

MOCK TEST PAPER MAY-2020

Test Series: May, 2020

MOCK TEST PAPER –1

INTERMEDIATE (NEW): GROUP – I

PAPER – 3: COST AND MANAGEMENT ACCOUNTING

Answers are to be given only in English except in the case of the candidates who have opted for Hindi medium. If a candidate has not opted for Hindi medium his/ her answer in Hindi will not be valued.

Question No. 1 is compulsory.

*Attempt any **four** questions from the remaining **five** questions.*

Working notes should form part of the answer.

Time Allowed – 3 Hours

Maximum Marks – 100

1. Answer the following:

(a) A company gives the following information:

Margin of Safety	Rs.7,50,000
Total Cost	Rs.7,75,000
Margin of Safety (Qty.)	15,000 units
Break Even Sales in Units	5,000 units

You are required to CALCULATE:

- (i) Selling price per unit
- (ii) Profit
- (iii) Profit/ Volume Ratio
- (iv) Break Even Sales (in Rupees)
- (v) Fixed Cost

(b) ZX Ltd. has furnished the following information:

	Budgeted	Actual March 2020
Number of working days	25	27
Production (in units)	20,000	22,000
Fixed Overheads	Rs. 3,00,000	Rs. 3,10,000

Budgeted fixed overhead rate is Rs. 10.00 per hour. In March 2020, the actual hours worked were 31,500. In relation to fixed overheads, CALCULATE:

- (i) Efficiency Variance
- (ii) Capacity Variance
- (iii) Calendar Variance
- (iv) Volume Variance
- (v) Expenditure Variance

(c) A company is undecided as to what kind of wage scheme should be introduced. The following particulars have been compiled in respect of three workers, which are under consideration of the management.

	I	II	III
Actual hours worked	380	100	540
Hourly rate of wages (in Rs.)	40	50	60
Productions in units:			
- Product A	210	-	600
- Product B	360	-	1350
- Product C	460	250	-
Standard time allowed per unit of each product is:			
	A	B	C
Minutes	15	20	30

For the purpose of piece rate, each minute is valued at Rs. 1/-

You are required to COMPUTE the wages of each worker under:

- Guaranteed hourly rate basis.
 - Piece work earning basis, but guaranteed at 75% of basic pay (Guaranteed hourly rate if his earnings are less than 50% of basic pay.)
 - Premium bonus basis where the worker received bonus based on Rowan scheme.
- (d) A Ltd has calculated a predetermined overhead rate of Rs.22 per machine hour for its Quality Check (QC) department. This rate has been calculated for the budgeted level of activity and is considered as appropriate for absorbing overheads. The following overhead expenditures at various activity levels had been estimated.

Total overheads	Number of machine hours
Rs.3,38,875	14,500
Rs.3,47,625	15,500
Rs.3,56,375	16,500

You are required to:

- CALCULATE the variable overhead absorption rate per machine hour.
 - CALCULATE the estimated total fixed overheads.
 - CALCULATE the budgeted level of activity in machine hours.
 - CALCULATE the amount of under/over absorption of overheads if the actual machine hours were 14,970 and actual overheads were Rs.3,22,000.
 - ANALYSE the arguments for and against using departmental absorption rates as opposed to a single or blanket factory wide rate. **(4 × 5 Marks = 20 Marks)**
2. (a) ZA Ltd. is a manufacturer of a range of goods. The cost structure of its different products is as follows:

Particulars	Product	Product	Product	
	A	B	C	
Direct Materials	100	80	80	Rs./u
Direct Labour @Rs.10/ hour	30	40	50	Rs./u
Production Overheads	30	40	50	Rs./u
Total Cost	160	160	180	Rs./u
Quantity Produced	20,000	40,000	60,000	Units

ZA Ltd. was absorbing overheads on the basis of direct labour hours. A newly appointed management accountant has suggested that the company should introduce ABC system and has identified cost drivers and cost pools as follows:

Activity Cost Pool	Cost Driver	Associated Cost (Rs.)
Stores Receiving	Purchase Requisitions	5,92,000
Inspection	Number of Production Runs	17,88,000
Dispatch	Orders Executed	4,20,000
Machine Setup	Number of Setups	24,00,000

The following information is also supplied:

Details	Product A	Product B	Product C
No. of Setups	360	390	450
No. of Orders Executed	180	270	300
No. of Production Runs	750	1,050	1,200
No. of Purchase Requisitions	300	450	500

Required:

CALCULATE activity based production cost of all the three products.

