

## **Paper 8- Cost Accounting**

## Paper-8: Cost Accounting

Full Marks: 100

Time allowed:3 hours

### Section - A

Answer the following questions:

1. (a) Choose the correct answer from the given four alternatives: [10 ×1 = 10]
- (i) Cost Unit of Hospital Industry is
- Tonne
  - Student per year
  - Kilowatt Hour
  - Patient Day
- (ii) Depreciation is an example of-
- Fixed Cost
  - Variable Cost
  - Semi Variable Cost
  - None
- (iii) Idle time is
- Time spent by workers in factory
  - Time spent by workers in office
  - Time spent by workers off their work
  - Time spent by workers on their job
- (iv) Over time is
- Actual hours being more than normal time
  - Actual hours being more than standard time
  - Standard hours being more than actual hours
  - Actual hours being less than standard time
- (v) Which of the following items is not included in preparation of cost sheet?
- Carriage inward
  - Purchase returns
  - Sales Commission
  - Interest paid
- (vi) Operating costing is applicable to:
- Hospitals
  - Cinemas
  - Transport undertaking
  - All of the above
- (vii) If sales are ₹90,000 and variable cost to sales is 75%. Contribution is
- ₹21,500
  - ₹22,500
  - ₹23,500
  - ₹67,500

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- (viii) P/V Ratio will increase if the
- There is a decrease in fixed cost
  - There is an increase in fixed cost
  - There is a decrease in selling price per unit
  - There is a decrease in variable cost per unit.
- (ix) Difference between standard cost and actual cost is called as
- Wastage
  - Loss
  - Variance
  - Profit
- (x) Sales Budget is a ...
- Expenditure budget
  - Functional budget
  - Master budget
  - None

**Answer:**

(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
d	a	c	a	d	d	b	d	c	b

- (b) Match the statement in Column I with the most appropriate statement in Column II:

[1×5 =5]

Column I		Column II	
(i)	Job Ticket	(A)	A Technique of Inventory Control
(ii)	Escalation Clause	(B)	BEP Chart
(iii)	VED Analysis	(C)	Contract Costing
(iv)	Angle of Incidence	(D)	Labour Cost Plus Factory Overhead
(v)	Conversion Cost	(E)	A Method of Time Booking

**Answer:**

Column I		Column II	
(i)	Job Ticket	(E)	A Method of Time Booking
(ii)	Escalation Clause	(C)	Contract Costing
(iii)	VED Analysis	(A)	A Technique of Inventory Control
(iv)	Angle of Incidence	(B)	BEP Chart
(v)	Conversion Cost	(D)	Labour Cost Plus Factory Overhead

- (c) State whether the following statements are True' or 'False':

[1x5=5]

- A flexible budget is one, which changes from year to year
- Variances are calculated for both material and labour.
- Multiple Costing is suitable for the banking Industry.
- Contact costing is variant of job costing
- Closing stock of finished goods should be valued on the basis of cost of sales.

**Answer:**

(i)	(ii)	(iii)	(iv)	(v)
False	True	False	True	False

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(d) Fill in the blanks suitably: [1x5=5]

- (i) Administration overheads are usually absorbed as a percentage of \_\_\_\_\_
- (ii) Variable cost per unit is \_\_\_\_\_
- (iii) Bin card shows \_\_\_\_\_ details of materials.
- (iv) Sum of material price variance and material usage variance is equal to \_\_\_\_\_ variance.
- (v) Contribution earned on Break-even sales equals to \_\_\_\_\_ of the firm.

**Answer:**

(i)	(ii)	(iii)	(iv)	(v)
Work cost	Fixed	Quantitative	material cost	Fixed cost

### Section - B

(Answers any five Questions, working notes should form part of the answer.)

2. (a) M Two workmen, Gyani and Jeetu, produce the same product using the same material. Their normal wage rate is also the same. Gyani is paid bonus according to the Halsey System, while Jeetu is paid bonus according to the Rowan System. The time allowed to make the product is 40 hours. Gyani takes 25 hours while Jeetu takes 32 hours to complete the product. The factory overheads are charged @ 125% of direct labour cost. The factory cost for the product for Gyani is ₹8,925 and for Jeetu it is ₹9,456. You are required to:

- (i) find the normal rate of wages;
- (ii) find the cost of materials;
- (iii) Prepare a statement comparing the element wise factory cost of the products as made by the two workmen. [21/2+21/2+5=10]

