost sheet showing :

(i) Raw material consumed

(ii) Prime cost

(iii) Factory cost

(iv) Cost of goods sold

(v) Cost of sales and profit

Ans. 2(a) :

It is a question on Cost Sheet. We have covered it in the topic of Job Costing.

It is similar to Q. 14 from page 13 of our classroom notes - Volume II.

Note : In this question, "Material Consumed" is to be calculated using **reverse approach**. Starting point is "Cost of goods sold".

Cost Sheet for the quarter ending on 30.09.2018

Particulars	Amount (Rs.)	Amount (Rs.)
Raw material inventory at the beginning of the year	2,45,600	
Add: Purchases of raw material (Bal. Fig.)	12,22,650	
Less: Closing stock of raw material inventory	(2,08,000)	
Raw Material Consumed (Bal. Fig.)		12,60,250
Add: Direct Labour (Given)		2,57,250
Add: Direct Expenses (Given)		1,80,000
Prime Cost		16,97,500
Add: Factory Overheads (2,57,250 / 175%)		1,47,000
Add: Opening Work-in-Progress		1,70,800
Less: Closing Work-in-Progress		(1,90,000)
Net Factory Cost of Finished Goods		18,25,300
Add: Administrative expenses (10% of 1,47,000)		14,700
Cost of Production		18,40,000
Add: Opening stock of Finished Goods		3,10,000
Less: Closing stock of Finished Goods		(2,75,000)
Cost of Goods Sold (Given) starting point		18,75,000
Add: Selling & Distribution OH (Given)		60,000
Cost of Sales		19,35,000
Sales (Given)		22,10,000
PROFIT (Bal. Fig.)		2,75,000

Que. 2(b) : [10 Marks]

A manufacturing company is producing a product 'A' which is sold in the market at Rs. 45 per unit. The company has the capacity to produce 40,000 units per year. The budget for the year 2018-19 projects a sale of 30,000 units.

The costs of each unit are expected as under :

Materials	12
Wages	9
Overheads	6

Margin of safety is Rs. 4,12,500

You are required to :

(i) Calculate fixed cost and break-even point.

(ii) Calculate the volume of sales to earn profit of 20% on sales.

(iii) If management is willing to invest Rs 10,00,000 with an expected return of 20%, calculate units to be sold to earn this profit.

(iv) Management expects additional sales if the selling price is reduced to Rs. 44. Calculate units to be sold to achieve the same profit as desired in (iii) above.

Ans. 2(b) :

This question is from Marginal Costing Topic.

Note : In this question, "Overheads cost per unit" given is Rs. 6. It should be treated as variable overheads. Because, we have to calculate fixed overheads i.e. fixed cost.

Capacity to produce 40,000 units is of no use. Just ignore it. Budgeted sales is 30,000 units @ Rs. 45 per unit = Rs. 13,50,000 which is relevant for solving the question.

(i) Calculation of Fixed Cost and BEP :

Variable cost per unit	= Material + Wages + Variable OH
	= 12 + 9 + 6 = Rs. 27 per unit
Contribution p.u.	= Selling price - Variable cost
	= Rs. 45 - 27 = Rs. 18 per unit
Profit Volume Ratio	= Contribution / Sales
	= 18/45 x 100 = 40%
Budgeted sales	= 30,000 units x Rs. 45 per unit = Rs. 13,50,000
BEP Sales	= Budgeted Sales - MOS Sales
	= Rs. 13,50,000 - Rs. 4,12,500 = Rs. 9,37,500
Fixed Cost	= BEP Sales x P/V Ratio
	= Rs. 9,37,500 x 40% = Rs. 3,75,000

(ii) Calculation of Sales Volume to earn 20% profit on Sales :

Let's assume desired Sales Volume = Rs. 'X'

Desired profit = 20% of X = 0.2X

Using the formula,

Desired Sales = (Desired Profit + Fixed Cost) / PV Ratio

Hence, X = (0.2X + 3,75,000) / 40%

On solving the above equation, we get -

0.4X = 0.2X + 3,75,000 and hence X = 18,75,000

Sales Volume for 20% profit = Rs. 18,75,000

Sales Volume (in units) = Sales Value / Selling Price per unit

= 18,75,000 / 45 = 41,666.67 units (approx)

(iii) Calculation of Sales Units to earn 20% profit on Investment :

Desired profit = 10,00,000 x 20% = Rs. 2,00,000

Desired Sales Units = (Desired Profit + Fixed Cost) / Contribution per unit

= (2,00,000 + 3,75,000) / 18 = 31,945 units (approx)