(10 Marks)

(b) Following figures has been extracted from the books of M/s A&R Brothers:

	Amount (Rs.)
Stock on 1 st March, 2020	
- Raw materials	6,06,000
- Finished goods	3,59,000
Stock on 31 st March, 2020	
- Raw materials	7,50,000
- Finished goods	3,09,000
Work-in-process:	
- On 1 st March, 2020	12,56,000
- On 31 st March, 2020	14,22,000
Purchase of raw materials	28,57,000
Sale of finished goods	1,34,00,000
Direct wages	37,50,000
Factory expenses	21,25,000
Office and administration expenses	10,34,000
Selling and distribution expenses	7,50,000
Sale of scrap	26,000

You are required to COMPUTE:

- (i) Value of material consumed
- (ii) Prime cost
- (iii) Cost of production
- (iv) Cost of goods sold

(v) Cost of sales

(vi) Profit/ loss

(10 Marks)

3. (a) A company manufactures a product from a raw material, which is purchased at Rs.180 per kg. The company incurs a handling cost of Rs.1,460 plus freight of Rs.940 per order. The incremental carrying cost of inventory of raw material is Rs.2.5 per kg per month. In addition, the cost of working capital finance on the investment in inventory of raw material is Rs.18per kg per annum. The annual production of the product is 1,00,000 units and 2.5 units are obtained from one kg. of raw material.

Required:

- (i) CALCULATE the economic order quantity of raw materials.
(ii) DETERMINE, how frequently company should order for procurement be placed.
(iii) If the company proposes to rationalize placement of orders on quarterly basis, DETERMINE the percentage of discount in the price of raw materials should be negotiated?

Assume 360 days in a year.

(10 Marks)

- (b) G K Ltd. produces a product "XYZ" which passes through two processes, viz. Process-A and Process-B. The details for the year ending 31st March, 2020 are as follows:

	Process A	Process - B
40,000 units introduced at a cost of	Rs. 3,60,000	-
Material consumed	Rs. 2,42,000	2,25,000
Direct wages	Rs. 2,58,000	1,90,000
Manufacturing expenses	Rs. 1,96,000	1,23,720
Output in units	37,000	27,000
Normal wastage of inputs	5%	10%
Scrap value (per unit)	Rs. 15	20
Selling price (per unit)	Rs. 37	61

Additional Information:

- (a) 80% of the output of Process-A, was passed on to the next process and the balance was sold. The entire output of Process- B was sold.
(b) Indirect expenses for the year was Rs. 4,48,080.
(c) It is assumed that Process-A and Process-B are not responsibility centre.

Required:

- (i) PREPARE Process-A and Process-B Account.
(ii) PREPARE Costing Profit & Loss Account showing the net profit/ net loss for the year.

(10 Marks)

4. (a) The Trading and Profit and Loss Account of a company for the year ended 31-03-2020 is as under:

Trading and Profit and Loss Account

Particulars	Rs.	Particulars	Rs.
To Materials	26,80,000	By Sales (50,000 units)	62,00,000
To Wages	17,80,000	By Closing stock (2,000 units)	1,50,000
To Factory expenses	9,50,000	By Dividend received	80,000

To General administrative expenses	4,80,200	
To Selling Expenses	2,50,000	
To Preliminary expenses written off	70,000	
To Net profit	2,19,800	
	64,30,000	64,30,000

In the Cost Accounts:

- Factory expenses have been allocated to production at 20% of Prime Cost.
- General administrative expenses absorbed at 10% of factory cost.
- Selling expenses charged at Rs.10 per unit sold.

Required:

PREPARE the Costing Profit and Loss Account of the company and RECONCILE the Profit/Loss with the profit as shown in the Financial Accounts. **(10 Marks)**

- (b) During the FY 2019-20, GP Limited has produced 30,000 units operating at 50% capacity level. The cost structure at the 50% level of activity is as under:

Particulars	Rs.
Direct Material	150 per unit
Direct Wages	50 per unit
Variable Overheads	50 per unit
Direct Expenses	30 per unit
Factory Expenses (25% fixed)	40 per unit
Selling and Distribution Exp. (80% variable)	20 per unit
Office and Administrative Exp. (100% fixed)	10 per unit

The company anticipates that in FY 2020-21, the variable costs will go up by 10% and fixed costs will go up by 15%.

The selling price per unit will remain unchanged at Rs.400.

Required:

- CALCULATE the budgeted profit/ loss for the FY 2019-20.
 - PREPARE an Expense budget on marginal cost basis for the FY 2020-21 for the company at 50% and 60% level of activity and FIND OUT the profits at respective levels. **(10 Marks)**
5. (a) KR Resorts (P) Ltd. offers three types of rooms to its guests, viz deluxe room, super deluxe room and luxury suite. You are required to DETERMINE the tariff to be charged to the customers for different types of rooms on the basis of following information:

Types of Room	Number of Rooms	Occupancy
Deluxe Room	100	90%
Super Deluxe Room	60	75%
Luxury Suite	40	60%

Rent of 'super deluxe' room is to be fixed at 2 times of 'deluxe room' and that of 'luxury suite' is 3 times of 'deluxe room'. Annual expenses are as follows:

Particulars	Amount (Rs. lakhs)
Staff salaries	780.00
Lighting, Heating and Power	350.00
Repairs, Maintenance and Renovation	220.00
Linen	60.00
Laundry charges	34.00
Interior decoration	85.00
Sundries	36.28

An attendant for each room was provided when the room was occupied and he was paid Rs. 500 per day towards wages. Further, depreciation is to be provided on building @ 5% on Rs. 900 lakhs, furniture and fixtures @ 10% on Rs. 90 lakhs and air conditioners @ 10% on Rs. 75 lakhs.