- (b) A factory has three production departments A, B and C and also two service departments 'X' and 'Y'. The primary distribution of the estimated overheads in the factory has just been completed. These details and the quantum of service rendered by the service departments, to the other departments are given below:

	A	B	C	X	Y
Primary distribution (₹)	2,40,000	2,10,000	2,50,000	1,40,000	96,000
Service rendered by					
Dept 'X'	30%	20%	35%	-	15%
Dept 'Y'	25%	40%	25%	10%	-

Prepare a statement showing the distribution of service dept. overheads to the production departments, by the simultaneous equation method. [5]

**Answer:**

- (a) Let 'x' be the material cost and 'y' be the wages rate. Earnings of Gyani under Halsey Plan:

	₹
Normal wages = 25 × ₹y	25y
Bonus = 40 – 25 = 15 × ₹y × 50%	7.5y
Total Earnings	32.5y

Earnings of Jeetu under Rowan Plan:

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	₹
Normal wages = $32 \times y$	32y
<b>Bonus</b> = $(32 \times 8) / 40 \times y$	6.4y
Total Earnings	38.4y
Total Earnings	38.4y

Factory Cost = Material + Wages + Factory overheads

In case Gyani:  $8,925 = x + 32.5y + 125\% \text{ of } 32.5y$

Or,  $x + 32.5y + 40.625y = 8,925$

Or,  $x + 73.125y = 8,925$  .....(1)

In case of Jeetu:-  $x + 38.4y + 125\% \text{ of } 38.4y = 9,456$

Or,  $x + 38.4y + 48y = 9,456$

Or,  $x + 86.4y = 9,456$  .....(2)

Solving equation (1) & (2)

$$x + 86.4y = 9,456 \text{ .....(2)}$$

$$-x + 73.125y = -8,925 \text{ .....(1)}$$

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$$13.275y = 531$$

Or,  $y = 40 \times 86.4 \times 40 = 9,456$

Or,  $x = 9,456 - 3,456$

Or,  $x = 6,000$

Hence, (a) Normal rate of wages (y) = ₹40 per hour

(b) Cost of material (x) = ₹6,000

(c) Statement of factory Cost

Particulars	Gyani ₹	Jeetu ₹
Material Cost	6,000	6,000
Wages : Gyani $(25 \times 40) + [(40 - 25) \times 40 \times 50\%]$	1,300	-
Jeetu: $(32 \times 40) + \frac{32 \times (40 - 31)}{40} \times 40$	-	1,536
Factory overhead @ 125% of wages	1,625	1,920
Factory Cost	8,925	9,456

(b) Let, P and N be the total overheads of the service departments "X" and "Y" respectively. Then

$P = 1,40,000 + 0.10N$ i.e.,	$10P - N$	= 14,00,000
$N = 96,000 + 0.15P$ and	$-0.15P + N$	= 96,000
(By adding)	$9.85P$	14,96,000
	$P = 14,96,000 / 9.85$	= ₹1,51,878
By substitution,	$N = 96,000 + 0.15 \times 1,51,878$	
	$= 96,000 + 22,782$	= ₹1,18,782

Statement showing the distribution of service dept. overheads to the production departments

Distribution of overheads of	A (₹)	B (₹)	C (₹)	Total (₹)
1,40,000 Dept. X (85% of ₹1,51,878)	45,563	30,376	53,157	1,29,096
96,000 Dept. Y (90% of ₹ 1,18,782)	29,696	47,513	29,695	1,06,904
2,36,000				
Total	75,259	77,889	82,852	2,36,000

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3. (a) How classification of costs is determined under CAS-1 [5]

(b) The following balances are shown in the Cost Ledger of Spark Ltd. as on 1st October, 2022:

Particulars	Dr. (₹)	Cr. (₹)
Work in progress Account	7,056	
Factory overheads suspense Account	360	
Finished stock Account	5,274	
Stores Ledger Control Account	9,450	
Administration Overheads Suspense A/C	180	
General Ledger Adjustment Account		22,320

Transactions for the year ended 30th September, 2022

Particulars	₹
Stores issued to production	45,370
Stores purchased	52,400
Material purchased for direct issued to production	1,135
Wages paid (including indirect labour ₹ 2,520)	57,600
Finished goods sold	1,18,800
Administration expenses	5,400
Selling expenses	6,000
Factory overheads	15,600
Store issued for Capital work-in-Progress	1,500
Finished goods transferred to warehouse	1,08,000
Store issued for factory repairs	2,000
Factory overheads recovered to production	16,830
Administration overheads charged to production	4,580
Factory overheads applicable unfinished work	3,080
selling overheads allocated to sales	5,500
Stores lost due to fire in store (not insured)	150
Administration expenses on unfinished work	850
Finished goods stock on 30.9.2017	14,274

