

Mock Test Paper - Series I: November, 2024

Date of Paper: 21st November, 2024

Time of Paper: 2 P.M. to 5 P.M.

INTERMEDIATE: GROUP – II

PAPER – 4: 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.

Working notes should form part of the answer.

Time Allowed – 3 Hours

Maximum Marks – 100

1. *The question paper comprises two parts, Part I and Part II.*
2. *Part I comprises Case Scenario based Multiple Choice Questions (MCQs) for 30 marks*
3. *Part II comprises questions which require descriptive type answers for 70 marks.*

PART I – Case Scenario based MCQs

Part I is compulsory.

Write the most appropriate answer to each of the following multiple-choice questions by choosing one of the four options given. All questions are compulsory.

Case Scenario I

XYZ Manufacturing Ltd. is a mid-sized enterprise that has established a strong reputation in the field of precision engineering. The company specializes in producing high-quality engineering components that meet the stringent requirements of various industries including automotive, aerospace, medical devices, and industrial machinery. With a commitment to precision and excellence, XYZ Manufacturing Ltd. has positioned itself as a reliable supplier of critical components that demand the highest levels of accuracy and durability.

To maintain stringent control over its production costs and enhance cost efficiency, XYZ Manufacturing Ltd. operates under a standard costing system. This system plays a pivotal role in the company's financial and operational management. Standard costing involves setting predetermined costs for each production element, including materials, labor, and overheads. These predetermined costs, known as standard costs, serve as benchmarks against which actual production costs are measured.

Particulars	Budgeted Data	Actual Data
Units Produced	10,000 units	9,500 units
Fixed Overheads	₹ 20,00,000	₹ 19,50,000 + ₹ 1,00,000 (additional quality control cost for

		1,000 units chosen on sample basis)
Hours Worked	15,000 hours	14,250 hours
Variable Overhead Rate	₹ 50 per hour	₹ 50 per hour (first 10,000 hours) ₹ 60 per hour (additional hours)

Based on the given information, you are being required to answer the following questions (MCQs 1 to 5):

- What is the Fixed Overhead Cost Variance for XYZ Manufacturing Ltd. in May 2024?
 - ₹ 50,000 (A)
 - ₹ 1,00,000 (A)
 - ₹ 1,50,000 (A)
 - ₹ 2,00,000 (A)
- What is the Fixed Overhead Volume Variance for XYZ Manufacturing Ltd. in May 2024?
 - ₹ 50,000 (F)
 - ₹ 50,000 (A)
 - ₹ 1,00,000 (F)
 - ₹ 1,00,000 (A)
- What is the Variable Overhead Efficiency Variance for XYZ Manufacturing Ltd. in May 2024?
 - ₹ 37,500 (A)
 - ₹ 42,500 (A)
 - ₹ 0
 - ₹ 25,000 (A)
- What is the Variable Overhead Expenditure Variance for XYZ Manufacturing Ltd. in May 2024?
 - ₹ 40,000 (A)
 - ₹ 42,500 (A)
 - ₹ 45,000 (A)
 - ₹ 45,030 (A)
- What is the Fixed Overhead Expenditure Variance for XYZ Manufacturing Ltd. in May 2024?
 - ₹ 50,000 (F)
 - ₹ 50,000 (A)
 - ₹ 1,00,000 (F)
 - ₹ 1,00,000 (A)

(5 x 2 Marks)

Case Scenario II

A garment manufacturer has been producing and selling T-shirts exclusively for Indian market. His T-shirts are made of a specific material which is eco-friendly. It means that T-shirts are bio-degradable in soil after it becomes unsuitable for use.

This invention has been applauded throughout the country. Owner, Vikas, registered for the patent rights for his invention so that no one else could use it.

Vikas feels that this invention will also be liked in foreign markets, and thus plans to expand his business outside India. He feels that US market is the first foreign market he should tap into.

Current cost structure (each T-shirt):

Direct material	90
Direct labour	60
Special service	80
(Used in T-shirt making, 50% fixed)	
Fixed overhead	50
Administration overhead (fixed)	<u>20</u>
Total cost per T-shirt	300
(+) Profit margin	<u>200</u>
Selling price in India	<u>500</u>

There is no limitation of any resources in India. Vikas is able to sell 80,000 T-shirts each year. He is currently working at 80% of his total capacity.

After searching for potential customers in US, Vikas received an inquiry for 30,000 units from a wholesale distributor in California. As per the inquiry, order will be placed if price per T-shirt is reasonable and the order has to be satisfied in full.

Vikas decided to send a quote and the order was placed by the foreign client, on the same day. Vikas, without a second thought accepted the order, but did not feel the need to extend the manufacturing capacity; therefore he decided forgo a few Indian clients.

This foreign order also required special packaging. It is spent at 20% of the total prime cost per T-shirt. The production was done quickly and foreign consignment was transported to custom port via services from a carriage agency. It charged ₹ 80,000 for 1 truck, whose capacity was 500 kg, to transport whole of the consignment. Truck was 20% vacant after loading the consignment.

Bill of lading was filed and a professional fee of ₹ 25,000 for filing this was paid to a Chartered accountant. Custom port also charged ₹ 80 per kg per day to handle the material, storing it in warehouse, and for loading the goods on ship.

The shipping company, which was booked by Vikas for taking the consignment to US, got delayed due to bad weather. Stock was held at port for 5 days and on 6th day it was loaded on ship. Shipping company charged ₹ 2,800/ 10kg of goods. Insurance was charged flat at ₹ 1,11,000.

There is no custom duty on such exports.

Answer the following questions (MCQs 6 to 10):

6. Vikas had sufficient funds in his hands but he still raised a short-term working capital loan @ 6.5% p.a. for the satisfaction of this foreign order because he found a one time investment opportunity which was giving him 9.25% returns. Foreign order was accepted on 1st June and loan was taken on the same day. Repayment of the loan will be made on 1st September. Calculate net cash outflow due to this export order. Which of the following is correct?
 - (a) ₹ 73,91,000
 - (b) ₹ 75,47,750
 - (c) ₹ 74,76,500
 - (d) ₹ 71,06,000
7. What would have been the minimum price that Vikas could have quoted per T-shirt in US dollars? (exchange rate on 1st June, \$1 = ₹ 83.86)
 - (a) \$ 4.23
 - (b) \$ 4.20
 - (c) \$ 4.17
 - (d) \$4.05
8. Payment from foreign client was received on 8th October when exchange rate was ₹ 86 for each US \$. Calculate the profit earned from this export order if actual quoted price was \$4.90 per T-shirt. Select the correct amongst following:
 - (a) ₹ 40,65,500
 - (b) ₹ 41,51,000
 - (c) ₹ 39,94,250
 - (d) ₹ 44,36,000
9. What is the net cash Inflow from this export order?
 - (a) ₹ 55,36,000
 - (b) ₹ 51,65,500
 - (c) ₹ 52,51,000
 - (d) ₹ 50,94,250

10. What is the Incremental benefit from this export order?

- (a) ₹ 19,94,250
- (b) ₹ 21,51,000
- (c) ₹ 20,65,500
- (d) ₹ 24,36,000

(5 x 2 Marks)

11. The rate of change in the composition of employee force over the average number of employees for the year is computed as 9% under 'separation method'. However, the same rate is computed as 15% and 30% under 'replacement method' and 'flux method' respectively.

Considering the average number of employees on roll during the year as 200, FIND OUT the number of employees -

- (i) replaced, (ii) left and discharged and (iii) recruited and joined
- (a) Replaced- 18 employees, left and discharged- 30 employees and recruited & joined- 42 employees
- (b) Replaced- 30 employees, left and discharged- 42 employees and recruited & joined- 18 employees
- (c) Replaced- 30 employees, left and discharged- 18 employees and recruited & joined- 42 employees
- (d) Replaced- 42 employees, left and discharged- 18 employees and recruited & joined- 30 employees

(2 Marks)

12. WHICH of the following item is not the cause of differences in Financial and Cost Accounts?

- (a) Income tax not treated in Cost Accounts
- (b) Dividends credited in Financial Accounts
- (c) Losses on the sale of investments not treated in Financial Accounts
- (d) Cost Accounts showing notional depreciation on the assets fully depreciated for which book value is nil

(2 Marks)

13. Mefttal Ltd. is currently operating at 60% of its total capacity which is 1.5 times than the previous year. The total capacity of the company is 2,00,000 units.