Profit is to be provided @ 25% on total taking and assume 360 days in a year. **(10 Marks)**

- (b) (i) SHOW Journal entries for the following transactions assuming cost and financial accounts are integrated:

- (1) Materials issued:

Direct	Rs. 6,50,000
Indirect (to factory)	Rs. 2,30,000

- (2) Allocation of wages (25% indirect) Rs. 9,00,000

- (3) Under/Over absorbed overheads:

Factory (Over)	Rs. 60,000
Administration (Under)	Rs. 50,000

- (4) Payment to Creditors (Trade payables) Rs. 9,00,000

- (5) Collection from Debtors (Trade receivables) Rs. 8,00,000

- (ii) A company can make any one of the 3 products X, Y or Z in a year. It can exercise its option only at the beginning of each year.

Relevant information about the products for the next year is given below.

	X	Y	Z
Selling Price (Rs. / unit)	100	120	120
Variable Costs (Rs. / unit)	60	90	70
Market Demand (unit)	3,000	2,000	1,000
Production Capacity (unit)	2,000	3,000	900
Fixed Costs (Rs.)	3,00,000		

Required

COMPUTE the opportunity costs for each of the products. **(2 × 5 = 10 Marks)**

6. (a) DISCUSS the accounting treatment of Idle time and overtime wages.
 (b) EXPLAIN the stages in Zero-based budgeting.
 (c) STATE the differences between Job costing and Batch costing.
 (d) EXPLAIN the treatment of by-product cost in cost accounting. **(4 × 5 =20 Marks)**

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SUGGESTED ANSWERS/HINTS

1. (a) (i) Selling Price per unit = $\frac{\text{Margin of Safety in Rupee value}}{\text{Margin of Safety in Quantity}}$
- $$= \frac{\text{Rs.7,50,000}}{15,000 \text{ units}} = \text{Rs.50}$$
- (ii) Profit = Sales Value – Total Cost
= Selling price per unit × (BEP units + MoS units) – Total Cost
= Rs.50 × (5,000 + 15,000) units – Rs.7,75,000
= Rs.10,00,000 – Rs.7,75,000 = Rs.2,25,000
- (iii) Profit/ Volume (P/V) Ratio = $\frac{\text{Profit}}{\text{Margin of Safety in Rupee value}} \times 100$
- $$= \frac{\text{Rs.2,25,000}}{\text{Rs.7,50,000}} \times 100 = 30\%$$
- (iv) Break Even Sales (in Rupees) = BEP units × Selling Price per unit
= 5,000 units × Rs.50 = Rs.2,50,000
- (v) Fixed Cost = Contribution – Profit
= Sales Value × P/V Ratio – Profit
= (Rs.10,00,000 × 30%) – Rs.2,25,000
= Rs.3,00,000 – Rs.2,25,000 = Rs.75,000

(b) Workings:

- (1) Budgeted Hours = $\frac{\text{Rs.3,00,000}}{\text{Rs.10 per hour}} = 30,000 \text{ hours}$
- (2) Standard Fixed Overhead rate per hour (Standard Rate):
= $\frac{\text{Budgeted fixed overheads}}{\text{Budgeted Hours}} = \frac{\text{Rs.3,00,000}}{30,000 \text{ hours}} = \text{Rs.10.00}$
- (3) Standard hour per unit of output = $\frac{30,000 \text{ hours}}{20,000 \text{ units}} = 1.5 \text{ hours}$
- (4) Standard hours for Actual Output = 22,000 units × 1.5 hours = 33,000 Hours
- (5) Budgeted Overhead per day for budgeted days = $\frac{\text{Rs.3,00,000}}{25 \text{ days}} = \text{Rs.12,000}$
- (6) Budgeted Overhead for actual days worked = Rs.12,000 × 27 days = Rs.3,24,000
- (7) Budgeted Hours for Actual days worked = $\frac{30,000 \text{ hours}}{25 \text{ days}} \times 27 \text{ days} = 32,400 \text{ hours}$

Computation of Variances in relation to Fixed Overheads:**(i) Efficiency Variance**

= Standard Rate × (Standard hours for actual output – Actual hours worked)
 = Rs.10 (33,000 hours – 31,500 hours) = Rs.15,000 (Favourable)

(ii) Capacity Variance

= Standard Rate × (Actual Hours – Budgeted Hours for actual days worked)
 = Rs.10 (31,500 hours – 32,400 hours) = Rs.9,000 (Adverse)

(iii) Calendar Variance

= Standard/Budgeted Fixed Overhead Rate per day × (Actual Working days – Budgeted working days)
 = Rs.12,000 (27 days – 25 days) = Rs.24,000 (Favourable)

(iv) Volume Variance

= Standard Rate × (Standard hours – Budgeted hours)
 = Rs.10 (33,000 hours – 30,000 hours) = Rs.30,000 (Favourable)

(v) Expenditure Variance

= Budgeted Overheads – Actual Overheads
 = Rs.3,00,000 – Rs.3,10,000 = Rs.10,000 (Adverse)

Note: Overhead Variances may also be calculated based on output.