You are required to record the entries in the cost ledger for the year ended 30th September, 2022. [10]

**Answer:**

- (a) As per Cost Accounting Standard 1 (CAS-1), the basis for cost classification is as follows:
- I. Nature of expense - Costs should be gathered together in their natural grouping such as Material, Labour and Other Direct expenses. Items of costs differ on the basis of their nature. The elements of cost can be classified in the following three categories. 1. Material 2. Labour 3. Expenses
  - II. Relation to Object – Traceability - If expenditure can be allocated to a cost centre or cost object in an economically feasible way then it is called direct otherwise the cost component will be termed as indirect. According to this criterion for classification, material cost is divided into direct material cost and indirect material cost, Labour cost is divided into direct labour and indirect labour cost and expenses into direct expenses and indirect expenses. Indirect cost is also known as overhead.

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- III. Functions/Activities - A business enterprise performs a number of functions like manufacturing, selling, research...etc. Costs may be required to be determined for each of these functions and on this basis functional costs may be classified into the following types: - (1) Production or Manufacturing Costs (2) Administration Costs (3) Selling & Distribution cost (4) Research & Development costs
- IV. Behaviour - Costs are classified based on behaviour as fixed cost, variable cost and semi-variable cost depending upon response to the changes in the activity levels.
- V. Management decision making - Ascertainment of cost is essential for making managerial decisions. On this basis costing may be classified into the following types. Some Examples are **Marginal Costing, Differential Cost, Opportunity Cost, Replacement Cost, Relevant Costs, Imputed Costs, Sunk Costs etc.**
- VI. Production Process - Batch Costing, Process Costing, Operation Cost, Operating Cost, Contract Costing etc.
- VII. Time Period Details can be discussed as below: A cost item is related to a specific period of time and cost can be classified according to the system of assessment and specific purpose like , Historical Costs, Predetermined Costs, Standard Costs, Estimated Costs.
- Techniques of Costing—
- A. Marginal Costing
  - B. Standard Costing
  - C. Budgetary Control
  - D. Uniform Costing

(b)

**Dr. Work-in-Progress Control Account Cr.**

Particulars	Amt. ₹	Particulars	Amt. ₹
To, Balance b/d	7,056	By, Finished Goods Control A/c	1,08,000
To, Material Control A/c	45,370	By, Balance c/d	
To, General Ledger Adjustment A/c	1,135	Factory Overhead	3,080
To, Wages control A/c	55,080	Admn. O.H.	850
To, Factory overhead control A/c	16,830	Material & Wages	22,051
To, Administrative Overhead Control A/c	4,580		25,981
To, Factory Overhead Control A/c	3,080		
To, Administrative Overhead Control A/c	850		
	<b>1,33,981</b>		<b>1,33,981</b>
To Balance b/d	25,981		

**Dr. Factory Overhead Suspense Account Cr.**

Particulars	₹	Particulars	₹
To, Balance b/d	360	By, Work-in-Progress Control A/c	3,080
To, Wages Control A/c	2,520	By, Work-in-Progress Control A/c	16,830
To, General Ledger Adjustment A/c	15,600	By, Balance c/d	570
To, Material Control A/c	2,000		
	<b>20,480</b>		<b>20,480</b>
To, Balance b/d	570		

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Dr.		Finished Goods Control Account		Cr.	
Particulars	₹	Particulars	₹		
To, Balance b/d	5,274	By, Cost of Sales A/c	99,000		
To, Work-in-progress Control A/c	1,08,000	By, Balance c/d	14,274		
	<b>1,13,274</b>			<b>1,13,274</b>	
To, Balance b/d	14,274				

Dr.		Material Control Account		Cr.	
Particulars	₹	Particulars	₹		
To, Balance b/d	9,450	By, Work-in-Progress Control A/c	45,370		
To, General Ledger Adjustment A/c	52,400	By, Capital Work-in-Progress Control A/c	1,500		
		By, Factory Overhead Suspense A/c	2,000		
		By, Costing Profit & Loss A/c	150		
		By, Balance c/d	12,830		
	<b>61,850</b>			<b>61,850</b>	
To, Balance b/d	12,830				

