

MOCK TEST PAPER – II
INTERMEDIATE (IPC): GROUP – I
PAPER – 3: COST ACCOUNTING and FINANCIAL MANAGEMENT
SUGGESTED ANSWERS/HINTS

1. (a) (i) Computation of wages of each worker under guaranteed hourly rate basis

Worker	Actual hours worked (Hours)	Hourly wage rate (₹)	Wages (₹)
M	380	90	34,200
N	100	100	10,000
O	540	110	59,400

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

Product	Piece rate per unit (₹)	Worker-M		Worker-N		Worker-O	
		Units	Wages (₹)	Units	Wages (₹)	Units	Wages (₹)
A	22.50	210	4,725	-	-	600	13,500
B	30.00	360	10,800	-	-	1,350	40,500
C	45.00	460	20,700	250	11,250	-	-
Total			36,225		11,250		54,000

Since each worker's earnings are more than 50% of basic pay. Therefore, worker-M, N and O will be paid the wages as computed i.e. ₹ 36,225, ₹ 11,250 and ₹ 54,000 respectively.

Working Notes:

Piece rate per unit

Product	Standard time per unit (in minutes)	Piece rate each minute (₹)	Piece rate per unit (₹)
A	15	1.5	22.50
B	20	1.5	30.00
C	30	1.5	45.00

(b) Statement of Cost

	First three months (₹)	Remaining nine months (₹)	Total (₹)
	37,500 units	1,68,750 units	2,06,250 units
Direct material	18,75,000	84,37,500	1,03,12,500
Direct employee cost	6,00,000	27,00,000	33,00,000
Indirect- variable expenses	3,75,000	16,87,500	20,62,500
Indirect – fixed expenses	8,12,500	24,37,500	32,50,000
Indirect- semi-variable expenses			
- For first three months @ ₹ 40,000 p.m.	1,20,000		1,20,000
- For remaining nine months @ ₹ 70,000* p.m.		6,30,000	6,30,000
Total cost	37,82,500	1,58,92,500	1,96,75,000
Desired profit	-	-	10,00,000
Sales value	-	-	2,06,75,000
Average selling price per unit			100.24

* ₹ 40,000 for 50% capacity + ₹ 15,000 for 20% increase in capacity + ₹ 15,000 for 5% increase in capacity (because cost is increased for every 20% increase in capacity or part thereof)

(c) (i) Cost of Equity Capital (K_e):

$$K_e = \frac{\text{Expected dividend per share (D}_1\text{)}}{\text{Market price per share (P}_0\text{)}} + \text{Growth rate (g)}$$

$$= \frac{₹ 5 \times 1.05}{₹ 25} + 0.05 = 26\%$$

(ii) Cost of Debenture (K_d):

Using Present Value method (or YTM)

Identification of relevant cash flows

Year	Cash flows
0	Current market price (P ₀) = ₹ 95
1 to 10	Interest net of tax [I(1-t)] = 12% of ₹ 100 (1 – 0.30) = ₹ 8.40
10	Redemption value (RV) = ₹ 100 (1.12) = ₹ 112

Calculation of Net Present Values (NPV) at two discount rates

Year	Cash flows	Discount factor @ 9% (L)	Present Value	Discount factor @ 10% (H)	Present Value
0	(95)	1.0000	(95.00)	1.0000	(95.00)
1 to 10	8.40	6.4176	53.91	6.1445	51.61
10	112	0.4224	47.31	0.3855	43.18
NPV			+6.22		-0.21

Calculation of IRR

$$IRR = L + \frac{NPV_L}{NPV_L - NPV_H} (H - L)$$

$$= 9\% + \frac{6.22}{6.22 - (-0.21)} (10\% - 9\%) = 9\% + \frac{6.22}{6.43} = 9.97\%$$

Therefore, $K_d = 9.97\%$

(d)

Sales in units	12,000	10,000
	(₹)	(₹)
Sales Value	1,44,000	1,20,000
Variable Cost	(96,000)	(80,000)
Contribution	48,000	40,000
Fixed expenses	(20,000)	(20,000)
EBIT	28,000	20,000
Debenture Interest	(10,000)	(10,000)
EBT	18,000	10,000
Tax @ 30%	(5,400)	(3,000)
Profit after tax (PAT)	12,600	7,000
(i) Financial Leverage = $\frac{EBIT}{EBT}$	$= \frac{₹ 28,000}{₹ 18,000} = 1.56$	$= \frac{₹ 20,000}{₹ 10,000} = 2$
(ii) Operating leverage = $\frac{Contribution}{EBIT}$	$= \frac{₹ 48,000}{₹ 28,000} = 1.71$	$= \frac{₹ 40,000}{₹ 20,000} = 2$
(iii) Earnings per share (EPS)	$= \frac{₹ 12,600}{₹ 1,000} = ₹ 12.6$	$= \frac{₹ 7,000}{₹ 1,000} = ₹ 7$
Decrease in EPS	$= ₹ 12.6 - ₹ 7 = ₹ 5.6$	
% decrease in EPS	$= \frac{5.6}{12.6} \times 100 = 44.44\%$	