(c) (i) Computation of wages of each worker under guaranteed hourly rate basis

Worker	Actual hours worked (Hours)	Hourly wage rate (Rs.)	Wages (Rs.)
I	380	40	15,200
II	100	50	5,000
III	540	60	32,400

(ii) Computation of Wages of each worker under piece work earning basis

Product	Piece rate per unit (Rs.)	Worker-I		Worker-II		Worker-III	
		Units	Wages (Rs.)	Units	Wages (Rs.)	Units	Wages (Rs.)
A	15	210	3,150	-	-	600	9,000
B	20	360	7,200	-	-	1,350	27,000
C	30	460	13,800	250	7,500	-	-
Total			24,150		7,500		36,000

Since each worker's earnings are more than 50% of basic pay. Therefore, worker-I, II and III will be paid the wages as computed i.e. Rs. 24,150, Rs. 7,500 and Rs. 36,000 respectively.

Working Note:**1. Piece rate per unit**

Product	Standard time per unit in minute	Piece rate each minute (Rs.)	Piece rate per unit (Rs.)
A	15	1	15

B	20	1	20
C	30	1	30

(iii) Computation of wages of each worker under Premium bonus basis (where each worker receives bonus based on Rowan Scheme)

Worker	Time Allowed (Hr.)	Time Taken (Hr.)	Time saved (Hr.)	Wage Rate per hour (Rs.)	Earnings (Rs.)	Bonus (Rs.)*	Total Earning (Rs.)
I	402.5	380	22.5	40	15,200	850	16,050
II	125	100	25	50	5,000	1,000	6,000
III	600	540	60	60	32,400	3,240	35,640

Working Note:

1. Time allowed to each worker

Worker	Product-A	Product-B	Product-C	Total Time (Hours)
I	210 units × 15 = 3,150	360 units × 20 = 7,200	460 units × 30 = 13,800	24,150/60 = 402.50
II	-	-	250 units × 30 = 7,500	7,500/60 = 125
III	600 units × 15 = 9,000	1,350 units × 20 = 27,000	-	36,000/60 = 600

$$* \frac{\text{Time Taken}}{\text{Time Allowed}} \times \text{Time Saved} \times \text{Wage Rate}$$

$$\text{Worker-I} = \frac{380}{402.5} \times 22.5 \times 40 = 850$$

$$\text{Worker-II} = \frac{100}{125} \times 25 \times 50 = 1,000$$

$$\text{Worker-III} = \frac{540}{600} \times 60 \times 60 = 3,240$$

(d) (i) Variable overhead absorption rate = $\frac{\text{Difference in Total Overheads}}{\text{Difference in levels in terms of machine hours}}$

$$= \frac{\text{Rs.}3,47,625 - \text{Rs.}3,38,875}{15,500 \text{ hours} - 14,500 \text{ hours}} = \text{Rs.}8.75 \text{ per machine hour.}$$

(ii) Calculation of Total fixed overheads:

	(Rs.)
Total overheads at 14,500 hours	3,38,875
Less: Variable overheads (Rs. 8.75 × 14,500)	(1,26,875)
Total fixed overheads	2,12,000

(iii) Calculation of Budgeted level of activity in machine hours:

Let budgeted level of activity = X

$$\text{Then, } \frac{(\text{Rs. } 8.75X + \text{Rs. } 2,12,000)}{X} = \text{Rs. } 22$$

$$8.75X + \text{Rs. } 2,12,000 = 22X$$

$$13.25X = 2,12,000$$

$$X = 16,000$$

Thus, budgeted level of activity = 16,000 machine hours.

(iv) Calculation of Under / Over absorption of overheads:

	(Rs.)
Actual overheads	3,22,000
Absorbed overheads (14,970 hours × Rs. 22 per hour)	3,29,340
Over-absorption (3,29,340 – 3,22,000)	7,340

(v) Departmental absorption rates provide costs which are more precise than those provided by the use of blanket absorption rates. Departmental absorption rates facilitate variance analysis and cost control. The application of these rates makes the task of stock and work-in-process (WIP) valuation easier and more precise. However, the setting up and monitoring of these rates can be time consuming and expensive.

2. (a) The total production overheads are Rs.52,00,000:

$$\text{Product A: } 20,000 \times \text{Rs. } 30 = \text{Rs. } 6,00,000$$

$$\text{Product B: } 40,000 \times \text{Rs. } 40 = \text{Rs. } 16,00,000$$

$$\text{Product C: } 60,000 \times \text{Rs. } 50 = \text{Rs. } 30,00,000$$

On the basis of ABC analysis this amount will be apportioned as follows:

Statement Showing “Activity Based Production Cost”