Dr.		Administrative Overhead Control Account		Cr.	
Particulars	₹	Particulars	₹		
To, Balance c/d	180	By, Work-in-Progress Control A/c	4,580		
To, General Ledger Adjustment A/c	5,400	By, Work-in-Progress Control A/c	850		
		By, Balance c/d	150		
	<b>5,580</b>			<b>5,580</b>	
To, balance b/d	150				

Dr.		General Ledger Adjustment (GLA) Account (or) Cost Ledger Control (CLC) Account		Cr.	
Particulars	₹	Particulars	₹		
To, Costing Profit & Loss A/c	1,18,800	By, Balance b/d	22,320		
To, Balance c/d	55,805	By, Material Control A/c	52,400		
		By, Work-in-Progress Control A/c	1,135		
		By, Wages Control A/c	57,600		
		By, Administrative Overhead Control A/c	5,400		
		By, Factory Overhead Control A/c	15,600		
		By, Selling and Distribution Overhead Control A/c	6,000		
		By, Costing Profit & Loss A/c	14,150		
	<b>1,74,605</b>			<b>1,74,605</b>	
		By Balance b/d	55,805		

Dr.		Wages Control Account		Cr.	
Particulars	₹	Particulars	₹		
To, General Ledger Adjustment A/c	57,600	By, Work-in-Progress Control A/c	55,080		
		By, Factory Overhead Control A/c	2,520		
	<b>57,600</b>			<b>57,600</b>	



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Dr.		Costing Profit & Loss Account		Cr.	
Particulars	₹	Particulars	₹		
To, Material Control A/c	150	By, General Ledger Adjustment Control A/c (Sales)		1,18,800	
To, Cost of Sales	1,04,500				
To, General Ledger Adjustment Control A/c (profit)	14,150				
	<b>1,18,800</b>			<b>1,18,800</b>	

Dr.		Selling and Distribution Overhead Control Account		Cr.	
Particulars	₹	Particulars	₹		
To, General Ledger Adjustment A/c	6,000	By, Cost of Sales A/c		5,500	
		By, Balance c/d		500	
	<b>6,000</b>			<b>6,000</b>	
To Balance b/d	500				

Dr.		Capital Work-in-progress Account		Cr.	
Particulars	₹	Particulars	₹		
To, Material Control A/c	1,500	By, Balance c/d		1,500	
	<b>1,500</b>			<b>1,500</b>	
To, balance b/d	1,500				

Dr.		Cost of Sales Account		Cr.	
Particulars	₹	Particulars	₹		
To, Selling & Distribution Control A/c	5,500	By, Costing Profit & Loss A/c		1,04,500	
To, Finished Goods Control A/c	99,000				
	<b>1,04,500</b>			<b>1,04,500</b>	

4. (a) A work order for 100 units of a commodity has to pass through four different machines of which the machine hour rates are: Machine P – ₹ 1.25, Machine Q – ₹ 2.50, Machine R – ₹ 3 and Machine S – ₹ 2.25.

Following expenses have been incurred on the work order – Materials ₹8,000 and Wages ₹500. Machine - P has been engaged for 200 hours. Machine - Q for 160 hours, Machine - R for 240 hours and Machine - S for 132 hours. After the work order has been completed, materials worth ₹ 400 are found to be surplus and are returned to stores. Office overhead used to be 40% of works costs, but on account of all-round rise in the cost of administration, distribution and sale, there has been a 50% rise in the office overhead expenditure. Moreover, it is known that 10% of production will have to be scrapped as not being up to the specification and the sale proceeds of the scrapped output will be only 5% of the cost of sale. If the manufacturer wants to make a profit of 20% on the total cost of the work order, find out the selling price of a unit of commodity ready for sale. [6]

- (b) A product passes through three processes — A, B and C. 10,000 units at a cost of ₹1.10 were issued to Process A. The other direct expenses were as follows:

	PROCESS-A	PROCESS-B	PROCESS-C
Sundry materials	1,500	1,500	1,500
Direct labour	4,500	8,000	6,500
Direct expenses	1,000	1,000	1,503

The wastage of process: A was 5% and in process B 4%

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The wastage of process 'A' was sold at ₹0.25 per unit and that of 'B' at ₹0.50 per unit and that of C at ₹ 1.00.