(iv) Calculation of Sales Units at reduced selling price :

Revised Contribution per unit = 44 - 27 = Rs. 17 per unit

Desired Sales Units = (Desired Profit + Fixed Cost) / Contribution per unit

= (2,00,000 + 3,75,000) / 17 = 33,824 units (approx)

Que. 3(a) : [10 Marks]

XYZ Ltd. has obtained an order to supply 48,000 bearings per year from a concern. On a steady basis, it is estimated that it costs Rs. 0.20 as inventory holding cost per bearing per month and the set-up cost per run of bearing manufacture is Rs. 384.

You are required to :

(i) Compute the optimum run size and number of runs for bearing manufacture.

(ii) Compute the interval between two consecutive runs.

(iii) Find out the extra costs to be incurred, if company adopts a policy to manufacture 8,000 bearings per run as compared to optimum run size.

(iv) Give your opinion regarding run size of bearing manufacture.

Assume 365 days in a year.

Ans. 3(a) :

This question is from Batch Costing Topic and it is a simple question.

It is similar to Q. 9 from page 10 of our classroom notes - Volume II.

Note : In this question, inventory holding cost 0.20 is per month. Convert it into per annum. It means, C.C.p.u.p.a. = 0.20 x 12 months = Rs. 2.40 p.a.

(i) Optimum run size = 3,919 units (Approx) using EBQ formula.

No. of runs p.a. = 48,000 / 3,919 = 12.25 runs (approx)

(ii) Interval between two runs = 365 days / 12.25 runs

= 29.80 days say 30 days (approx)

(iii) Total cost at EBQ = Rs. 9,406 and at 8,000 units it is = Rs. 11,904.

It means, extra cost is Rs. 2,498

Total cost = Set up cost p.a. + Carrying cost p.a.

(iv) Opinion : Run size should be EBQ i.e. 3,919 units

Que. 3(b) : [10 Marks]

M/s. HMB Limited is producing a product in 10 batches each of 15,000 units in a year and incurring following overheads thereon :

Particulars	**Amount (₹)**
Material procurement	22,50,000
Maintenance	17,30,000
Set-up	6,84,500
Quality control	5,14,800

The prime costs for the year amounted to ₹ 3,01,39,000.

The company is using currently the method of absorbing overheads on the basis of prime cost. Now it wants to shift to activity based costing. Information relevant to Activity drivers for a year are as under :

Activity Driver	**Activity Volume**
No. of purchase orders	1500
Maintenance hours	9080
No. of set-ups	2250
No. of inspections	2710

The company has produced a batch of 15000 units and has incurred ₹ 26,38,700 and ₹ 3,75,200 on materials and wages respectively.

The usage of activities of the said batch are as follows :

Material orders	48 orders
Maintenance hours	810 hours
No. of set-ups	40
No. of inspections	25

You are required to :

(i) Find out cost of product per unit on absorption costing basis for the said batch.
(ii) Determine cost driver rate, total cost and cost per unit of output of the said batch on the basis of activity based costing.

Ans. 3(b) :

This question is from Activity Based Costing Topic, covered in Volume I.
It is a very simple question.

(i) Calculation of Product Cost using Absorption Costing :

Total overheads = ₹ 51,79,300
Total Prime Cost = ₹ 3,01,39,000
Overhead Recovery Rate = 17.1847% of Prime Cost

Product Cost of a Batch :

Particulars	Amount (₹)
Material cost	26,38,700
Wages	3,75,200
∴ Prime Cost	30,13,900
Add : Overheads @ 17.1847% of Prime Cost	5,17,930
∴ Total Cost	35,31,830
∴ Cost per unit [35,31,830 / 15,000]	235.46 (approx)

(ii) Activity Based Costing Method :

Calculation of Activity Cost Driver Rates :

Activity	Calculations	Cost Driver Rate (₹)
Material procurement	22,50,000 / 1,500	1,500 per purchase order
Maintenance	17,30,000 / 9,080	190.53 per maintenance hour
Set-up	6,84,500 / 2,250	304.22 per set up
Quality control	5,14,800 / 2,710	189.96 per inspection

Product Cost of a Batch :