Other information relating to the production is provided below:

- (i) The total cost of production for the current year is ₹ 59,28,000, and for the previous year, it was ₹ 44,72,000.
- (iii) No changes are anticipated in the cost structure for the upcoming years.

Selling price is ₹ 52 per unit and is expected to remain the same in the coming years.

You are required to CALCULATE Break-Even Point (in units).

- (a) 1,20,000 units
- (b) 40,000 units
- (c) 80,000 units
- (d) 1,00,000 units

(2 Marks)

14. Parth Ltd. operates in insurance business. Previous Year, the company launched a new term insurance policy called 'Max Jivan' and incurred the following expenditure throughout the year:

Particulars	Amount (₹)
Claim management cost	52,82,000
Facilities cost	6,49,82,500
Employees cost	2,25,18,000
Cost of marketing of the policy	19,30,71,000
Policy development cost	4,86,50,000
Policy issuance cost	4,10,05,000
Policy servicing cost	13,40,65,500
Sales support expenses	4,44,80,000
Office administration cost	6,67,20,000
I.T. Cost	30,71,90,000
Postage and logistics	4,50,36,000

You are required to ASCERTAIN the cost of the policy 'Max Jivan' segregated into four main activities namely (a) Marketing and Sales support (b) Operations (c) I.T. Cost and (d) Support functions.

- (a) Marketing and Sales support- ₹ 23,75,51,000, Operations - ₹ 22,90,02,500, I.T. Cost- ₹ 30,71,90,000 and Support functions- ₹ 19,92,56,500
- (b) Marketing and Sales support- ₹ 28,62,01,000, Operations- ₹ 22,53,88,500, I.T. Cost- ₹ 30,71,90,000 and Support functions- ₹ 15,42,20,500
- (c) Marketing and Sales support- ₹ 28,62,01,000, Operations- ₹ 18,03,52,500, I.T. Cost- ₹ 30,71,90,000 and Support functions- ₹ 19,92,56,500
- (d) Marketing and Sales support- ₹ 24,17,21,000, Operations- ₹ 22,48,32,500, I.T. Cost- ₹ 30,71,90,000 and Support functions- ₹ 19,92,56,500

(2 Marks)

15. RN Ltd. manufactures two primary products, P¹ and P², through a joint process and a by-product, R¹², is produced spontaneously. The relationship between output quantities to the direct material input stays stable.

To allocate joint production costs to the primary products, the company utilizes the physical volume method.

During the month of March, company incurred joint production costs of ₹ 1,30,00,000. As the primary products are not freely marketable at the split-off point, they are processed further.

The net realizable value of the by-product is treated as deductions from the joint production costs before the joint costs are allocated to the primary products.

The information regarding company's production and its cost during the month of March is provided below:

Particulars	P ¹	P ²	R ¹²
Output (kg.)	1,95,000	3,90,000	81,250
Selling price per kg.	₹ 200	₹ 120	₹ 40
Further processing costs	₹ 26,00,000	₹ 39,00,000	-

FIND OUT the amount of joint product cost to be allocated to P² by using the physical volume method.

- (a) ₹ 65,00,000
- (b) ₹ 97,50,000
- (c) ₹ 39,00,000
- (d) ₹ 32,50,000

(2 Marks)

PART-II – Descriptive Questions (70 Marks)

Question No. 1 is compulsory.

Attempt any **four** questions out of the remaining **five** questions.

1. (a) Petro Ltd. is a petroleum refining company which uses cracking process for producing gasoline, diesel and Heavy fuel oil (HFO). All three final products are extracted simultaneously at one common split-off point.

Gasoline and diesel are immediately available for sale upon separation, requiring no further processing. In contrast, heavy fuel oil (HFO) undergoes additional processing before it can be sold, as there is no market for it at the split-off point.

Throughout the year, the selling prices and total quantities sold for each item were as follows:

Product	Quantity sold (Gallons)	Selling Price per gallon (₹)
Gasoline	1,674	400
Diesel	4,743	300
Heavy fuel oil (HFO)	6,624	200

The selling prices listed above are projected to remain unchanged in the upcoming year.

The total joint manufacturing costs for the year amounted to ₹ 15,00,000, with an additional cost of ₹ 7,44,000 incurred for finishing Heavy fuel oil (HFO).

There were no opening inventories of gasoline, diesel and Heavy fuel oil (HFO). Though, at the end of the period, the following inventories of complete units were available: 1,620 gallons of gasoline, 540 gallons of diesel, and 225 gallons of Heavy fuel oil (HFO).

You are required to COMPUTE the following for gasoline, diesel and Heavy fuel oil (HFO)-

- (i) joint cost allocated, and
- (ii) cost of goods sold

using Net Realisable Value Method of joint cost allocation.

(5 Marks)

- (b) The following information have been extracted from the cost records of a manufacturing company:

	(₹)
Stores	
* Opening balance	9,000
* Purchases	48,000

* Transfer from WIP	24,000
* Issue to work-in-progress	48,000
* Issue for repairs	6,000
* Deficiency found in stock	1,800
Work-in-Progress:	
* Opening balance	18,000
* Direct Wages applied	18,000
* Overhead charged	72,000
* Closing balance	12,000
Finished Production :	
* Entire production is sold at a profit of 10% on cost from work-in-progress	
* Wages paid.	21,000
* Overhead incurred	75,000

DRAW the Stores Leger Control A/c, Work-in-Progress Control A/c, Overheads Control A/c and Costing Profit and Loss A/c. **(5 Marks)**

- (c) The management of a company wants to formulate an incentive plan for the workers with a view to increase productivity. The following particulars have been extracted from the books of company:

Piece Wage rate	₹ 10
Weekly working hours	40
Hourly wages rate	₹ 40 (guaranteed)
Standard/normal time per unit	15 minutes.
Actual output for a week:	
Worker A:	176 pieces
Worker B:	140 pieces

Under Halsey scheme, worker gets a bonus equal to 50% of Wages of time saved.

CALCULATE earning of workers under Halsey's and Rowan's premium scheme. **(4 Marks)**

2. (a) Baba Ltd. belongs to an automotive industry, manufacturing hybrid bicycles. The production of bicycles passes through three departments, viz. X1, Y2, Z3. The bicycles being equipped with gears needs quality check from time to time. Thus, the company also operates two service departments, namely quality control (QC) and maintenance (M), for its bicycle.

Following information is extracted from the accounting books regarding expenses as incurred/ charged:

Particulars	(₹)
Rent and Rates	40,00,000
General Lighting	4,80,000
Indirect Wages	15,51,200
Power	12,00,000
Depreciation on Machines	80,00,000
Sundries	77,56,000

Additional information:

	Production Departments			Service Departments	
	X1	Y2	Z3	QC	M
Direct wages (₹)	24,00,000	16,00,000	24,00,000	12,00,000	1,56,000
Working hours	6,140	8,950	4,838	-	-
Value of machines (₹)	4,80,00,000	6,40,00,000	8,00,00,000	40,00,000	40,00,000
H.P. of machines	120	60	100	20	-
Light points	20	30	40	20	10
Floor space (sq. ft.)	4,000	5,000	6,000	4,000	1,000

A technical assessment unveiled the following basis for the apportionment of expenses of service departments:

	X1	Y2	Z3	QC	M
QC	20%	30%	40%	-	10%
M	40%	20%	30%	10%	-

You are required to DETERMINE the following:

- Overheads distributed to all the departments, viz. X1, Y2, Z3, QC and M.
- Overheads total and rate per hour under all the Production Departments after redistribution of Service Department's Overhead.

- (iii) Total cost of a bicycle, considering the Direct Material and labour Cost of ₹ 20,000 and ₹ 12,000 respectively, which is being processed for manufacturing in Departments X1, Y2 and Z3 for 4, 5 and 3 hours respectively. **(5 + 5 + 2 = 12 Marks)**
- (b) Luxz Ltd. is into luxury pens business manufacturing 120 pens in a batch. To process a single batch of 120 pens, company needs to incur following expenditure:

Particulars	(₹)
Direct Materials	57,375
Direct wages	6,750
Batch Set-up cost	18,900

For each batch, the company absorbs the Production Overheads at a rate of 20% of direct wages and 15% of the total production cost is allocated to cover selling, distribution, and administrative overheads.