The overhead charges were 160% of direct labour. The final product was sold at ₹10 per unit fetching a profit of 20% on sales. Find out the percentage of wastage in Process 'C'. [9]

**Answer:**

(a) **Statement showing the selling price of a unit**

Particulars	Amount (₹)	Amount (₹)
Materials used (₹ 8,000 – ₹400)		7,600
Direct Wages		500
Prime Cost		8,100
Works Overhead at machine hour rate:		
Machine - P For 200 hours @ ₹ 1.25 per hour	250	
Machine - Q For 160 hours. @ ₹ 2.50 per hour	400	
Machine - R For 240 hours. @ ₹ 3 per hour	720	
Machine - S For 132 hours. @ ₹ 2.25 per hour	297	1,667
Works Cost		9,767
Administration Overhead at 60% of works cost		5,860
		15,627
Less: Sale proceeds of Scrap (5% of 10% of ₹ 15,627)		78
Total Cost of the work order		15,549
Profit at 20% of total Cost		3,110
Selling Price of 100 units		18,659
Selling Price of a unit		186.59

**Note:** It was known before that 10% of production will have to be scrapped, therefore, inputs must have been made taking this factor into consideration. No other adjustment is necessary except deducting the value of scrap from the cost of production.

(b)

Dr.			PROCESS-A- Account			Cr.		
Particulars	Units	Amount (₹)	Particulars	Units	Amount (₹)			
To, Material introduced A/c	10000	11,000	By Normal Loss A/c	500	125			
To, Additional Material A/c		1,500	(10000 x 5%) x 0.25					
To, Direct Labour A/c		4,500	By Transfer to Process-B A/c @	9500	2,5075			
To, Direct Expenses A/c		1,000	₹2.64 per unit					
To, Overheads A/c		7,200						
	10000	25,200		10000	25,200			

Dr.			PROCESS-B- Account			Cr.		
Particulars	Units	Amount (₹)	Particulars	Units	Amount (₹)			
To, Transfer from Process-A A/c	9500	25,075	By, Normal Loss A/c	380	190			
To, Direct Material A/c		1,500	(9,500 x 4%) x 0.5					
To, Direct Labour A/c		8,000	By, Transfer to Process-C	9120	48,185			
To, Direct Expenses A/c		1,000	A/c @ ₹ 5.283					
To, Overheads A/c		12,800						
	9,500	48,375		9,500	48,375			

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	PROCESS-C- Account			Cr.	
Particulars	Units	Amount (₹)	Particulars	Units	Amount (₹)
To, Transfer from Process-B A/c	9120	48,185	By, Normal Loss A/c (Ref. Working Notes)	696	696
To, Direct Material A/c		1,500	By, Transfer to Finished Stock A/c @ ₹8/- per unit	8424	67,392
To, Direct Labour A/c		6,500			
To, Direct Expenses A/c		1,503			
To, Overheads A/c		10,400			
	9120	68,088		9120	68,088

**Working Notes:**

- (a) Sale Price per unit 10  
 (-) Profit @ 20% 2  
 Cost per unit 8
- (b) Let the No. of units of loss in Process 'C' be 'x'  
 Scrap value = X × 1 = ₹ X  
 68,088 - x = 8(9,120-x) units  
 68,088 = 72,960 - 7x  
 7x = 4,872  
 X = 696 units
- Percentage of Normal wastage =  $\frac{696}{9120} \times 100 = 7.63\%$

5. (a) **Hera Transport Service Company is running four (4) buses between two cities, which are 40 kilometres apart. Seating capacity of each bus is 40 passengers. The following particulars are furnished by the company for March 2023:**

Particulars	Amount (₹)
Salaries of Office Staff	1,50,000
Wages of drivers, conductors and cleaners	3,60,000
Diesel oil & other Lubricants	3,50,000
Repairs & Maintenance	1,00,000
Insurance, Taxation etc.	2,60,000
Depreciation	2,50,000
Interest & Other Expenses	2,00,000
<b>Total</b>	<b>16,70,000</b>

Passengers carried were 80% of seating capacity. All buses run on all days of the month. Each bus made one round trip per day.  
 Find out the cost per passenger – Kilometre. [7]

- (b) **New Construction Ltd. is engaged in a contract during the year. Following information is available at the year end.**

Particulars	Amount Contract (₹)
Contract price	6,00,000
Material delivered direct to site	1,20,000
Materials issued from stores	40,000
Materials returned to stores	4,000

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Materials at site at the end of year	22,000
Direct labour payments	1,40,000
Direct expenses	60,000
Architect's fees	2,500
Establishment charges	24,500
Plant installed at cost	80,000
Value of plant at the end of year	65,000
Accrued wages at the end of year	10,000
Accrued expenses at the end of year	6,000
Cost of contract not certified by architect	23,000
Value of contract certified by architect	4,20,000
Cash received from contractor	3,78,000

During the period, materials amounting to ₹9,000 have been transferred to another contract to another place.