Particulars	Amount (₹)
Material cost	26,38,700
Wages	3,75,200
∴ Prime Cost	30,13,900
Add : Material procurement [48 orders x 1,500]	72,000
Add : Maintenance [810 hours x 190.53]	1,54,329
Add : Set up [40 set ups x 304.22]	12,169
Add : Quality Control [25 inspections x 189.96]	4,749
∴ Total Cost	32,57,147
∴ Cost per unit [32,57,147 / 15,000]	217.14 (approx)

Que. 4(a) : [10 Marks]

The following balances were extracted from a Company's ledger as on 30th June, 2018 :

Particulars	Debit (₹)	Credit (₹)
Raw material control a/c	2,82,450	
Work-in-progress control a/c	2,38,300	
Finished stock control a/c	3,92,500	
General ledger adjustment a/c		9,13,250
Total	**9,13,250**	**9,13,250**

The following transactions took place during the quarter ended 30thSeptember, 2018 :

		₹
(i)	Factory overheads — allocated to work-in-progress	1,36,350
(ii)	Goods finished — at cost	13,76,200
(iii)	Raw materials purchased	12,43,810
(iv)	Direct wages — allocated to work-in-progress	2,56,800
(v)	Cost of goods sold	14,56,500
(vi)	Raw materials — issued to production	13,60,430
(vii)	Raw materials — credited by suppliers	27,200
(viii)	Raw materials losses — inventory audit	6,000
(ix)	Work-in-progress rejected (with no scrap value)	12,300
(x)	Customer's returns (at cost) of finished goods	45,900

You are required to prepare :

(i) Raw material control a/c
(ii) Work-in-progress control a/c
(iii) Finished stock control a/c
(iv) General ledger adjustment a/c

Ans. 4(a) :

This question is from Cost Ledger Accounting Topic - Volume III.
It is a simple question. However, few transactions require some interpretation like :
(1) Raw materials - credited by suppliers means material returned to suppliers
(2) Raw Material losses - inventory audit : may be treated as normal or abnormal loss
(3) WIP rejected (with no scrap value) : may be treated as abnormal loss
(4) Customer's returns (at cost) of FG : Entry is FG A/c Dr. To COGS A/c
(5) GLA A/c : In absence of all transactions, only few entries will appear in this A/c

Stores Ledger Control Account

Particulars	Debit (₹)	Particulars	Credit (₹)
To opening balance b/d	2,82,450		
To GLA - Purchases	12,43,810	By WIP – direct material	13,60,430
		By GLA – material returned	27,200
		By Costing P&L A/c - Loss	6,000
		By Closing stock c/d - Bal. Fig.	1,32,630
Total	15,26,260	Total	15,26,260

Work in Progress Account (WIP)

Particulars	Debit (₹)	Particulars	Credit (₹)
To opening WIP b/d	2,38,300		
To Stores ledger – DM	13,60,430	By Finished Goods A/c	13,76,200
To Wages A/c – direct wages	2,56,800	By Costing P&L A/c - Rejected	12,300
To Factory Overheads	1,36,350	By Closing WIP c/d - Bal. Fig.	6,03,380
Total	19,91,880	Total	19,91,880

Finished Goods Account

Particulars	Debit (₹)	Particulars	Credit (₹)
To Opening stock of FG b/d	3,92,500		
To WIP – FG produced at cost	13,76,200	By Cost of Sales – COGS	14,56,500
To Cost of Sales – returns	45,900	By Closing bal. c/d - Bal. Fig.	3,58,100
Total	18,14,600	Total	18,14,600

General Ledger Adjustment Account (GLA)

Particulars	Debit (₹)	Particulars	Credit (₹)
		By Opening balance b/d	9,13,250
To Stores Ledger	27,200	By Stores Ledger	12,43,810
		By Wages A/c	
		By Factory OH A/c	
To Closing balance c/d			
Total		Total	

Note : ICAI has taken a different view on GLA account in their suggested answer. It doesn't match with the normal accounting principles of cost ledger accounting. With due respect, author disagrees with the view of ICAI.

ICAI has assumes direct wages charged to WIP as the only wages paid. It has also assumed that OH absorbed are OH incurred. Entries of Costing P&L account are shown in GLA account and so on.

Que. 4(b) : [10 Marks]

M/s XY Travels has been given a 25 km. long route to run an air-conditioned Mini Bus. The cost of bus is Rs 20,00,000. It has been insured @ 3% premium per annum while annual road tax amounts to Rs. 36,000. Annual repairs will be Rs. 50,000 and the bus is likely to last for 5 years.