During the month of March, Luxz Ltd. received an order for 2,400 pens and the company aims to achieve a profit margin of 25% on its sales value.

You are required to DETERMINE the total sales value for 2,400 pens. **(2 Marks)**

3. (a) Following information is available from the books of YSPP Ltd. for the current year ending 31st March:

S. No.	Particulars	(₹)	(₹)
(i)	Raw materials purchased		35,00,00,000
(ii)	Freight inwards		39,22,100
(iii)	Wages paid to factory workers		1,02,20,000
(iv)	Contribution made towards employees' PF & ESIS		12,60,000
(v)	Hire charges paid for hiring specific equipment		8,40,000
(vi)	Amount paid for power & fuel		16,17,000
(vii)	Amount paid for purchase of moulds and patterns (life is equivalent to four years production)		31,36,000
(viii)	Job charges paid to job workers		28,42,000
(ix)	Lease rent paid for production assets		3,92,000
(x)	Depreciation on:		

	Factory building	2,94,000	
	Office building	1,96,000	
	Plant & Machinery	4,41,000	
	Delivery vehicles	3,01,000	12,32,000
(xi)	Salary paid to supervisors		4,41,000
(xii)	Repairs & Maintenance paid for: Plant & Machinery	1,68,000	
	Sales office building	63,000	2,31,000
(xiii)	Insurance premium paid for:		
	Plant & Machinery	1,09,200	
	Factory building	63,350	
	Stock of raw materials & WIP	1,26,000	2,98,550
(xiv)	Expenses paid for quality control check activities		68,600
(xv)	Salary paid to quality control staffs		3,36,700
(xvi)	Research & development cost paid for improvement in production process		63,700
(xvii)	Expenses paid for administration of factory work		4,15,100
(xviii)	Salary paid to functional managers:		
	Production control	33,60,000	
	Finance & Accounts	32,13,000	
	Sales & Marketing	35,42,000	1,01,15,000
(xix)	Salary paid to General Manager		43,96,000
(xx)	Packing cost paid for:		
	Primary packing necessary to maintain quality	3,36,000	
	For re-distribution of finished goods	3,92,000	7,28,000
(xxi)	Fee paid to auditors		6,30,000
(xxii)	Fee paid to independent directors		7,70,000
(xxiii)	Value of stock as on 1 st April (beginning):		
	Raw materials	63,00,000	

	Work-in-process	32,20,000	
	Finished goods	38,50,000	1,33,70,000
(xxiv)	Value of stock as on 31 st March (ending):		
	Raw materials	33,60,000	
	Work-in-process	30,45,000	
	Finished goods	63,00,000	1,27,05,000

Due to delay in picking up cargo from the port, YSPP Ltd. had to pay ₹ 15,000 as demurrage in the month of March.

From the above data you are required to PREPARE Statement of cost for YSPP Ltd. for the year ended 31st March, showing (i) Prime cost, (ii) Factory cost, (iii) Cost of Production, (iv) Cost of sales.

(2 + 2 + 2 + 2 = 8 Marks)

(b) Following information is extracted from the purchase department of A Ltd.:

- (i) Number of units to be purchased during the year is 10,000
- (ii) Cost of placing a purchase order is ₹ 40
- (iii) Purchase price per unit is ₹ 80
- (iv) Insurance charges to be paid for protecting goods during transit is ₹ 20 per unit
- (v) Cash discount to be received is 2%
- (vi) Annual cost of storage per unit is ₹ 5
- (vii) Details of lead time:
 - Average- 20 days
 - Maximum- 30 days
 - Minimum- 10 days
 - For emergency purchases- 8 days.
- (viii) Rate of consumption:
 - Average- 30 units per day
 - Maximum- 40 units per day.

From the information given above, you are required to CALCULATE:

- (i) Re-ordering level
- (ii) Maximum level
- (iii) Minimum level
- (iv) Danger level.

(6 Marks)

4. (a) Xtyle Ltd. is a leading manufacturer in the textile industry, renowned for its commitment to quality and innovation. With decades of experience, the company specializes in producing a diverse range of textile products, including high-quality towels, designed to meet the varying needs of its

customers. The company offers mainly three types of towel, viz. Hand towels, Kitchen towels and Gym towels, catering to both everyday use and specialized applications. Below are the key production data for a recent period:

Particulars	Hand towels	Kitchen towels	Gym towels
Production (units)	9,000	15,000	60,000
Machine hours per unit	10	18	14
Direct Labour hours per unit	4	12	8
Direct Material per unit (₹)	450	400	600

Currently, the company utilizes a traditional costing method, which assigns all production overhead costs based on the number of machine hours used. The overhead cost is calculated at a rate of ₹ 30 per machine hour. Additionally, the direct labor cost is charged at ₹ 100 per hour.

Now, the company plans to implement an Activity-Based Costing (ABC) system to enhance cost accuracy and provide a clearer understanding of the costs associated with each product.

The activity analysis is provided as under:

Particulars	Hand towels	Kitchen towels	Gym towels
Batch size (units)	450	1,500	3,000
Number of purchase orders per batch	3	10	8
Store delivery	45	80	125
Number of inspections per batch	5	4	3

Further, the total production overheads can be divided into several key categories. Machine setup costs account for 20% of the total, while inspection costs make up 35%. Material procurement-related costs represent 10%, and store delivery costs also constitute 10%. Finally, machine operation costs contribute 25% to the overall overheads. This breakdown provides insight into how resources are allocated across various activities within the production process.

You are required to CALCULATE the cost per unit of each product using -

- (i) traditional method.
 - (ii) activity based costing principles. **(6 Marks)**
- (b) The following information relates to Anu Limited, a AI enabled toy manufacturing company:

The selling price of a toy is ₹ 3,000, and sales are made on credit and invoiced on the last day of the month.

Variable costs of production per toy are materials (₹ 1,000), labour (₹ 800), and overhead (₹ 400)

The sales manager has forecasted the following volumes:

Month	No. of Toys
November	1,000
December	1,000
January	1,000
February	1,250
March	1,500
April	2,000
May	1,900
June	2,200
July	2,200
August	2,300

Customers are expected to pay 50% One month after the sale and 50% Two months after the sale.

The company produces the toys two months before they are sold and the creditors for materials are paid two months after production.

Variable overheads are paid in the month following production and are expected to increase by 25 % in April; 75% of wages are paid in the month of production and 25% in the following month. A wage increase of 25% will take place on 1st March.

The company needs funds for the running the business and purchase of new machine so it will sell one of its freehold properties in June for ₹ 20,00,000, and buy a new machine in June for ₹ 5,00,000. Depreciation is currently ₹ 10,000 per month, and will rise to ₹ 15,000 after the purchase of the new machine.

The company's corporation tax of ₹ 1,00,000 is due for payment in March.

The company presently has a cash balance at bank on 31 December 2023, of ₹ 50,000.

You are required to PREPARE a cash budget for the six months from January to June, 2024. **(8 Marks)**

5. (a) Hawtt Veel is a renowned brand of HV Ltd. which manufactures toy car. The manufacturing process of the toy cars at first involve designing the parts, creating the mold and then simultaneously melting the plastic. As the mold created last year is being used as it is for the current year, the first process involves only melting the plastic (Process I). The next process is about injecting the plastic into the mold and assembling the parts formed (Process II).

During the month of April, the materials for 1,20,000 toy cars were put through Process I of which melting process were completed for 90,000 toy cars only before transferring to Process II.

The costs incurred in Process I are as follows:

Direct material	₹ 22,50,000
Direct wages	₹ 27,00,000
Factory overheads	₹ 18,00,000

Degree of completion for those not transferred to Process II is as follows:

Materials	100%
Labour and overheads	50%

Out of those transferred to Process II for injecting and assembling, 84,000 units of toy car were completed and transferred to finished goods store for protective packing. The process of protective packing is done at the end of the Process II and the costs incurred are as follows:

Packing materials	₹ 6,00,000
Direct wages	₹ 5,25,000
Factory overheads	₹ 6,75,000

There was a normal loss of 600 units in Process II with no salvage value.

