Test Series: November, 2021

MOCK TEST PAPER –2

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) The following particulars have been compiled in respect of three workers:

	M	N	O
Actual hours worked	380	100	540
Hourly rate of wages (in ₹)	90	100	110
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 ₹ 1.50.

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

(i) Guaranteed hourly rate basis.

(ii) Piece work earning basis but guaranteed at 75% of basic pay (Guaranteed hourly rate if his earnings are less than 50% of basic pay.)

(b) The annual demand for an item of raw material is 48,000 units and the purchase price is ₹ 80 per unit. The cost of processing an order is ₹ 1,350 and the annual cost of storage is ₹ 15 per unit.

(i) DETERMINE is the optimal order quantity and total relevant cost for the order?

(ii) If the cost of processing an order is ₹ 800 and all other data remain same, then DETERMINE the differential cost?

(iii) If the supplier offers bulk purchase of 48,000 units at a price of ₹ 72 and cost of placing the is Nil, SHOULD the order be accepted?

(c) A factory can produce 1,80,000 units per annum at its 60% capacity. The estimated costs of production are as under:

Direct material ₹ 50 per unit

Direct employee cost ₹ 16 per unit

Indirect expenses:

- Fixed ₹ 32,50,000 per annum
- Variable ₹ 10 per unit
- Semi-variable ₹ 40,000 per month up to 50% capacity and ₹ 15,000 for every 20% increase in the capacity or part thereof.

If production program of the factory is as indicated below and the management desires to ensure a profit of ₹10,00,000 for the year, DETERMINE the average selling price at which each unit should be quoted:

First three months of the year- 50% of capacity;

Remaining nine months of the year- 75% of capacity.

(d) JK Ltd. has furnished the following standard cost data per unit of production:

Material 10 kg @ ₹ 200 per kg.

Labour 6 hours @ ₹ 110 per hour

Variable overhead 6 hours @ ₹ 200 per hour.

Fixed overhead ₹ 90,00,000 per month (Based on a normal volume of 30,000 labour hours.)

The actual cost data for the month of September 2021 are as follows:

Material used 50,000 kg at a cost of ₹ 1,05,00,000.

Labour paid ₹ 31,00,000 for 31,000 hours

Variable overheads ₹ 58,60,000

Fixed overheads ₹ 94,00,000

Actual production 4,800 units.

CALCULATE:

(i) Material Cost Variance.

(ii) Labour Cost Variance.

(iii) Fixed Overhead Cost Variance.

(iv) Variable Overhead Cost Variance. ***(4 × 5 Marks = 20 Marks)***

2. (a) Following information is available regarding process A for the month of October, 2021:

Production Record:

Units in process as on 01.10.2021	8,000
(All materials used, 25% complete for labour and overhead)	
New units introduced	32,000
Units completed	28,000
Units in process as on 31.10.2021	12,000
(All materials used, 33-1/3% complete for labour and overhead)	

Cost Records:

Work-in-process as on 01.10.2021	(₹)
Materials	12,00,000
Labour	2,00,000
Overhead	2,00,000
	16,00,000
Cost during the month	
Materials	51,20,000
Labour	30,00,000
Overhead	30,00,000
	1,11,20,000

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) The following account balances and distribution of indirect charges are taken from the accounts of a manufacturing concern for the year ending on 31st March, 2021:

Item	Total Amount	Production Departments			Service Departments	
	(₹)	X (₹)	Y (₹)	Z (₹)	A (₹)	B (₹)
Indirect Material	5,00,000	80,000	1,20,000	1,80,000	1,00,000	20,000
Indirect Labour	10,40,000	1,80,000	2,00,000	2,80,000	2,40,000	1,40,000
Supervisor's Salary	3,84,000	-	-	3,84,000	-	-
Fuel & Heat	60,000					
Power	7,20,000					
Rent & Rates	6,00,000					
Insurance of Assets	72,000					
Canteen Charges	2,40,000					
Depreciation	10,80,000					

The following departmental data are also available:

	Production Departments			Service Departments	
	X	Y	Z	A	B
Area (Sq. ft.)	4,400	4,000	3,000	2,400	1,200
Capital Value of Assets (₹)	40,00,000	60,00,000	50,00,000	10,00,000	20,00,000
Kilowatt Hours	3,500	4,000	3,000	1,500	-
Radiator Sections	20	40	60	50	30
No. of Employees	60	70	120	30	20

Expenses charged to the service departments are to be distributed to other departments by the following percentages:

	X	Y	Z	A	B
Department A (%)	30	30	20	-	20
Department B (%)	25	40	25	10	-

PREPARE an overhead distribution statement to show the total overheads of production departments after re-apportioning service departments' overhead by using simultaneous equation method. Show all the calculations to the nearest rupee. ***(10 Marks)***

3. (a) MKL Infrastructure built and operates 110 k.m. highway on the basis of Built-Operate-Transfer (BOT) for a period of 21 years. A traffic assessment has been carried out to estimate the traffic flow per day which shows the following figures:

Sl. No.	Type of vehicle	Daily traffic volume
1.	Two wheelers	44,500
2.	Car and SUVs	3,450
3.	Bus and LCV	1,800
4.	Heavy commercial vehicles	816

The following is the estimated cost of the project:

Sl. no.	Activities	Amount (₹ in lakh)
1	Site clearance	341.00
2	Land development and filling work	9,160.00
3	Sub base and base courses	10,520.00
4	Bituminous work	32,140.00
5	Bridge, flyovers, underpasses, Pedestrian subway, footbridge, etc	28,110.00
6	Drainage and protection work	9,080.00
7	Traffic sign, marking and road appurtenance	8,810.00
8	Maintenance, repairing and rehabilitation	12,850.00
9	Environmental management	1,964.00
	Total Project cost	1,12,975.00

An average cost of ₹1,200 lakh has to be incurred on administration and toll plaza operation.

On the basis of the vehicle specifications (i.e. weight, size, time saving etc.), the following weights has been assigned to the passing vehicles:

Sl. No.	Type of vehicle	
1.	Two wheelers	5%
2.	Car and SUVs	20%
3.	Bus and LCV	30%
4.	Heavy commercial vehicles	45%

Required:

(i) CACULATE the total project cost per day of concession period.

(ii) COMPUTE toll fee to be charged for per vehicle of each type, if the company wants earn a profit of 15% on total cost.

[Note: Concession period is a period for which an infrastructure is allowed to operate and recover its investment] ***(10 Marks)***

(b) XYZ Ltd. maintains a non-integrated accounting system for the purpose of management information. The following are the data related with year 2020-21:

Particulars	**Amount ('000)**
Opening balances:	
- Stores ledger control A/c	48,000
- Work-in-process control A/c	12,000
- Finished goods control A/c	2,58,000
- Building construction A/c	6,000
- Cost ledger control A/c	3,24,000
During the year following transactions took place:	
Materials:	
- Purchased	24,000
- Issued to production	30,000
- Issued to general maintenance	3,600
- Issued to building construction	2,400
Wages:	
- Gross wages paid	90,000
- Indirect wages paid	24,000
- For building construction	6,000
Factory overheads:	
- Actual amount incurred (excluding items shown above)	96,000
- Absorbed in building construction	12,000
- Under-absorbed	4,800
Royalty paid	3,000
Selling distribution and administration overheads	15,000
Sales	2,70,000

At the end of the year, the stock of raw material and work-in-process was ₹ 33,00,000, and ₹15,00,000 respectively. The loss arising in the raw material account is treated as factory overheads. The building under construction was completed during the year. Gross profit margin is 20% on sales.

Required:

PREPARE the relevant control accounts to record the above transactions in the cost ledger of the company. ***(10 Marks)***

4. (a) G Ltd. has the following expenditures for the year ended 31st March, 2021:

Sl. No.		Amount (₹)	Amount (₹)
(i)	Raw materials purchased		20,00,00,000
(ii)	Freight inward		22,41,200
(iii)	Wages paid to factory workers		58,40,000
(iv)	Royalty paid for production		3,45,200
(v)	Amount paid for power & fuel		9,24,000
(vi)	Job charges paid to job workers		16,24,000
(vii)	Stores and spares consumed		2,24,000
(viii)	Depreciation on office building		1,12,000
(ix)	Repairs & Maintenance paid for:	96,000	
	- Plant & Machinery		
	- Sales office building	36,000	1,32,000
(x)	Insurance premium paid for:		
	- Plant & Machinery	62,400	
	- Factory building	36,200	98,600
(xi)	Expenses paid for quality control check activities		39,200
(xii)	Research & development cost paid improvement in production process		36,400
(xiii)	Expenses paid for pollution control and engineering & maintenance		53,200
(xiv)	Salary paid to Sales & Marketing Managers:		20,24,000
(xv)	Salary paid to General Manager		25,12,000
(xvi)	Packing cost paid for:		
	- Primary packing necessary to maintain quality	1,92,000	
	- For re-distribution of finished goods	2,24,000	4,16,000
(xvii)	Performance bonus paid to sales staffs		7,20,000
(xviii)	Value of stock as on 1st April, 2020:		
	- Raw materials	36,00,000	
	- Work-in-process	18,40,000	
	- Finished goods	22,00,000	76,40,000
(xix)	Value of stock as on 31st March, 2021:		
	- Raw materials	19,20,000	
	- Work-in-process	17,40,000	
	- Finished goods	36,40,000	73,00,000