The driver's salary will be Rs. 2,40,000 per annum and the conductor's salary will be Rs. 1,80,000 per annum in addition to 10% of the takings as commission (to be shared by the driver and the conductor equally). Office and administration overheads will be Rs. 3,18,000 per annum. Diesel and oil will be Rs. 1,500 per 100 km. The bus will make 4 round trips carrying on an average 40 passengers on each trip.

Assuming 25% profit on takings and considering that the bus will run on an average 25 days in a month, you are required to :

(i) Prepare operating cost sheet for the month.

(ii) Calculate fare to be charged per passenger km.

Ans. 4(b) :

This question is from Operating Costing (Service Costing) Topic.

It is similar to Q. 6 from page 55 of our classroom notes - Volume II.

Note : In this question, cost sheet is asked for a month. Hence, convert all the given data for one month only.

Operating Cost Sheet for a Month

Particulars	Amount (₹)
- Insurance [20,00,000 x 3% x 1/12]	5,000
- Road Tax [36,000 / 12]	3,000
- Repair Cost [50,000 / 12]	4,167
- Depreciation [20,00,000 / 5 years] x 1/12	33,333
- Driver's Salary [2,40,000 x 1/12]	20,000
- Conductor's Salary [1,80,000 x 1/12]	15,000
- Office & Admin. OH [3,18,000 x 1/12]	26,500
- Diesel & Oil [Rs. 1,500 x 5,000 km. / 100 km.]	75,000
Cost before commission	1,82,000
Commission to driver and conductor [10 / 65 x 1,82,000]	28,000
TOTAL COST AFTER COMMISSION	2,10,000
PROFIT [25 / 75 x 2,10,000]	70,000
TOTAL TAKINGS	2,80,000
Fare per passenger km. [2,80,000 / 2,00,000]	1.40

Working Notes :

1. Total distance travelled in a month -

= 25 km one way x 2 way x 4 round trips per day x 25 days per month

= 5,000 kilometers per month.

2. Total passenger kilometers per month -

= 5,000 km per month x 40 passengers

= 2,00,000 passenger kilometers per month

3. Calculation of commission and profit -

Total Takings (assumed)	100
(-) Profit @ 25% of takings	25
Total Cost	75
(-) Commission @ 10% of takings	10
Cost before commission	65

Que. 5(a) : [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	5,000 units
February	6,000 units
March	7,000 units
April	7,500 units
May	8,000 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.

3,250 units of batteries and 1,200 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.

Ans. 5(a) :

This question is from Budgetary Control Topic.
It is similar to Q. 17 from page 148 of our classroom notes - Volume III.

(i) Production budget (in units) :

Particulars	January	February	March	April
Budgeted sales	5,000	6,000	7,000	7,500
Add : Closing Stock @ 25% of next month's sale	1,500	1,750	1,875	2,000
Less : Opening Stock	(1,200)	(1,500)	(1,750)	(1,875)
∴ Production units	5,300	6,250	7,125	7,625

(ii) Purchase budget for batteries (in units) :

Particulars	January	February	March	April
(a) Production units (WN1)	5,300	6,250	7,125	7,625
Consumption of batteries [a x 2]	10,600	12,500	14,250	15,250
Add : Closing Stock @ 30% of next month's requirement	3,750	4,275	4,575	
Less : Opening Stock	(3,250)	(3,750)	(4,275)	
∴ Purchase units	11,100	13,025	14,550	

(iii) Profit budget for quarter ending on March (in rupees) :

Particulars	₹
Budgeted sales [5,000 + 6,000 + 7,000 units] x ₹ 2,000	3,60,00,000
Less : Discount to dealers [3,60,00,000 x 15%]	54,00,000
Less : Cost of goods sold [18,000 units x ₹ 1,500]	2,70,00,000
∴ Budgeted profit for the quarter	36,00,000

Que. 5(b)(i) : [5 Marks]

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
(vi)	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 :

(i) Annual cost of each employee

(ii) Employee cost per hour

(iii) Cost of abnormal idle time, per employee

Ans. 5(b)(i) :

This question is from Labour Cost Topic.

It is similar to Q. 22 from page 86 of our classroom notes - Volume I.

Note : Convert all the data on per annum per employee basis and then solve it.