Some units were still in progress under Process II and thus, shifted for the next month process. The degree of completion for those not transferred to finished goods store is as follows:

Materials	100%
Labour and overheads	25%

You are required to PREPARE-

- (i) Statement of Equivalent Production, Cost per unit and Process I A/c.
- (ii) Statement of Equivalent Production, Cost per unit and Process II A/c. **(10 Marks)**
- (b) EXPLAIN the Usefulness/Suitability of ABC. **(4 Marks)**
6. (a) Cost and Management Accounting information is used by different stakeholders. The users of the information can be broadly categorised into internal and external to the entity.
GIVE two examples of internal users and three examples of external users and EXPLAIN how they are concerned with the Cost and Management Accounting information. **(5 Marks)**
- (b) EXPLAIN the Methods for ascertaining Service Cost Unit. **(5 Marks)**

- (c) Despite the many benefits of Budgetary Control System, it does have its own limitations. DISCUSS those limitations. **(4 Marks)**

OR

- (d) IDENTIFY the method of costing in the following cases and give one example of industry where this method is followed:
- (i) Cost of each job is ascertained separately. It is suitable in all cases where work is undertaken on receiving a customer's order.
 - (ii) Cost of completing each stage of work is ascertained.
 - (iii) Each group is treated as a unit of cost and thus separately costed. Here cost per unit is determined by dividing the cost of the group by the number of units produced.
 - (iv) A combination of two or more methods of costing. **(4 Marks)**

INTERMEDIATE: GROUP – II

PAPER – 4: COST AND MANAGEMENT ACCOUNTING

Suggested Answers/ Solution

PART I – Case Scenario based MCQs

1. (c) ₹ 1,50,000 (A)

Fixed Overhead Cost Variance = Absorbed Fixed Overheads - Actual Fixed Overheads

Absorbed Fixed Overheads = (Budgeted Fixed Overheads / Budgeted Production) x Actual Production

= (₹ 20,00,000 / 10,000 units) x 9,500 units

= ₹ 19,00,000

Adjusted Actual Fixed Overheads = ₹ 19,50,000 + ₹ 1,00,000
= ₹ 20,50,000

Fixed Overhead Cost Variance = ₹ 19,00,000 - ₹ 20,50,000
= ₹ 1,50,000 (Adverse)

2. (d) ₹ 1,00,000 (A)

Fixed Overhead Volume Variance = (Actual Production - Budgeted Production) x Standard Fixed Overhead Rate per Unit

Standard Fixed Overhead Rate per Unit = ₹ 20,00,000 / 10,000 units
= ₹ 200 per unit

Fixed Overhead Volume Variance = (9,500 units - 10,000 units) x ₹ 200

= 500 units x ₹ 200

= ₹ 1,00,000 (Adverse)

3. (c) 0

Variable Overhead Efficiency Variance = (Standard Hours for Actual Production - Actual Hours Worked) x Standard Variable Overhead Rate

Standard Hours for Actual Production = 9,500 units x 1.5 hours/unit
= 14,250 hours

Variable Overhead Efficiency Variance = $(14,250 - 14,250) \times ₹ 50 = 0$

4. (b) **₹ 42,500 (A)**

Variable Overhead Expenditure Variance = (Standard Rate - Actual Rate) x Actual Hours Worked

Total Variable Overhead for Actual Hours: $(10,000 \times ₹ 50) + (4,250 \times ₹ 60) = ₹ 5,00,000 + ₹ 2,55,000 = ₹ 7,55,000$

Variable Overhead Expenditure Variance = $(₹ 50 \times 14,250 \text{ hours}) - ₹ 7,55,000$

= ₹ 42,500 (Adverse)

5. (b) **₹ 50,000 (A)**

Fixed Overhead Expenditure Variance = Budgeted Fixed Overheads - Actual Fixed Overheads

= ₹ 20,00,000 - ₹ 20,50,000

= ₹ 50,000 (Adverse)

6. (b) **₹ 75,47,750**

Funds required for foreign order:

Costs	Amounts
Direct material per unit	90
Add: Direct labour per unit	60
Add: special services per unit	40
	190
Add: packaging per unit (20% x prime cost, 20% x (90 + 60 + 80))	46
Variable cost per unit	236
Total variable cost (236x30,000)	70,80,000
Add: freight	80,000
Add: professional fees	25,000
Add: custom charges (500kg x 80% x 80 x 6)	1,92,000
	73,77,000
Add: shipping ((500x80%/10) x 2,800)	1,12,000
Add: insurance	1,11,000
Funds required	76,00,000

Net amount of interest earned (interest earned in 9.25% and paid is 6.50% for 3 months) = $76,00,000 \times (9.25\% - 6.50\%) \times 3/12 = 52,250$

So, net cash outflow due to export order = $76,00,000 - 52,250 = 75,47,750$

7. (a) \$ 4.23

Minimum price :-

Variable cost (net)	75,47,750
Add: fixed cost recovery (110 x 10,000 units)	11,00,000
Add: loss of profit (200 x 10,000 units)	<u>20,00,000</u>
Minimum price	<u>1,06,47,750</u>
Minimum price per unit 1,06,47,750/30,000	<u>₹ 354.925</u>
Minimum price is \$ (\$1 = ₹ 83.864)	<u>\$4.23</u>

8. (c) ₹ 39,94,250

PROFIT EARNED:

SALES (\$4.90 x 30,000 x RS. 86)	₹ 1,26,42,000
(-) Variable cost (net)	(75,47,750)
(-) allotted fixed cost (10,000 units x110)	<u>(11,00,000)</u>
PROFIT	<u>₹ 39,94,250</u>

9. (d) ₹ 50,94,250

CASH INFLOW:

SALES (\$4.90 x 30,000 x RS. 86)	₹ 1,26,42,000
(-) Variable cost (net)	<u>(75,47,750)</u>
CASH INFLOW	<u>₹ 50,94,250</u>

10. (a) ₹ 19,94,250

Incremental benefits:

SALES (\$4.90 x 30,000 x RS. 86)	₹ 1,26,42,000
(-) Variable cost (net)	(75,47,750)
(-) allotted fixed cost (10,000 units x110)	(11,00,000)
(-) loss of profit (10,000x200)	<u>(20,00,000)</u>
Incremental benefits	<u>19,94,250</u>

11. (c) Replaced- 30 employees, left and discharged- 18 employees and recruited & joined- 42 employees

(i) **Number of employees replaced:**

Employee Turnover rate (Replacement method)

$$= \left(\frac{\text{No. of Replacements}}{\text{Average number of employees on roll}} \times 100 \right)$$

$$\text{Or, } \left(\frac{15}{100} \right) = \left(\frac{\text{No. of replacements}}{200} \right)$$

$$\text{Or, Number of Replacements} = \left(\frac{200 \times 15}{100} \right) = 30$$

(ii) Number of employees left and discharged:

Employee turnover rate (Separation method)

$$= \left(\frac{\text{No. of Separations (S)}}{\text{Average number of employees on roll}} \times 100 \right)$$

$$\text{Or,} \quad \left(\frac{9}{100} \right) = \left(\frac{S}{200} \right)$$

$$\text{Or,} \quad S = 18$$

Hence, number of employees left and discharged = 18

(iii) Number of employees recruited and joined:

Employee turnover rate (Flux method)

$$= \left(\frac{\text{No. of Separations (S)} + \text{No. of Accessions (A)}}{\text{Average number of employees on roll}} \times 100 \right)$$

$$\text{Or,} \quad \left(\frac{30}{100} \right) = \left(\frac{18 + A}{200} \right)$$

$$\text{Or,} \quad A = \left(\frac{6000}{100} - 18 \right) = 42$$

Hence, number of employees recruited and joined = 42

12. (c) Losses on the sale of investments not treated in Financial Accounts

13. (d) 1,00,000 units

Current Year production = 60% of 2,00,000 units

= 1,20,000 units

Previous Year production = $\left(\frac{1,20,000 \text{ units}}{1.5 \text{ times}} \right)$