You are required to show the Contract A/c. [8]

**Answer:**

(a)

### Operating Cost Statement March 2023

	Particulars	Amount (₹)	Amount (₹)
(A)	Operating & Running Cost:		
	Wages of Drivers, Conductors and Cleaner	3,60,000	
	Diesel Oil & other Lubricants	3,50,000	7,10,000
(B)	Maintenance Charges:		
	Repair & Maintenance	1,00,000	1,00,000
(C)	Fixed Charges:		
	Insurance & Taxation etc.	260,000	
	Depreciation	250,000	
	Interest & other exp.	200,000	
	Salaries & Office Staff	1,50,000	8,60,000
	Total (A+B+C)		16,70,000

\*Cost per passenger kilometer:

$$= ₹ 16,70,000 \div 3,07,200$$

$$= ₹ 5.44$$

Passengers kilo-metres are computed as below:

$$= \text{Number of buses} \times \text{distance in one round trip} \times \text{seating capacity available} \times \text{percentage of seating capacity actually used} \times \text{number of days in a month.}$$

$$= 4 \times 40 \times 2 \times 40 \times 80\% \times 30 \text{ days}$$

$$= 3,07,200$$

# Answer to MTP\_Intermediate\_Syllabus 2016\_Dec2023\_Set1

(b)

**In the Book of new Construction ltd.**

Dr.		Cr.	
Contract Account for the year ended....			
Particular	Amount (₹)	Particular	Amount (₹)
To Material delivered to Site	1,20,000	By Materials returned to Store	4,000
To Material from Store	40,000	By Material c/d	22,000
To Labour 1,40,000		By Material Transferred	9,000
Add. Accrued 10,000	1,50,000	By Cost of Contract c/d	3,83,000
		(Balancing figure)	
To Direct Expenses 60,000			
Add. Accrued 6,000	66,000		
To Depreciation on Plant (80,000 - 65,000)	15,000		
To Architect's Fees	2,500		
To Establishment Charges	24,500		
	4,18,000		4,18,000
To Cost of Contract b/d	3,83,000	By Work-in-Progress A/C – Work Certified	4,20,000
To Notional Profit c/d		-Work Uncertified	23,000
(Balancing Figure)	60,000		
	4,43,000		4,43,000
To Costing Profit & loss A/c	36,000	By Notional profit b/d	60,000
(Working Note)			
To Work-in-Progress A/c	24,000		
(Balancing figure)			
	60,000		60,000

6. (a) The sales turnover and profit during two periods were as follows:

Period	Sales (₹)	Profit (₹)
1	3,50,000	20,000
2	4,50,000	40,000

What would be probable trading results with sales of ₹2,80,000? What amount of sales will yield a profit of ₹1,00,000? [7]

(b) Mr. Young has ₹1,50,000 investment in a business. He wants a 15% profit on his money. From an analysis of recent cost figures, he finds that his variable cost of operating is 60% of sales; his fixed costs are ₹75,000 per year. Show supporting computations for each answer.

- (i) What sales volume must be obtained to break-even?
- (ii) What sales volume must be obtained to his 15% return on investment?
- (iii) Mr. Young estimates that even if he closed the doors of his business he would incur ₹25,000 expenses per year. At what sales would be better off by locking his sales up?

[8]

# Answer to MTP\_Intermediate\_Syllabus 2016\_Dec2023\_Set1

**Answer:**

(a) P/V ratio = (Change in profit / Change in sales) x 100  
 = (20,000 / 1,00,000) x 100  
 = 20% Fixed cost  
 = (Sales x P/V ratio) – Profit  
 = (2,00,000 x 0.2) – 20,000  
 = ₹ 20,000 Sales required to earn desired profit  
 = Fixed cost + desired profit P/V ratio  
 = (20,000 + 50,000) / 20%  
 = ₹ 3,50,000

(b) P/V ratio (V. cost ratio 60%) = 40%

(i) Break even sales = 75,000 / 40%  
 = ₹1,87,500

(ii) Required sales to get desired income = (75,000 + 22,500) / 40%  
 = ₹2,43,750  
 = ₹ 2,43,750

(iii) Shut down sales = Fixed Cost -Shut Down Cost P/ V Ratio  
 = (75,000 – 25,000) / 40%  
 = ₹ 1,25,000

7. (a) **The standard labour complement and the actual labour complement engaged in a week for a job are as under:**