Calculation of effective hours per employee p.a. :

Particulars	Hours
Gross hours p.a. [310 days x 8 hours per day]	2,480
Less : Permitted leave [30 days x 8 hours per day]	240
Less : Normal idle time	70
∴ Effective normal hours p.a. per employee	2,170

Calculation of employee cost p.a. :

Particulars	₹
Salary [30,000 p.m. x 12 months]	3,60,000
Bonus [3,60,000 x 25%]	90,000
Employer's contribution to PF, ESI etc. [3,60,000 x 15%]	54,000
Cost of employees' welfare activities [6,61,500 / 175 employees]	3,780
∴ Annual cost of each employee	5,07,780
∴ Employee cost per hour [5,07,780 / 2,170 hours]	234
∴ Cost of abnormal idle time per employee [234/hr. x 50 hrs.]	11,700

Que. 5(b)(ii) : [5 Marks]

M/s. NOP Limited has its own power plant and generates its own power. Information regarding power requirements and power used are as follows:

Horse power hours	Production Dept.		Service Dept.	
	A	B	X	Y
Needed at capacity production	20,000	25,000	15,000	10,000
Used during the quarter ended Sept. 2018	16,000	20,000	12,000	8,000

During the quarter ended September 2018, costs for generating power amounted to Rs. 12.60 lakhs out of which Rs. 4.20 lakhs was considered as fixed cost.

Service department X renders services to departments A, B, and Y in the ratio of 6:4:2 whereas department Y renders services to department A and B in the ratio of 4:1. The direct labour hours of department A and B are 67,500 hours and 48,750 hours respectively.

Required :

(i) Prepare overheads distribution sheet.

(ii) Calculate factory overhead per labour hour for the dept. A and dept. B.

Ans. 5(b)(ii) :

This question is from Overheads Cost Topic. It is a simple question.

It is similar to Q. 25 from page 131 of our classroom notes - Volume I.

Note : While asking the question at the bottom, ICAI should have used the word "Power Cost" instead of Overheads.

Overhead Distribution Sheet :

Particulars	Amount	Production Dept.		Service Dept.	
	(₹)	A	B	X	Y
Fixed power cost apportioned in the ratio of HP hours needed at capacity production i.e. in the ratio 20:25:15:10	4,20,000	1,20,000	1,50,000	90,000	60,000
Variable power cost apportioned in the ratio of HP hours used during the quarter i.e. in the ratio 16:20:12:8	8,40,000	2,40,000	3,00,000	1,80,000	1,20,000
∴ Total Cost	12,60,000	3,60,000	4,50,000	2,70,000	1,80,000
Service Dept. X cost to be apportioned to A, B & Y in the ratio 6:4:2	---	1,35,000	90,000	(2,70,000)	45,000
Service Dept. Y cost to be apportioned to A & B in the ratio 4:1	---	1,80,000	45,000	---	(2,25,000)
∴ Total Cost	12,60,000	6,75,000	5,85,000	NIL	NIL
Labour Hours		67,500	48,750		
∴ Cost per labour hour		10	12		

Que. 6 : Answer any FOUR of the following : [5 Marks Each]

(a) Mention and explain types of responsibility centres.

(b) Explain obsolescence and circumstances under which materials become obsolete. State the steps to be taken for its treatment.

(c) State the bases of apportionment of following overhead costs :

(i) Air-conditioning

(ii) Time keeping

(iii) Depreciation of plant and machinery

(iv) Power / Steam consumption

(v) Electric power (Machine operation)

(d) How are By-products treated in Costing?

(e) Explain 'Activity Based Budgeting'.

Ans. 6 :

Note : These are theory questions and you already have these answers in your printed notes.

(a) Refer Chapter 1 - Volume I - Page No. 6

For example - Cost Centre, Revenue Centre, Profit Centre and Investment Centre

(b) Refer Chapter 2 - Volume I - Page No. 31

Obsolescence means material getting outdated. Like medicines have expiry date, similarly raw material may become obsolete due to various reasons.

(c) Refer Chapter 4 - Volume I - Page No. 111

(i) Air-conditioning - Floor space occupied

(ii) Time keeping - Number of workers

(iii) Depreciation of plant and machinery - Value of Plant & Machinery

(iv) Power / Steam consumption - KWH / Therms used

(v) Electric power (Machine operation) - HP Machine Hours / KWH

(d) Refer Chapter 10 - Volume II - Page No. 133

Other Income Method, Credit of Sale Value to Joint Cost, Credit of Net Sale Value to Joint Cost, Reverse Cost Method etc.

(e) Refer Chapter 5 - Volume I - It is dictated in the classroom. Refer your note book.

It is the process of preparing cost budget by estimating the use of activities. It is the reverse process of Activity Based Costing.

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