= 80,000 units

Particulars	Previous Year	Current Year	Difference
Sales (Units)	80,000	1,20,000	40,000
Total Cost (₹)	44,72,000	59,28,000	14,56,000

Variable Cost per unit = $\frac{\text{Change in Total Cost}}{\text{Change in sales volume}}$

$$= \left(\frac{\text{₹ } 14,56,000}{40,000 \text{ units}} \right)$$

= ₹ 36.40 per unit

Total Fixed Cost (₹) = ₹ 59,28,000 - (1,20,000 units × ₹ 36.40)
= ₹ 15,60,000

Break- even point (in units) = $\frac{\text{Fixed Cost}}{\text{Contribution per unit}}$

$$= \left(\frac{\text{₹ } 15,60,000}{\text{₹ } 52 - \text{₹ } 36.40} \right)$$

$$= 1,00,000 \text{ units}$$

14. (c) **Marketing and Sales support-** ₹ 28,62,01,000, **Operations-** ₹ 18,03,52,500, **I.T. Cost-** ₹ 30,71,90,000 and **Support functions-** ₹ 19,92,56,500

Calculation of total cost for 'Max Jivan' Insurance policy

	Particulars	Amount (₹)	Amount (₹)
a.	Marketing and Sales support:		
	- Policy development cost	4,86,50,000	
	- Cost of marketing	19,30,71,000	
	- Sales support expenses	4,44,80,000	28,62,01,000
b.	Operations:		
	- Policy issuance cost	4,10,05,000	
	- Policy servicing cost	13,40,65,500	
	- Claim management cost	52,82,000	18,03,52,500
c.	IT Cost		30,71,90,000
d.	Support functions		
	- Postage and logistics	4,50,36,000	
	- Facilities cost	6,49,82,500	
	- Employees cost	2,25,18,000	
	- Office administration cost	6,67,20,000	19,92,56,500
	Total Cost		97,30,00,000

15. (a) ₹ 65,00,000

Calculation of Net joint costs to be allocated:

Particulars	Amount (₹)
Joint Costs	1,30,00,000
Less: Net Realizable value of by-product R ¹² (81,250 kg. × ₹ 40)	32,50,000
Net joint costs to be allocated	97,50,000

Therefore, the amount of joint product cost to be allocated to P² by using the physical volume method

$$= \left(\frac{\text{Physical quantity of P}^2}{\text{Total quantity}} \right) \times \text{Net joint costs to be allocated}$$

$$= \left(\frac{3,90,000 \text{ kg}}{5,85,000 \text{ kg}} \right) \times ₹ 97,50,000 = ₹ 65,00,000$$

PART-II Descriptive Questions

1. (a) (i) **Statement of Joint Cost allocation of inventories of gasoline, diesel and Heavy fuel oil (HFO)**

(By using Net Realisable Value Method)

	Products			Total
	Gasoline	Diesel	Heavy fuel oil (HFO)	
	(₹)	(₹)	(₹)	
Final sales value of total production (Working Note 1)	13,17,600 (3,294 × ₹ 400)	15,84,900 (5,283 × ₹ 300)	13,69,800 (6,849 × ₹ 200)	42,72,300
Less: Additional cost	-	-	(7,44,000)	(7,44,000)
Net realisable value (at split-off point)	13,17,600	15,84,900	6,25,800	35,28,300
Joint cost allocated (Working Note 2)	5,60,156	6,73,795	2,66,049	15,00,000

(ii)

Cost of goods sold

(By using Net Realisable Value Method)

	Products			Total
	Gasoline	Diesel	Heavy fuel oil (HFO)	
	(₹)	(₹)	(₹)	
Allocated joint cost (from (i))	5,60,156	6,73,795	2,66,049	15,00,000
Additional costs	--	--	7,44,000	7,44,000
Cost of goods available for sale (CGAS)	5,60,156	6,73,795	10,10,049	22,44,000
Less: Cost of ending inventory (Working Note 1)	2,75,485 (CGAS × 49.18%)	68,862 (CGAS × 10.22%)	33,231 (CGAS × 3.29%)	3,77,578
Cost of goods sold	2,84,671	6,04,933	9,76,818	18,66,422

Working Notes

1. **Total production of three products for the year**

Products	Quantity sold (in gallon)	Quantity of ending inventory (in gallon)	Total production	Ending inventory percentage (%)
(1)	(2)	(3)	(4) = [(2) + (3)]	(5) = (3)/ (4)
Gasoline	1,674	1,620	3,294	49.18

Diesel	4,743	540	5,283	10.22
Heavy fuel oil (HFO)	6,624	225	6,849	3.29

2. Joint cost apportioned to each product

$$\frac{\text{Total Joint cost}}{\text{Total Net Realisable Value}} \times \text{Net Realisable Value of each product}$$

Total cost of Gasoline	$\frac{\text{₹ } 15,00,000}{\text{₹ } 35,28,300} \times \text{₹ } 13,17,600$	₹ 5,60,156
Total cost of Diesel	$\frac{\text{₹ } 15,00,000}{\text{₹ } 35,28,300} \times \text{₹ } 15,84,900$	₹ 6,73,795
Total cost of Heavy fuel oil (HFO)	$\frac{\text{₹ } 15,00,000}{\text{₹ } 35,28,300} \times \text{₹ } 6,25,800$	₹ 2,66,049

(b)

Stores Ledger Control A/c

Particulars	(₹)	Particulars	(₹)
To Balance b/d	9,000	By Work in Process	48,000
To General Ledger Adjustment A/c	48,000	By Overhead Control A/c	6,000
To Work in Process A/c	24,000	By Overhead Control A/c (Deficiency)	1,800*
		By Balance c/d	25,200
	81,000		81,000

*Deficiency assumed as normal (alternatively can be treated as abnormal loss)

Work in Progress Control A/c

Particulars	(₹)	Particulars	(₹)
To Balance b/d	18,000	By Stores Ledger Control a/c	24,000
To Stores Ledger Control A/c	48,000	By Costing P/L A/c (Balancing figures being Cost of finished goods)	1,20,000
To Wages Control A/c	18,000	By Balance c/d	12,000
To Overheads Control a/c	72,000		
	1,56,000		1,56,000

Overheads Control A/c

Particulars	(₹)	Particulars	(₹)
To Stores Ledger Control A/c	6,000	By Work in Process A/c	72,000
To Stores Ledger Control A/c	1,800	By Balance c/d (Under absorption)	13,800

To Wages Control A/c (₹ 21,000- ₹18,000)	3,000		
To Gen. Ledger Adjust. A/c	75,000		
	85,800		85,800

Costing Profit & Loss A/c

Particulars	(₹)	Particulars	(₹)
To Work in progress	1,20,000	By Gen. ledger Adjust. A/c (Sales) (1,20,000 + 12,000)	1,32,000
To Gen. Ledger Adjust. A/c (Profit)	12,000		
	1,32,000		1,32,000

(c) Calculation of earnings for workers under different incentive plans:

Halsey's Premium Plan:

	Worker – A	Worker – B
Actual time taken	40 hours	40 hours
Standard time for actual Production	44 hours $(\frac{176 \text{ Pcs} \times 15 \text{ Min.}}{60 \text{ Min.}})$	35 hours $(\frac{140 \text{ Pcs} \times 15 \text{ Min.}}{60 \text{ Min.}})$
Minimum Wages	₹ 1,600 (40 hours x ₹ 40)	₹ 1,600 (40 hours x ₹ 40)
Bonus	₹ 80 {50% (44-40) x ₹40}	No bonus
Earning	<u>₹ 1,680</u>	<u>₹ 1,600</u>

Rowan's Premium Plan:

Minimum Wages (as above)	₹ 1,600	₹ 1,600
Bonus	= ₹ 145.45 $(\frac{4 \text{ hours}}{44 \text{ hours}} \times 40 \text{ hours} \times ₹40)$	No bonus
Earning	<u>₹ 1,745.45</u>	<u>₹ 1,600</u>

2. (a) (i) Statement Showing Distribution of Overheads of Baba Ltd.