Activity Cost Pool	Cost Driver	Ratio	Total Amount (Rs.)	A (Rs.)	B (Rs.)	C (Rs.)
Stores Receiving	Purchase Requisition	6:9:10	5,92,000	1,42,080	2,13,120	2,36,800
Inspection	Production Runs	5:7:8	17,88,000	4,47,000	6,25,800	7,15,200
Dispatch	Orders Executed	6:9:10	4,20,000	1,00,800	1,51,200	1,68,000
Machine Setups	Setups	12:13:15	24,00,000	7,20,000	7,80,000	9,00,000
Total Activity Cost				14,09,880	17,70,120	20,20,000
Quantity Produces				20,000	40,000	60,000
Unit Cost (Overheads)				70.49	44.25	33.67
Add: Conversion Cost (Material + Labour)				130	120	130
Total				200.49	164.25	163.67

(b) Cost Sheet of M/s A&R Brothers for the month ended March 2020:

	Particulars	Amount (Rs.)	Amount (Rs.)
(i)	Materials consumed:		
	- Opening stock	6,06,000	

	- Add: Purchases	28,57,000	
		34,63,000	
	- Less: Closing stock	(7,50,000)	27,13,000
	Direct wages		37,50,000
(ii)	Prime cost		64,63,000
	Factory expenses		21,25,000
			85,88,000
	Add: Opening W-I-P		12,56,000
	Less: Closing W-I-P		(14,22,000)
	Factory cost		84,22,000
	Less: Sale of scrap		(26,000)
(iii)	Cost of Production		83,96,000
	Add: Opening stock of finished goods		3,59,000
	Less: Closing stock of finished goods		(3,09,000)
(iv)	Cost of Goods Sold		84,46,000
	Office and administration expenses		10,34,000
	Selling and distribution expenses		7,50,000
(v)	Cost of Sales		1,02,30,000
(vi)	Profit (balancing figure)		31,70,000
	Sales		1,34,00,000

3. (a) (i) **Calculation of Economic Order Quantity (E.O.Q)**

$$\text{Annual requirement (usage) of raw material in kg. (A)} = \frac{1,00,000 \text{ units}}{2.5 \text{ units per kg.}} = 40,000 \text{ kg.}$$

$$\text{Ordering Cost (Handling \& freight cost) (O)} = \text{Rs.1,460} + \text{Rs.940} = \text{Rs.2,400}$$

$$\begin{aligned} \text{Carrying cost per unit per annum (C) i.e. inventory carrying cost + working capital cost} \\ = (\text{Rs.2.5} \times 12 \text{ months}) + \text{Rs.18} = \text{Rs.48 per kg.} \end{aligned}$$

$$\text{E.O.Q.} = \sqrt{\frac{2AO}{C}} = \sqrt{\frac{2 \times 40,000 \text{ kg.} \times \text{Rs.2,400}}{\text{Rs.48}}} = 2,000 \text{ kg.}$$

(ii) **Frequency of placing orders for procurement:**

$$\text{Annual consumption (A)} = 40,000 \text{ kg.}$$

$$\text{Quantity per order (E.O.Q)} = 2,000 \text{ kg.}$$

$$\text{No. of orders per annum} \left(\frac{A}{\text{E.O.Q}} \right) = \frac{40,000 \text{ kg.}}{2,000 \text{ kg.}} = 20 \text{ orders}$$

$$\text{Frequency of placing orders (in days)} = \frac{360 \text{ days}}{20 \text{ orders}} = 18 \text{ days}$$

(iii) **Percentage of discount in the price of raw materials to be negotiated:**

Particulars	On Quarterly Basis	On E.O.Q Basis
1. Annual Usage (in Kg.)	40,000 kg.	40,000 kg.

2. Size of the order	10,000 kg.	2,000 kg.
3. No. of orders (1 ÷ 2)	4	20
4. Cost of placing orders or Ordering cost (No. of orders × Cost per order)	Rs.9,600 (4 order × Rs2,400)	Rs.48,000 (20 orders × Rs2,400)
5. Inventory carrying cost (Average inventory × Carrying cost per unit)	Rs.2,40,000 (10,000 kg. × ½ × Rs.48)	Rs.48,000 (2,000 kg. × ½ × Rs.48)
6. Total Cost (4 + 5)	Rs.2,49,600	Rs.96,000

When order is placed on quarterly basis the ordering cost and carrying cost increased by Rs.1,53,600 (Rs.2,49,600 - Rs.96,000).

So, discount required = Rs.1,53,600

Total annual purchase = 40,000 kg. × Rs.180 = Rs.72,00,000

So, Percentage of discount to be negotiated = $\frac{\text{Rs.1,53,600}}{\text{Rs.72,00,000}} \times 100 = 2.13\%$

(b) (i) Process- A Account

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Inputs	40,000	3,60,000	By Normal wastage (2,000 units × Rs.15)	2,000	30,000
To Material	---	2,42,000	By Abnormal loss A/c (1,000 units × Rs.27)	1,000	27,000
To Direct wages	---	2,58,000	By Process- B (29,600 units × Rs.27)	29,600	7,99,200
To Manufacturing Exp.	---	1,96,000	By Profit & Loss A/c (7,400 units × Rs.27)	7,400	1,99,800
	40,000	10,56,000		40,000	10,56,000

Cost per unit = $\frac{\text{Rs.10,56,000} - \text{Rs.30,000}}{40,000 \text{ units} - 2,000 \text{ units}} = \text{Rs. 27 per unit}$