Amount realized by selling of scrap and waste generated during manufacturing process – ₹1,72,000/-

From the above data you are requested to PREPARE Statement of cost for G Ltd. for the year ended 31st March, 2021, showing (i) Prime cost, (ii) Factory cost, (iii) Cost of Production, (iv) Cost of goods sold and (v) Cost of sales. ***(10 Marks)***

(b) A Limited manufactures three different products and the following information has been collected from the books of accounts:

	Products		
	S	**T**	**U**
Sales Mix	25%	35%	40%
Selling Price	₹ 600	₹ 800	₹ 400
Variable Cost	₹ 300	₹ 400	₹ 240
Total Fixed Costs			₹ 36,00,000
Total Sales			₹ 1,20,00,000

The company has currently under discussion, a proposal to discontinue the manufacture of Product U and replace it with Product M, when the following results are anticipated:

	Products		
	S	**T**	**M**
Sales Mix	40%	35%	25%
Selling Price	₹ 600	₹800	₹600
Variable Cost	₹ 300	₹400	₹300
Total Fixed Costs			₹ 36,00,000
Total Sales			₹1,28,00,000

Required

(i) Compute the PV ratio, total contribution, profit and Break-even sales for the existing product mix.

(ii) Compute the PV ratio, total contribution, profit and Break-even sales for the proposed product mix. ***(10 Marks)***

5. (a) The following budgeted information relates to B Ltd. for the year 2021:

	Products		
	X	**Y**	**Z**
Production and Sales (units)	1,00,000	80,000	60,000
	(₹)	**(₹)**	**(₹)**
Selling price per unit	45	90	70
Direct cost per unit	25	45	50
	Hours	**Hours**	**Hours**
Machine department (machine hours per unit)	3	4	5
Assembly department (direct labour hours per unit)	6	4	3

The estimated overhead expenses for the year 2021 will be as below:

Machine Department ₹ 36,80,000

Assembly Department ₹ 27,50,000

Overhead expenses are apportioned to the products on the following basis:

Machine Department On the basis of machine hours

Assembly Department On the basis of labour hours

After a detailed study of the activities the following cost pools and their respective cost drivers are found:

Cost Pool	Amount (₹)	Cost Driver	Quantity
Machining services	32,20,000	Machine hours	9,20,000 hours
Assembly services	22,00,000	Direct labour hours	11,00,000 hours
Set-up costs	4,50,000	Machine set-ups	9,000 set-ups
Order processing	3,60,000	Customer orders	7,200 orders
Purchasing	2,00,000	Purchase orders	800 orders

As per an estimate the activities will be used by the three products:

	Products		
	X	Y	Z
Machine set-ups	4,500	3,000	1,500
Customer orders	2,200	2,400	2,600
Purchase orders	300	350	150

You are required to PREPARE a product-wise profit statement using:

(i) Absorption costing method;

(ii) Activity-based method. ***(10 Marks)***

(b) T Ltd manufactures and sells a single product and has estimated sales revenue of ₹1,51,20,000 during the year based on 20% profit on selling price. Each unit of product requires 6 kg of material A and 3 kg of material B and processing time of 4 hours in machine shop and 2 hours in assembly shop. Factory overheads are absorbed at a blanket rate of 20% of direct labour. Variable selling & distribution overheads are ₹30 per unit sold and fixed selling & distribution overheads are estimated to be ₹34,56,000.

The other relevant details are as under:

Purchase Price:	Material A	₹80 per kg
	Materials B	₹50 per kg
Labour Rate:	Machine Shop	₹70 per hour
	Assembly Shop	₹35 per hour

	Finished Stock	Material A	Material B
Opening Stock	2,500 units	7,500 kg	4,000 kg
Closing Stock	3,000 units	8,000 kg	5,500 kg

Required

(i) CALCULATE number of units of product proposed to be sold and selling price per unit,

(ii) PREPARE Production Budget in units and

(iii) PREPARE Material Purchase Budget in units. ***(10 Marks)***

6. (a) How apportionment of joint costs up-to the point of separation amongst the joint products using market value at the point of separation and net realizable value method is done? DISCUSS.

(b) DISCUSS cost classification based on variability and controllability.

(c) WRITE NOTE on cost-plus-contracts.

(d) DESCRIBE the salient features of budget manual. ***(4 × 5 = 20 Marks)***