Particulars	Basis	Total	Production Departments			Service Departments	
			X1	Y2	Z3	QC	M
		(₹)	(₹)	(₹)	(₹)	(₹)	(₹)
Direct wages	Actual	13,56,000	-	-	-	12,00,000	1,56,000
Rent & rates	Area	40,00,000	8,00,000	10,00,000	12,00,000	8,00,000	2,00,000

General lighting	Light points	4,80,000	80,000	1,20,000	1,60,000	80,000	40,000
Indirect wages	Direct wages	15,51,200	4,80,000	3,20,000	4,80,000	2,40,000	31,200
Power	H.P.	12,00,000	4,80,000	2,40,000	4,00,000	80,000	—
Depreciation of machines	Value of machines	80,00,000	19,20,000	25,60,000	32,00,000	1,60,000	1,60,000
Sundries	Direct wages	77,56,000	24,00,000	16,00,000	24,00,000	12,00,000	1,56,000
		2,43,43,200	61,60,000	58,40,000	78,40,000	37,60,000	7,43,200

(ii) Redistribution of Service Department's Expenses over Production Departments

	X1 (₹)	Y2 (₹)	Z3 (₹)	QC (₹)	M (₹)
Total overhead distributed as above	61,60,000	58,40,000	78,40,000	37,60,000	7,43,200
Dept. QC Overheads apportioned (20:30:40:—:10)	7,52,000	11,28,000	15,04,000	-37,60,000	3,76,000
Dept. M overheads apportioned (40:20:30:10:—)	4,47,680	2,23,840	3,35,760	1,11,920	-11,19,200
Dept. QC Overheads apportioned (20:30:40:—:10)	22,384	33,576	44,768	-1,11,920	11,192
Dept. M overheads apportioned (40:20:30:10:—)	4,477	2,238	3,358	1,119	-11,192
Dept. QC Overheads apportioned (20:30:40:—:10)	224	336	448	-1,119	112
Dept. M overheads apportioned (40:20:30:10:—)	45	22	34	11	-112
Dept. QC Overheads apportioned (20:30:40:—:10)	2	3	5	-11	-
Total	73,86,812	72,28,015	97,28,373		
Working hours	6,140	8,950	4,838		
Rate per hour	1,203	808	2,011		

(iii) Determination of total cost of a bicycle:

Particulars	(₹)
Direct material cost	20,000
Direct labour cost	12,000
Overhead cost (See working note)	14,885
	46,885

Working Note:

Overhead cost

$$= (\text{₹ } 1,203 \times 4 \text{ hrs.}) + (\text{₹ } 808 \times 5 \text{ hrs.}) + (\text{₹ } 2,011 \times 3 \text{ hrs.})$$

$$= \text{₹ } 4,812 + \text{₹ } 4,040 + \text{₹ } 6,033 = \text{₹ } 14,885$$

(b) Determination of total sales value of Luxury pens

Particulars	Amount per Batch (₹)	Amount for 2,400 units or 20 batches (₹)
Direct materials	57,375	11,47,500
Direct wages	6,750	1,35,000
Batch set-up cost	18,900	3,78,000
Production overheads (20% of direct wages)	1,350	27,000
Total Production Cost	84,375	16,87,500
Selling, distribution and administration cost (15% of Total Production cost)	12,656	2,53,125
Total Cost	97,031	19,40,625
Add: Profit (25% of Sales value or 1/3 rd of Total cost)	32,344	6,46,875
Total Sales value	1,29,375	25,87,500

3. (a) Statement of Cost of YSPP Ltd. for the year ended 31st March:

S. NO.	PARTICULARS	(₹)	(₹)
(I)	Material consumed:		
	Raw materials purchased	35,00,00,000	
	Freight inwards	39,22,100	
	Add: opening stock of raw materials	63,00,000	
	Less: closing stock of raw materials	(33,60,000)	35,68,62,100
(II)	Direct employee (labour) cost:		
	Wages paid to factory workers	1,02,20,000	
	Contribution made towards employees' PF & ESIS	12,60,000	1,14,80,000
(III)	Direct expenses:		

	Hire charges paid for hiring specific equipment	8,40,000	
	Amount paid for power & fuel	16,17,000	
	Amortised cost of moulds and patterns	7,84,000	
	Job charges paid to job workers	28,42,000	60,83,000
	Prime cost		37,44,25,100
(IV)	Works/ factory overheads:		
	Lease rent paid for production assets	3,92,000	
	Depreciation on factory building	2,94,000	
	Depreciation on plant & machinery	4,41,000	
	Repairs & maintenance paid for plant & machinery	1,68,000	
	Insurance premium paid for plant & machinery	1,09,200	
	Insurance premium paid for factory building	63,350	
	Insurance premium paid for stock of raw materials & WIP	1,26,000	
	Salary paid to supervisors	4,41,000	20,34,550
	Gross factory cost		37,64,59,650
	Add: opening value of w-i-p		32,20,000
	Less: closing value of w-i-p		(30,45,000)
	Factory cost		37,66,34,650
(V)	Quality control cost:		
	Expenses paid for quality control check activities	68,600	
	Salary paid to quality control staffs	3,36,700	4,05,300
(VI)	Research & development cost paid for improvement in production process		63,700
(VII)	Administration cost related with production:		
	-Expenses paid for administration of factory work	4,15,100	

	-Salary paid to production control manager	33,60,000	37,75,100
(VIII)	Add: primary packing cost		3,36,000
	Cost of production		38,12,14,750
	Add: opening stock of finished goods		38,50,000
	Less: closing stock of finished goods		(63,00,000)
	Cost of goods sold		37,87,64,750
(IX)	Administrative overheads:		
	Depreciation on office building	1,96,000	
	Salary paid to manager-finance & accounts	32,13,000	
	Salary paid to general manager	43,96,000	
	Fee paid to auditors	6,30,000	
	Fee paid to independent directors	7,70,000	92,05,000
(X)	Selling overheads:		
	Repairs & maintenance paid for sales office building	63,000	
	Salary paid to manager- sales & marketing	35,42,000	36,05,000
(XI)	Distribution overheads:		
	Depreciation on delivery vehicles	3,01,000	
(XII)	Packing cost paid for re-distribution of finished goods	3,92,000	6,93,000
	Cost of sales		39,22,67,750

Note: Demurrage is a type of penalty, thus will not form part of cost.

(b) Basic Data:

A (Number of units to be purchased annually) = 10,000 units

O (Ordering cost per order) = ₹ 40

C (Annual cost of storage per unit) = ₹ 5

Purchase price per unit = ₹ 80 + ₹ 20 (Insurance charges)

= ₹ 100

(Note: Cash discount is treated as an interest and finance item and thus, it is ignored.)

Computations:

- (i) **Re-ordering level** = Maximum usage per period × Maximum lead time
 (ROL) = 40 units per day × 30 days
 = **1,200 units**
- (ii) **Maximum level** = ROL + ROQ – [Min. rate of consumption × Min. lead time] (Refer to working notes 1 and 2)
 = 1200 units + 400 units – [20 units per day × 10 days]
 = **1,400 units**
- (iii) **Minimum level** = ROL – [Average rate of consumption × Average re-order-period]
 = 1,200 units – (30 units per day × 20 days)
 = **600 units**
- (iv) **Danger level** = Average consumption × Lead time for emergency purchases
 = 30 units per day × 8 days
 = **240 units**

Working Notes:

1. Minimum rate of consumption per day (X)

$$\text{Av. rate of consumption} = \frac{\text{Minimum rate of consumption} + \text{Maximum rate of consumption}}{2}$$

$$30 \text{ units per day} = \frac{X \text{ units/day} + 40 \text{ units per day}}{2}$$

$$\text{Or, } X = 20 \text{ units per day.}$$

2. Re-order Quantity (ROQ) or Economic Order Quantity (EOQ)

$$= \sqrt{\frac{2 \times 10,000 \text{ units} \times \text{Rs.} 40}{\text{Rs.} 5}}$$

$$= 400 \text{ units}$$

4. (a) (i) **Statement Showing “Cost per unit - Traditional Method”**

Particulars of Costs	Hand towels (₹)	Kitchen towels (₹)	Gym towels (₹)
Direct Materials	450	400	600

Direct Labour [(4, 12, 8 hours) × ₹ 100]	400	1,200	800
Production Overheads [(10, 18, 14 hours) × ₹ 30]	300	540	420
Cost per unit	1,150	2,140	1,820