2. (a) (i) **Statement of Equivalent Production (Average cost method)**

Input (Units)	Particulars	Output Units	Equivalent Production					
			Materials		Labour		Overheads	
			(%*)	Units**	(%)*	Units**	(%)*	Units**
40,000	Completed	28,000	100	28,000	100	28,000	100	28,000
	WIP	12,000	100	12,000	33-1/3	4,000	33-1/3	4,000
40,000		40,000		40,000		32,000		32,000

*Percentage of completion

** Equivalent units

(ii) **Statement showing Cost for each element**

Particulars	Materials	Labour	Overhead	Total
Cost of opening work-in-progress (₹)	12,00,000	2,00,000	2,00,000	16,00,000
Cost incurred during the month (₹)	51,20,000	30,00,000	30,00,000	1,11,20,000
Total cost (₹) : (a)	63,20,000	32,00,000	32,00,000	1,27,20,000
Equivalent units : (B)	40,000	32,000	32,000	
Cost per equivalent unit (₹): C= (A ÷ B)	158	100	100	358

(iii) **Statement of Apportionment of cost**

	(₹)	(₹)
Value of output transferred: (A) (28,000 units × ₹ 358)		1,00,24,000
Value of closing work-in-progress: (B)		
Material (12,000 units × ₹158)	18,96,000	
Labour (4,000 units × ₹ 100)	4,00,000	
Overhead (4,000 units × ₹ 100)	4,00,000	26,96,000
Total cost : (A + B)		1,27,20,000

(iv) **Process- A Account**

Particulars	Units	(₹)	Particulars	Units	(₹)
To Opening WIP	8,000	16,00,000	By Completed units	28,000	1,00,24,000
To Materials	32,000	51,20,000	By Closing WIP	12,000	26,96,000
To Labour		30,00,000			
To Overhead		30,00,000			
	40,000	1,27,20,000		40,000	1,27,20,000

(b) (In ₹ '000)

Ratio	Formula	2018-19	2019-20	2020-21	Industry Average
Current ratio	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$	$\frac{1,320}{520}$ = 2.54	$\frac{6,200}{3,456}$ = 1.80	$\frac{8,912}{5,560}$ = 1.60	2.30:1
Acid test ratio (quick ratio)	$\frac{\text{Quick Assets}}{\text{Current Liabilities}}$	$\frac{680}{520}$ = 1.31	$\frac{3,200}{3,456}$ = 0.93	$\frac{4,412}{5,560}$ = 0.79	1.20:1
Receivable turnover ratio	$\frac{\text{Credit Sales}}{\text{Average Accounts Receivable}}$	$\frac{3,600}{(600+600)/2}$ = 6	$\frac{8,640}{(600+3,000)/2}$ = 4.80	$\frac{14,400}{(3,000+4,200)/2}$ = 4	7 times
Inventory turnover ratio	$\frac{\text{COGS}}{\text{Average Inventory}}$	$\frac{2,480}{(640+640)/2}$ = 3.88	$\frac{5,664}{(640+3,000)/2}$ = 3.11	$\frac{9,600}{(3,000+4,500)/2}$ = 2.56	4.85 times
Long-term debt to total debt	$\frac{\text{Long term Debt}}{\text{Total Debt}} \times 100$	$\frac{1,472}{1,992} \times 100$ = 73.90%	$\frac{2,472}{5,928} \times 100$ = 41.70%	$\frac{5,000}{10,560} \times 100$ = 47.35%	24%
Debt-to-equity ratio	$\frac{\text{Long term Debt}}{\text{Shareholders' Equity}} \times 100$	$\frac{1,472}{3,128} \times 100$ = 47.06%	$\frac{2,472}{5,272} \times 100$ = 46.89%	$\frac{5,000}{7,752} \times 100$ = 64.50%	35%
Net profit ratio	$\frac{\text{Net Profit}}{\text{Sales}} \times 100$	$\frac{728}{4,000} \times 100$ = 18.2%	$\frac{1,344}{9,600} \times 100$ = 14%	$\frac{1,680}{16,000} \times 100$ = 10.5%	18%
Return on total assets	$\frac{\text{Net Profit after taxes}}{\text{Total assets}} \times 100$	$\frac{728}{5,120} \times 100$ = 14.22%	$\frac{1,344}{11,200} \times 100$ = 12%	$\frac{1,680}{18,312} \times 100$ = 9.17%	10%
Interest coverage ratio (times interest earned)	$\frac{\text{EBIT}}{\text{Interest}}$	$\frac{1,160}{120}$ = 9.67	$\frac{2,236}{316}$ = 7.08	$\frac{3,080}{680}$ = 4.53	10