Normal wastage = 40,000 units × 5% = 2,000 units

Abnormal loss = 40,000 units – (37,000 units + 2,000 units) = 1,000 units

Transfer to Process- B = 37,000 units × 80% = 29,600 units

Sale = 37,000 units × 20% = 7,400 units

Process- B Account

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Process- A A/c	29,600	7,99,200	By Normal wastage (2,960 units × Rs. 20)	2,960	59,200
To Material	---	2,25,000	By Profit & Loss A/c (27,000 units × Rs. 48)	27,000	12,96,000
To Direct Wages	---	1,90,000			
To Manufacturing Exp.	---	1,23,720			

To Abnormal Gain A/c (360 units × Rs. 48)	360	17,280		
	29,960	13,55,200	29,960	13,55,200

$$\text{Cost per unit} = \frac{\text{Rs. } 13,37,920 - \text{Rs. } 59,200}{29,600 \text{ units} - 2,960 \text{ units}} = \text{Rs. } 48 \text{ per unit}$$

$$\text{Normal wastage} = 29,600 \text{ units} \times 10\% = 2,960 \text{ units}$$

$$\text{Abnormal gain} = (27,000 \text{ units} + 2,960 \text{ units}) - 29,600 \text{ units} = 360 \text{ units}$$

(ii) Costing Profit & Loss Account

Particulars	Amount (Rs.)	Particulars	Amount (Rs.)
To Process- A A/c	1,99,800	By Sales:	
To Process- B A/c	12,96,000	- Process-A	2,73,800
To Abnormal loss A/c	12,000	(7,400 units × Rs. 37)	
To Indirect Expenses	4,48,080	- Process- B	16,47,000
		(27,000 units × Rs. 61)	
		By Abnormal gain	10,080
		By Net loss	25,000
	19,55,880		19,55,880

Working Notes:

Normal wastage (Loss) Account

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Process- A A/c	2,000	30,000	By Abnormal Gain A/c (360 units × Rs. 20)	360	7,200
To Process- B A/c	2,960	59,200	By Bank (Sales)	4,600	82,000
	4,960	89,200		4,960	89,200

Abnormal Loss Account

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Process- A A/c	1,000	27,000	By Bank A/c (1,000 units × Rs. 15)	1,000	15,000
			By Profit & Loss A/c	---	12,000
	1,000	27,000		1,000	27,000

Abnormal Gain Account

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Normal loss A/c (360 units × Rs. 20)	360	7,200	By Process- B A/c	360	17,280
To Profit & Loss A/c		10,080			
	360	17,280		360	17,280

4. (a) Workings:

Preparation of Cost Sheet/ Cost Statement

Particulars	Amount (Rs.)
Materials	26,80,000
Wages	17,80,000
Prime Cost	44,60,000
Add: Factory expenses (20% of Rs. 44,60,000)	8,92,000
Factory cost/ Cost of Production	53,52,000
Less: Closing Stock $\left(\frac{\text{Rs.}53,52,000}{52,000 \text{ units}} \times 2,000 \text{ units} \right)$	(2,05,846)
Cost of Goods Sold	51,46,154
Add: General administrative expenses (10% of Rs.53,52,000)	5,35,200
Add: Selling expenses (Rs.10 × 50,000 units)	5,00,000
Cost of Sales	61,81,354
Profit (Balancing figure)	18,646
Sales Value	62,00,000

Costing Profit and Loss Account

Particulars	Amount (Rs.)	Particulars	Amount (Rs.)
To Materials	26,80,000	By Sales	62,00,000
To Wages	17,80,000	By Closing stock	2,05,846
To Factory expenses	8,92,000		
To General administrative expenses	5,35,200		
To Selling expenses	5,00,000		
To Profit (Balancing figure)	18,646		
	64,05,846		64,05,846

Reconciliation of profit as per Cost Accounts and as per Financial Accounts

Particulars	Amount (Rs.)
Profit as per Cost Accounts	18,646
Additions:	
General administrative expenses (Over-absorbed) (Rs. 5,35,200 – Rs.4,80,200)	55,000
Selling expenses (Overcharged) (Rs. 5,00,000 – Rs. 2,50,000)	2,50,000
Dividend received	80,000
	4,03,646
Deductions:	
Factory expenses (Under -absorbed) (Rs.9,50,000 – 8,92,000)	58,000
Closing stock (Over-valued) (Rs.2,05,846 – Rs. 1,50,000)	55,846
Preliminary expenses written off	70,000
	1,83,846
Profit as per Financial Accounts	2,19,800

(b) (i) Calculation of Budgeted profit for the FY 2019-20

	30,000 units	
	Per unit (Rs.)	Amount (Rs.)
Sales (A)	400.00	1,20,00,000
Less: Variable Costs:		
- Direct Material	150.00	45,00,000
- Direct Wages	50.00	15,00,000
- Variable Overheads	50.00	15,00,000
- Direct Expenses	30.00	9,00,000
- Variable factory expenses (75% of Rs.40p.u.)	30.00	9,00,000
- Variable Selling & Dist. exp. (80% of Rs.20p.u.)	16.00	4,80,000
Total Variable Cost (B)	326.00	97,80,000
Contribution (C) = (A – B)	74.00	22,20,000
Less: Fixed Costs:		
- Office and Admin. exp. (100%)	--	3,00,000
- Fixed factory exp. (25%)	--	3,00,000
- Fixed Selling & Dist. exp. (20%)	--	1,20,000
Total Fixed Costs (D)	--	7,20,000
Profit (C – D)	--	15,00,000