(ii) Statement Showing “Cost per unit - Activity Based Costing”

Products	Hand towels	Kitchen towels	Gym towels
Production (units)	9,000	15,000	60,000
	(₹)	(₹)	(₹)
Direct Materials	40,50,000 (9,000 units x ₹ 450)	60,00,000 (15,000 units x ₹ 400)	3,60,00,000 (60,000 units x ₹ 600)
Direct Labour (refer Part (i) above)	36,00,000 (9,000 units x ₹ 400)	1,80,00,000 (15,000 units x ₹ 1,200)	4,80,00,000 (60,000 units x ₹ 800)
Setup Costs @ ₹ 1,44,000 per setup	28,80,000 (20 setups x ₹ 1,44,000)	14,40,000 (10 setups x ₹ 1,44,000)	28,80,000 (20 setups x ₹ 1,44,000)
Inspection Costs @ ₹ 63,000 per inspection	63,00,000 (100 inspections x ₹ 63,000)	25,20,000 (40 inspections x ₹ 63,000)	37,80,000 (60 inspections x ₹ 63,000)
Purchase Related Costs @ ₹ 11,250 per purchase order	6,75,000 (60 purchase orders x ₹ 11,250)	11,25,000 (100 purchase orders x ₹ 11,250)	18,00,000 (160 purchase orders x ₹ 11,250)
Store delivery costs @ ₹ 14,400 per store delivery	6,48,000 (45 store delivery x ₹ 14,400)	11,52,000 (80 store delivery x ₹ 14,400)	18,00,000 (125 store delivery x ₹ 14,400)
Machine Related Costs @ ₹ 7.5 per hour	6,75,000 (90,000 hours x ₹ 7.5)	20,25,000 (2,70,000 hours x ₹ 7.5)	63,00,000 (8,40,000 hours x ₹ 7.5)
Total Costs	1,88,28,000	3,22,62,000	10,05,60,000
Cost per unit (Total Cost ÷ no. of Units)	2,092	2,151	1,676

Working Notes:

A. Number of Batches, Purchase Orders, Inspections and Store Deliveries-

	Particulars	Hand towels	Kitchen towels	Gym towels	Total
A.	Production (units)	9,000	15,000	60,000	
B.	Batch Size (units)	450	1,500	3,000	
C.	Number of Batches (A÷B)	20	10	20	50
D.	Number of Purchase Order per batch	3	10	8	

E.	Total Purchase Orders [C × D]	60	100	160	320
F.	Number of Inspections per batch	5	4	3	
G.	Total Inspections [C × F]	100	40	60	200
H.	Total Store Deliveries	45	80	125	250

B. Total Machine Hours-

	Particulars	Hand towels	Kitchen towels	Gym towels
A.	Machine Hours per unit	10	18	14
B.	Production (units)	9,000	15,000	60,000
C.	Total Machine Hours [A × B]	90,000	2,70,000	8,40,000

Total Machine Hours = 12,00,000

Total Production Overheads-

= 12,00,000 hrs. × ₹ 30 = ₹ 3,60,00,000

C. Cost Driver Rates-

Cost Pool	%	Overheads (₹)	Cost Driver Basis	Cost Driver (Units)	Cost Driver Rate (₹)
Setup	20%	72,00,000	Number of batches	50	1,44,000 per Setup
Inspection	35%	1,26,00,000	Number of inspections	200	63,000 per Inspection
Purchases	10%	36,00,000	Number of purchase order	320	11,250 per Purchase order
Store delivery	10%	36,00,000	Number of store deliveries	250	14,400 per store delivery
Machine Operation	25%	90,00,000	Machine Hours	12,00,000	7.5 per Machine Hour

(b) Workings:

1. Sale receipts

Month	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Forecast sales (S)	1,000	1,000	1,000	1,250	1,500	2,000	1,900	2,200
	₹	₹	₹	₹	₹	₹	₹	₹
S×3000	30,00,000	30,00,000	30,00,000	37,50,000	45,00,000	60,00,000	57,00,000	66,00,000
Debtors pay:								
1 month 50%		15,00,000	15,00,000	15,00,000	18,75,000	22,50,000	30,00,000	28,50,000
2nd month 50%		-	15,00,000	15,00,000	15,00,000	18,75,000	22,50,000	30,00,000
	-	15,00,000	30,00,000	30,00,000	33,75,000	41,25,000	52,50,000	58,50,000

2. Variable overheads

Month	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Qty produced (Q)	1,000	1,250	1,500	2,000	1,900	2,200	2,200	2,300
	₹	₹	₹	₹	₹	₹	₹	₹
Var. overhead (Q×400)	4,00,000	5,00,000	6,00,000	8,00,000	7,60,000			
Var. overhead (Q×500)						11,00,000	11,00,000	11,50,000
Paid one month later		4,00,000	5,00,000	6,00,000	8,00,000	7,60,000	11,00,000	11,00,000

3. Wages payments

Month	Dec	Jan	Feb	Mar	Apr	May	Jun
Qty produced (Q)	1,250	1,500	2,000	1,900	2,200	2,200	2,300
	₹	₹	₹	₹	₹	₹	₹
Wages (Q × 800)	10,00,000	12,00,000	16,00,000				
Wages (Q × 1,000)				19,00,000	22,00,000	22,00,000	23,00,000
75% this month	7,50,000	9,00,000	12,00,000	14,25,000	16,50,000	16,50,000	17,25,000
25% next month		2,50,000	3,00,000	4,00,000	4,75,000	5,50,000	5,50,000
	7,50,000	11,50,000	15,00,000	18,25,000	21,25,000	22,00,000	22,75,000

CASH BUDGET – SIX MONTHS ENDED JUNE

	Jan	Feb	Mar	Apr	May	Jun
	₹	₹	₹	₹	₹	₹
Receipts:						
Sales receipts	30,00,000	30,00,000	33,75,000	41,25,000	52,50,000	58,50,000
Freehold property	-	-	-	-	-	20,00,000
	30,00,000	30,00,000	33,75,000	41,25,000	52,50,000	78,50,000
Payments:						
Materials	10,00,000	12,50,000	15,00,000	20,00,000	19,00,000	22,00,000
Var. overheads	5,00,000	6,00,000	8,00,000	7,60,000	11,00,000	11,00,000
Wages	11,50,000	15,00,000	18,25,000	21,25,000	22,00,000	22,75,000
Machine	-	-	-	-	-	5,00,000
Tax	-	-	1,00,000	-	-	-
	26,50,000	33,50,000	42,25,000	48,85,000	52,00,000	60,75,000
Net cash flow	3,50,000	(3,50,000)	(8,50,000)	(7,60,000)	50,000	17,75,000
Balance b/f	50,000	4,00,000	50,000	(8,00,000)	(15,60,000)	(15,10,000)
Cumulative cash flow	4,00,000	50,000	(8,00,000)	(15,60,000)	(15,10,000)	2,65,000

5. (a) (i) **Process I – Statement of Equivalent Production**

Particulars	Completed Units	Closing stock of WIP			Equivalent Production units
		Units	% of Completion	Equivalent Units	
	(1)			(2)	(1) + (2)
Material	90,000	30,000	100%	30,000	1,20,000
Wages	90,000	30,000	50%	15,000	1,05,000
Overhead	90,000	30,000	50%	15,000	1,05,000

Process I

Particulars	Process Cost (₹)	Equivalent Production (units)	Process Cost p.u. (₹) (2)/(3)	WIP stock Equivalent units	Cost of WIP Stock (₹) (4) x (5)	Transfer to Process II (₹) (2)-(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Material	22,50,000	1,20,000	18.750	30,000	5,62,500	16,87,500
Wages	27,00,000	1,05,000	25.714	15,000	3,85,714	23,14,286
Overhead	18,00,000	1,05,000	17.143	15,000	2,57,143	15,42,857
	67,50,000				12,05,357	55,44,643

Process I A/c

	Particulars	Unit	(₹)		Particulars	Units	(₹)
To	Direct material	1,20,000	22,50,000	By	Process II A/c	90,000	55,44,643
To	Direct wages	--	27,00,000	By	Closing W-I-P	30,000	12,05,357
To	Factory overhead	--	18,00,000				
		1,20,000	67,50,000			1,20,000	67,50,000