Skilled workers	Semi-skilled workers		Unskilled workers
a) Standard no. of workers in the gang	32	12	6
b) Standard wage rate per hour (₹)	3	2	1
c) Actual no. of workers employed in the gang during the week	28	18	4
d) Actual wage rate per hour (₹)	4	3	2

**During the 40 hour working week the gang produced 1,800 standard labour hours of work. Calculate**

- 1) Labour Efficiency Variance
- 2) Mix Variance
- 3) Rate of Wages Variance
- 4) Labour Cost Variance [9]

(b) **Draw a Material Procurement Budget (Quantitative) from the following information: Estimated sales of a product 40,000 units. Each unit of the product requires 3 units of material A and 5 units of material B. Estimated opening balances at the commencement of the next year: Finished product = 5,000 units Material A = 12,000 units B= 20,000 units Material on order: Material A = 7,000 units Material B = 11,000 units The desirable closing balance at the end of the next year: Finished product = 7,000 units Material A = 15,000 units Material B= 25,000 units Material on order: Material A = 8,000 units Material B= 10,000 units. [6]**

# Answer to MTP\_Intermediate\_Syllabus 2016\_Dec2023\_Set1

**Answer:**

(a) Analysis of Given Data

	Standard Data			Actual Data		
	Hours	Rate (₹)	Value (₹)	Hours	Rate (₹)	Value (₹)
Skilled	1,280	3	3,840	1,120	4	4,480
Semi skilled	480	2	960	720	3	2,160
unskilled	240	1	240	160	2	320
	2,000		5,040	2,000		6,960

**Computation of Required Values**

	SRS <sub>H</sub> (1) (₹)	SRRS <sub>H</sub> (2) (₹)	SRA <sub>H</sub> (3) (₹)	ARA <sub>H</sub> (4) (₹)
Men	3 x 1,152 = 3,456	3,840	3 x 1,120 = 3,360	4,480
Women	2 x 432 = 864	960	2 x 720 = 1,440	2,160
Boys	1 x 216 = 216	240	1 x 160 = 160	320
	4,536	5,040	4,960	6,960

**Computation of SH**

SH = (SH for that worker / SH for all the worker) x AQ for that worker

For Skilled worker =  $(1,280 / 2,000) \times 1,800 = 1,152$

For Semiskilled worker =  $(480 / 2,000) \times 1,800 = 432$

For unskilled worker =  $(240 / 2,000) \times 1,800 = 216$

Where

(1) SRS<sub>H</sub> = Standard Cost of Standard Labour = ₹ 4,536

(2) SRRS<sub>H</sub> = Revised Standard Cost of Labour = ₹ 5,040

(3) SRA<sub>H</sub> = Standard Cost of Actual Labour = ₹ 4,960

(4) ARA<sub>H</sub> = Actual Cost of Labour = ₹ 6,960

**Computation of Labour Variances:**

a. Labour Sub-efficiency Variance = (1) – (2) = ₹ 504 (A) [₹(4,536 – 5,040)]

b. Labour Mix or gang Variance = (2) – (3) = ₹80 (F) [₹(5,040 – 4,960)]

c. Labour efficiency Variance = (1) – (3) = ₹424 (A) [₹(4,536 – 4,960)]

d. Labour Rate Variance = (3) – (4) = ₹2,000 (A) [₹(4,960 – 6,960)]

e. Labour Cost Variance = (1) – (4) = ₹2,424 (A) [₹(4,536 – 6,960)]

**8. Write short notes on any three of the following:**

**[5x3=15]**

- (a) Cost Centre
- (b) Financial Accounting and Cost Accounting
- (c) Just-in-Time (JIT)
- (d) Limitations of Marginal Costing

# Answer to MTP\_Intermediate\_Syllabus 2016\_Dec2023\_Set1

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**Answer:**

- (a) **Cost Centre:** CIMA defines a cost centre as “a location, a person, or an item of equipment (or a group of them) in or connected with an undertaking, in relation to which costs ascertained and used for the purpose of cost control”. The determination of suitable cost centres as well as analysis of cost under cost centres is very helpful for periodical comparison and control of cost. In order to obtain the cost of product or service, expenses should be suitably segregated to cost centre. The manager of a cost centre is held responsible for control of cost of his cost centre. The selection of suitable cost centres or cost units for which costs are to be ascertained in an undertaking depends upon a number of factors such as organization of a factory, condition of incidence of cost, availability of information, requirements of costing and management policy regarding selecting a method from various choices. Cost centre may be production cost centres operating cost centres or process cost centres depending upon the situation and classification. Cost centres are of two Types-Personal and Impersonal Cost Centre. A personal cost centre consists of person or group of persons. An impersonal cost centre consists of a location or item of equipment or group of equipment.
- (b) **Financial Accounting and Cost Accounting:** Financial Accounting is primarily concerned with the preparation of financial statements, which summarise the results of operations for selected period of time and show the financial position of the company at particular dates. Cost Accounting, as the name implies, is primarily concerned with determination of cost of something, which may be a product, service, a process or an operation according to costing objective of management.