(ii) Expense Budget of GP Ltd. for the FY 2020-21 at 50% & 60% level

	30,000 units		36,000 units	
	Per unit (Rs.)	Amount (Rs.)	Per unit (Rs.)	Amount (Rs.)
Sales (A)	400.00	1,20,00,000	400.00	1,44,00,000
Less: Variable Costs:				
- Direct Material	165.00	49,50,000	165.00	59,40,000
- Direct Wages	55.00	16,50,000	55.00	19,80,000
- Variable Overheads	55.00	16,50,000	55.00	19,80,000
- Direct Expenses	33.00	9,90,000	33.00	11,88,000
- Variable factory expenses	33.00	9,90,000	33.00	11,88,000
- Variable Selling & Dist. exp.	17.60	5,28,000	17.60	6,33,600
Total Variable Cost (B)	358.60	1,07,58,000	358.60	1,29,09,600
Contribution (C) = (A – B)	41.40	12,42,000	41.40	14,90,400
Less: Fixed Costs:				
- Office and Admin. exp. (100%)	--	3,45,000	--	3,45,000
- Fixed factory exp. (25%)	--	3,45,000	--	3,45,000
- Fixed Selling & Dist. exp. (20%)	--	1,38,000	--	1,38,000
Total Fixed Costs (D)	--	8,28,000	--	8,28,000
Profit (C – D)	--	4,14,000	--	6,62,400

5. (a) Total cost statement of KR Resort (P) Limited

Particulars	Cost per annum (Rs. in lakhs)
Staff Salaries	780.00
Room Attendant's Wages (Refer working note 3)	286.20
Lighting, Heating & Power	350.00
Repairs, Maintenance & Renovation	220.00
Linen	60.00
Laundry charges	34.00
Interior Decoration	85.00
Sundries	36.28
Depreciation: (Refer working note 4)	
- Building	45.00
- Furniture & Fixture	9.00
- Air Conditioners	7.50
Total cost for the year	1912.98

Computation of profit:

Let Rs. x be the rent for deluxe from.

Equivalent deluxe room days are 90,720 (Refer working note 2)

Total takings = Rs. 90,720x

Profit is 25% of total takings.

Profit = 25% of Rs. 90,720x = Rs. 22,680x

Total takings = Total Cost + Profit

Rs. 90,720x = Rs. 19,12,98,000 + Rs. 22,680x

Rs. 90,720x - Rs. 22,680x = Rs. 19,12,98,000

Rs. 68,040x = Rs. 19,12,98,000

$$x = \frac{\text{Rs. } 19,12,98,000}{\text{Rs. } 68,040} = \text{Rs. } 2,811.55$$

Rent to be charged for deluxe room	Rs. 2,811.55
Rent to be charged for super deluxe room = Rent of deluxe room x 2 = Rs. 2,811.55 x 2	Rs. 5,623.10
Rent to be charged for luxury suite = Rent of Super Deluxe room x 1.5 = Rs. 5,623.10 x 1.5	Rs. 8,434.65

Working Notes:**(1) Computation of Room Occupancy**

Type of Room	No. of rooms x no. of days x occupancy %	Room days
Deluxe Room	100 rooms x 360 days x 90% occupancy	32,400
Super Deluxe Room	60 rooms x 360 days x 75% occupancy	16,200

Luxury Suite	40 rooms x 360 days x 60% occupancy	8,640
	Total	57,240

(2) Computation of equivalent deluxe room days

Rent of 'super deluxe' room is to be fixed at 2 times of 'deluxe room' and luxury suite' is 3 times of 'deluxe room'. Therefore, equivalent room days would be:

Type of Room	Room days	Equivalent deluxe room days
Deluxe Room	32,400 x 1	32,400
Super Deluxe Room	16,200 x 2	32,400
Luxury Suite	8,640 x 3	25,920
	Total	90,720

(3) Computation of room attendant's wages

Room occupancy days @ Rs. 500 per day = 286.2 lakhs (i.e. 57,240 days × Rs. 500)

(4) Computation of Depreciation per annum

Particulars	Cost (Rs.)	Rate of Depreciation	Depreciation (Rs.)
Building	9,00,00,000	5%	45,00,000
Furniture & Fixtures	90,00,000	10%	9,00,000
Air Conditioners	75,00,000	10%	7,50,000