(ii) **Process II – Statement of Equivalent Production**

Particulars	Completed Units	Closing stock of WIP			Equivalent Production units
		Units	% of Completion	Equivalent Units	
	(1)			(2)	(1) + (2)
Material	84,000	5,400*	100%	5,400	89,400
Wages	84,000	5,400	25%	1,350	85,350
Overhead	84,000	5,400	25%	1,350	85,350

*(90,000 - 84,000 - 600) units = 5,400 units

Process II

Particulars	Process Cost (₹)	Equivalent Production (units)	Process Cost p.u. (₹) (2)/(3)	WIP stock Equivalent units	Cost of WIP Stock (₹) (4) x (5)	Transfer to Finished Stock (₹) (2)-(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Material	55,44,643	89,400	62.021	5,400	3,34,911	52,09,732

Wages	5,25,000	85,350	6.151	1,350	8,304	5,16,696
Overhead	6,75,000	85,350	7.909	1,350	10,677	6,64,323
	67,44,643				3,53,892	63,90,751
Add: Packing Material Cost						6,00,000
Cost of Finished Stock						69,90,751

Process II A/c

	Particulars	Units	(₹)		Particulars	Units	(₹)
To	Process I	90,000	55,44,643	By	Finished Stock	84,000	69,90,751
To	Direct wages	--	5,25,000	By	Normal loss	600	--
To	Factory overhead	--	6,75,000	By	WIP stock	5,400	3,53,892
To	Packing charges	--	6,00,000				
		90,000	73,44,643			90,000	73,44,643

(b) ABC is particularly needed by organisations for product costing in the following situations:

1. High amount of overhead: When production overheads are high and form significant costs, ABC is more useful than traditional costing system.
2. Wide range of products: ABC is most suitable, when, there is diversity in the product range or there are multiple products.
3. Presence of non-volume related activities: When non-volume related activities e.g. material handling, inspection set-up, are present significantly and traditional system cannot be applied, ABC is a superior and better option. ABC will identify non-value-adding activities in the production process that might be a suitable focus for attention or elimination.
4. Stiff competition: When the organisation is facing stiff competition and there is an urgent requirement to compute cost accurately and to fix the selling price according to the market situation, ABC is very useful. ABC can also facilitate in reducing cost by identifying non-value-adding activities in the production process that might be a suitable focus for attention or elimination.

6. (a) Internal Users

Internal users, who use the Cost and Management Accounting information may include the followings:

(a) Policy Makers- The policy makers are those who formulate strategies

- (i) to achieve the goals (short & long term both) to fulfil the objectives of the organisation.
- (ii) to position the organisation into the competitive market environment.

- (iii) to design the organisational structure to get the policy and strategies implemented. etc.

(b) Managers- The managers use the information

- (i) to know the cost of a cost object and cost centre
- (ii) to know the price for the product or service
- (iii) to measure and evaluate performance of responsibility centres
- (iv) to know the profitability-product-wise, department-wise, customer-wise etc.
- (v) to evaluate the strategic options and to make decisions

(c) Operational level staff- The operational level staff like supervisors, foreman, team leaders require information

- (i) to know the objectives and performance goals for them
- (ii) to know product and service specifications like volume, quality and process etc.
- (iii) to know the performance parameters against which their performance is measured and evaluated.
- (iv) to know divisional (responsibility centre) profitability etc.

(d) Employees- Employees are concerned with the information related with time and attendance, incentives for work, performance standards etc.

External Users

External users, who use the Cost and Management Accounting information may include the followings:

- (a) Regulatory Authorities-** Regulatory Authorities are concerned with cost accounting data and information for different purpose which includes tariff determination, providing subsidies, rate fixation etc. To do this the regulatory bodies require information on the basis of some standards and format in this regard.
- (b) Auditors-** The auditors while conducting audit of financial accounts or for some other special purpose audit like cost audit etc. require information related with costing and reports reviewed by management etc.
- (c) Shareholders-** Shareholders are concerned with information that effect their investment in the entity. Management communicates to the shareholders through periodic communique, annual reports etc. regarding new orders received, product expansion, market share for products etc.

- (d) **Creditors and Lenders-** Creditors and lenders are concerned with data and information which affects an entity's ability to serve lenders or creditors. For example, any financial institutions which provides loan to an entity against book debts and inventories are more concerned with regular reporting on net debt position and stock balances.

(b) **Methods for ascertaining Service Cost Unit**

Composite Cost Unit

Sometime two measurement units are combined together to know the cost of service or operation. These are called composite cost units. For example, a public transportation undertaking would measure the operating cost per passenger per kilometer.

Examples of Composite units are Tonne- km., Quintal- km, Passenger- km., Patient-day etc. **Composite unit may be computed in two ways.**

- (i) Absolute (Weighted Average) basis.
- (ii) Commercial (Simple Average) basis.

In both bases of computation of service cost unit, weightage is also given to qualitative factors rather quantitative (which are directly related with variable cost elements) factors alone.

- (i) **Weighted Average or Absolute basis** – It is a summation of the products of qualitative and quantitative factors. For example, to calculate absolute Tonne-Km for a goods transport is calculated as follows.:

$$\frac{\sum(\text{Weight Carried} \times \text{Distance})_1 + (\text{Weight Carried} \times \text{Distance})_2 + \dots + (\text{Weight Carried} \times \text{Distance})_n}{\text{Total Distance}}$$

Similarly, in case of Cinema theatres, price for various classes of seats is fixed differently. For example–

First class seat may be provided with higher quality service and hence charged at a higher rate, whereas Second Class seat may be priced less. In this case, appropriate weight to be given effect for First Class seat and Second Class seat – to ensure proper cost per composite unit.

- (ii) **Simple Average or Commercial Basis** – It is the product of average qualitative and total quantitative factors. For example, in case of goods transport, Commercial Tonne-Km is arrived at by multiplying total distance km., by average load quantity.

$$\Sigma(\text{Distance}_1 + \text{Distance}_2 + \dots + \text{Distance}_n) \times \left(\frac{W_1 + W_2 + \dots + W_n}{n} \right)$$

In both the example, variable cost is dependent of distance and is a quantitative factor. Since, the weight carried does not affect the variable cost hence and is a qualitative factor.

Equivalent Cost Unit/ Equivalent Service Unit:

To calculate cost or pricing of two more different grade of services which uses common resources, **each grade of service is assigned a weight and converted into equivalent units**. Converting services into equivalent units make different grade of services equivalent and comparable.

(c)

	Points	Description
1.	Based on Estimates	Budgets are based on a series of estimates, which are based on the conditions prevalent or expected at the time budget is established. It requires revision in plan if conditions change.
2.	Time factor	Budgets cannot be executed automatically. Some preliminary steps are required to be accomplished before budgets are implemented. It requires proper attention and time of management. Management must not expect too much during the initial development period.
3.	Co-operation Required	Staff co-operation is usually not available during the initial budgetary control exercise. In a decentralised organisation, each unit has its own objective and these units enjoy some degree of discretion. In this type of organisation structure, coordination among different units is required. The success of the budgetary control depends upon willing co-operation and teamwork,
4.	Expensive	The implementation of budget is somewhat expensive. For successful implementation of the budgetary control, proper organisation structure with responsibility is prerequisite. Budgeting process start from the collection of information to for preparing the budget and performance analysis. It consumes valuable resources (in terms of qualified manpower, equipment, etc.) for this purpose; hence, it is an expensive process.
5.	Not a substitute for management	Budget is only a managerial tool and must be intelligently applied for management to get

		benefited. Budgets are not a substitute for good management.
6.	Rigid document	Budgets are sometime considered as rigid documents. But in reality, an organisation is exposed to various uncertain internal and external factors. Budget should be flexible enough to incorporate ongoing developments in the internal and external factors affecting the very purpose of the budget.

(d)

S. No.	Method of costing	Example of industry where this method is followed
(i)	Job Costing	Printing press
(ii)	Process Costing	Paper and Pulp
(iii)	Batch Costing	Bakery
(iv)	Multiple Costing	Bicycles