Financial Accounting	Cost Accounting
a) It provides the information about the business in a general way. i.e. Profit and Loss Account, Balance Sheet of the business to owners and other outside partners.	(a) It provides information to the management for proper planning, operation, control and decision making.
(b) It classifies, records and analyses the transactions in a subjective manner, i.e. according to the nature of expense.	(b) It records the expenditure in an objective manner, i.e. according to the purpose for which the costs are incurred.
(c) It lays emphasis on recording aspect without attaching any importance to control.	(c) It provides a detailed system of control for materials, labour and overhead costs with the help of standard costing and budgetary control.
(d) It reports operating results and financial position usually at the end of the year.	(d) It gives information through cost reports to management as and when desired.
(e) The users of financial accounting statements are the various stakeholders i.e. shareholders, creditors, financial institutions, banks, government and its various agencies and regulators	(e) The users of cost accounting information are generally internal management, officials and senior executives of the company.
(f) Generally the financial statements are prepared periodically, for example, quarterly, half-yearly and yearly.	(f) The cost reports and statements are prepared as and when required by the management.



- (b) **Just-in-Time (JIT):** Just in time (JIT) is a production strategy that strives to improve a business return on investment by reducing in-process inventory and associated carrying costs. Inventory is seen as incurring costs, or waste, instead of adding and storing value, contrary to traditional accounting. In short, the Just-in-Time inventory system focuses on “the right material, at the right time, at the right place, and in the exact amount” without the safety net of inventory. The advantages of Just-in-Time system are as follows:
- increased emphasis on supplier relationships. A company without inventory does not want a supply system problem that creates a part shortage. This makes supplier relationships extremely important.
  - supplies come in at regular intervals throughout the production day. Supply is synchronized with production demand and the optimal amount of inventory is on hand at any time. When parts move directly from the truck to the point of assembly, the need for storage facilities is reduced.
  - reduces the working capital requirements, as very little inventory is maintained.
  - minimizes storage space.
  - reduces the chance of inventory obsolescence or damage.
- (e) **Limitations of Marginal Costing:**
- (i) The separation of costs into fixed and variable present’s technical difficulties and no variable cost is completely variable nor is a fixed cost completely fixed.
  - (ii) Under the marginal cost system, stock of finished goods and work-in-progress are understated. After all, fixed costs are incurred in order to manufacture products and as such, these should form a part of the cost of the products. It is, therefore, not correct to eliminate fixed costs from finished stock and work-in-progress.
  - (iii) The exclusion of fixed overhead from the inventories affects the Profit and Loss Account and produces an unrealistic and conservative Balance Sheet, unless adjustments are made in the financial accounts at the end of the period.
  - (iv) In marginal costing system, marginal contribution and profits increase or decrease with changes in sales volume. Where sales are seasonal, profits fluctuate from period to period. Monthly operating statements under the marginal costing system will not, therefore, be as realistic or useful as in absorption costing.
  - (v) During the earlier stages of a period of recession, the low profits or increase in losses, as revealed in a magnified way in the marginal costs statements, may unduly create panic and compel the management to take action that may lead to further depression of the market.
  - (vi) Marginal costing does not give full information. For example, increased production and sales may be due to extensive use of existing equipment (by working overtime or in shifts), or by an expansion of the resources, or by the replacement of labour force by machines. The marginal contribution fails to reveal these.
  - (vii) Though for short-term assessment of profitability marginal costs may be useful, long term profit is correctly determined on full costs basis only.
  - (viii) Although marginal costing eliminates the difficulties involved in the apportionment and under and over-absorption of fixed overhead, the problem still remains so far as the variable overhead is concerned.
  - (ix) With increased automation and technological developments, the impact on fixed costs on products is much more than that of variable costs. A system which ignores fixed costs is therefore, less effective because a major portion of the cost, such as not taken care of.
  - (x) Marginal costing does not provide any standard for the evaluation of performance. A system of budgetary control and standard costing provides more effective control than that obtained by marginal costing.