(b) (i) Journal Entries under Integrated system of accounting

Particulars		Rs.	Rs.
(i)	Work-in-Progress Control A/c	Dr. 6,50,000	
	Factory Overhead Control A/c	Dr. 2,30,000	
	To Stores Ledger Control A/c		8,80,000
	<i>(Being issue of Direct and Indirect materials)</i>		
(ii)	Work-in Progress Ledger Control A/c	Dr. 6,75,000	
	Factory Overhead control A/c	Dr. 2,25,000	
	To Wages Control A/c		9,00,000
	<i>(Being allocation of Direct and Indirect wages)</i>		
(iii)	Factory Overhead Control A/c	Dr. 60,000	
	To Costing Profit & Loss A/c		60,000
	<i>(Being transfer of over absorption of Factory overhead)</i>		
	Costing Profit & Loss A/c	Dr. 50,000	
	To Administration Overhead Control A/c		50,000
	<i>(Being transfer of under absorption of Administration overhead)</i>		
(iv)	Trade Payables A/c	Dr. 9,00,000	
	To Cash/ Bank A/c		9,00,000
	<i>(Being payment made to creditors)</i>		

(v) Cash/ Bank A/c To Trade receivables A/c (Being payment received from debtors)	Dr.	8,00,000	8,00,000
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(ii)

	X	Y	Z
I. Contribution per unit (Rs.)	40	30	50
II. Units (Lower of Production / Market Demand)	2,000	2,000	900
III. Possible Contribution (Rs.) [I × II]	80,000	60,000	45,000
IV. Opportunity Cost* (Rs.)	60,000	80,000	80,000

(*) Opportunity cost is the maximum possible contribution forgone by not producing alternative product i.e. if Product X is produced then opportunity cost will be maximum of (Rs. 60,000 from Y, Rs. 45,000 from Z).

6. (a) **Accounting treatment of idle time wages & overtime wages in cost accounts:** Normal idle time is treated as a part of the cost of production. Thus, in the case of direct workers, an allowance for normal idle time is built into the labour cost rates. In the case of indirect workers, normal idle time is spread over all the products or jobs through the process of absorption of factory overheads.

Under Cost Accounting, the overtime premium is treated as follows:

If overtime is resorted to at the desire of the customer, then the overtime premium may be charged to the job directly.

If overtime is required to cope with general production program or for meeting urgent orders, the overtime premium should be treated as overhead cost of particular department or cost center which works overtime.

Overtime worked on account of abnormal conditions should be charged to costing Profit & Loss Account.

If overtime is worked in a department due to the fault of another department, the overtime premium should be charged to the latter department.

- (b) **Zero-based budgeting (ZBB) involves the following stages:**

- (i) Identification and description of Decision packages
- (ii) Evaluation of Decision packages
- (iii) Ranking (Prioritisation) of the Decision packages
- (iv) Allocation of resources

(i) **Identification and description of Decision packages:** Decision packages are the programmes or activities for which decision is required to be taken. The programmes or activities are described for technical specifications, financial impact in the form of cost benefit analysis and other issues like environmental, regulatory, social etc.

(ii) **Evaluation of Decision packages:** Once Decision packages are identified and described, it is evaluated against factors like synchronisation with organisational objectives, availability of funds, regulatory requirement etc.

(iii) **Ranking (Prioritisation) of the Decision packages:** After evaluation of the decision packages, it is ranked on the basis priority of the activities. Because of this prioritization feature ZBB is also known as **Priority-based Budgeting**.

(iv) **Allocation of resources:** After ranking of the decision packages, resources are allocated for decision packages. Budgets are prepared like it is done first time without taking reference to previous budgets.

(c) **Differences between Job costing and Batch costing:**

Sr. No	Job Costing	Batch Costing
1	Method of costing used for non- standard and non- repetitive products produced as per customer specifications and against specific orders.	Homogeneous products produced in a continuous production flow in lots.
2	Cost determined for each Job.	Cost determined in aggregate for the entire Batch and then arrived at on per unit basis.
3	Jobs are different from each other and independent of each other. Each Job is unique.	Products produced in a batch are homogeneous and lack of individuality.

(d) By-product cost can be dealt in cost accounting in the following ways:

(i) **When they are of small total value:** When the by-products are of small total value, the amount realised from their sale may be dealt in any one the following two ways:

1. The sales value of the by-products may be credited to the Costing Profit and Loss Account and no credit be given in the Cost Accounts. The credit to the Costing Profit and Loss Account here is treated either as miscellaneous income or as additional sales revenue.
2. The sale proceeds of the by-product may be treated as deductions from the total costs. The sale proceeds in fact should be deducted either from the production cost or from the cost of sales.

(ii) **When the by-products are of considerable total value:** Where by-products are of considerable total value, they may be regarded as joint products rather than as by-products. To determine exact cost of by-products the costs incurred upto the point of separation, should be apportioned over by-products and joint products by using a logical basis. In this case, the joint costs may be divided over joint products and by-products by using relative market values; physical output method (at the point of split off) or ultimate selling prices (if sold).

(iii) **Where they require further processing:** In this case, the net realisable value of the by-product at the split-off point may be arrived at by subtracting the further processing cost from the realisable value of by-products.

If total sales value of by-products at split-off point is small, it may be treated as per the provisions discussed above under (i).

In the contrary case, the amount realised from the sale of by-products will be considerable and thus it may be treated as discussed under (ii).