Conclusion:

In the last two years, the current ratio and quick ratio are less than the ideal ratio (2:1 and 1:1 respectively) indicating that the company is not having enough resources to meet its current obligations. Receivables are growing slower. Inventory turnover is slowing down as well, indicating a relative build-up in inventories or increased investment in stock. High Long-term debt to total debt ratio and Debt to equity ratio compared to that of industry average indicates high dependency on long term debt by the company. The net profit ratio is declining substantially and is much lower than the industry

norm. Additionally, though the Return on Total Asset (ROTA) is near to industry average, it is declining as well. The interest coverage ratio measures how many times a company can cover its current interest payment with its available earnings. A high interest coverage ratio means that an enterprise can easily meet its interest obligations, however, it is declining in the case of Jensen & Spencer and is also below the industry average indicating excessive use of debt or inefficient operations.

On overall comparison of the industry average of key ratios than that of Jensen & Spencer, the company is in deterioration position. The company's profitability has declined steadily over the period. However, before jumping to the conclusion relying only on the key ratios, it is pertinent to keep in mind the industry, the company dealing in with i.e. manufacturing of pharmaceutical drugs. The pharmaceutical industry is one of the major contributors to the economy and is expected to grow further. After the covid situation, people are more cautious towards their health and are going to spend relatively more on health medicines. Thus, while analysing the loan proposal, both the factors, financial and non-financial, needs to be kept in mind.

3. (a) Workings

Statement Showing "Total Variable Cost for the year"

Particulars	Amount (₹)
Estimated Sales Revenue	1,51,20,000
Less: Desired Profit Margin on Sale @ 20%	30,24,000
Estimated Total Cost	1,20,96,000
Less: Fixed Selling and Distribution Overheads	34,56,000
Total Variable Cost	86,40,000

Statement Showing "Variable Cost per unit"

Particulars	Variable Cost p.u. (₹)
Direct Materials:	
A: 6 Kg. @ ₹80 per kg.	480
B: 3 Kg. @ ₹50 per kg.	150
Labour Cost:	
Machine Shop: 4 hrs. @ ₹70 per hour	280
Assembly Shop: 2 hrs. @ ₹35 per hour	70
Factory Overheads: 20% of (₹280 + ₹70)	70
Variable Selling & Distribution Expenses	30
Total Variable Cost per unit	1,080

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

$$\begin{aligned}
 \text{Number of Units Sold} &= \text{Total Variable Cost} / \text{Variable Cost per unit} \\
 &= ₹ 86,40,000 / ₹ 1,080 \\
 &= 8,000 \text{ units}
 \end{aligned}$$

$$\begin{aligned}
 \text{Selling Price per unit} &= \text{Total Sales Value / Number of Units Sold} \\
 &= ₹ 1,51,20,000 / 8,000 \text{ units} \\
 &= ₹ 1,890
 \end{aligned}$$

(ii) Production Budget (units)

Particulars	Units
Budgeted Sales	8,000
Add: Closing Stock	3,000
Total Requirements	11,000
Less: Opening Stock	(2,500)
Required Production	8,500

(iii) Materials Purchase Budget (Kg.)

Particulars	Material A	Material B
Requirement for Production	51,000 (8,500 units × 6 Kg.)	25,500 (8,500 units × 3 Kg.)
Add: Desired Closing Stock	8,000	5,500
Total Requirements	59,000	31,000
Less: Opening Stock	(7,500)	(4,000)
Quantity to be purchased	51,500	27,000

(b) (i) Computation of NPV and IRR

For Project A:

Years	Cash flows (₹)	PVF 15%	P.V. (₹)	PVF 20%	P.V. (₹)
0	(10,00,000)	1.0000	(10,00,000)	1.0000	(10,00,000)
1	1,70,000	0.8696	1,47,832	0.8333	1,41,661
2	4,00,000	0.7561	3,02,440	0.6944	2,77,760
3	4,80,000	0.6575	3,15,600	0.5787	2,77,776
4	4,40,000	0.5718	2,51,592	0.4823	2,12,212
5	1,40,000	0.4972	69,608	0.4019	56,266
	NPV		+87,072		-34,325

NPV of Project A at 15% (Cost of Capital) is ₹ 87,072

IRR of Project A may be calculated by interpolation method as under:

NPV at 20% is (-) 34,325

NPV at 15% is (+) 87,072

$$\therefore \text{IRR} = 15 + \frac{87,072}{87,072 - (-34,325)} (20 - 15)\% = 18.59\%$$

For Project B:

Years	Cash flows (₹)	PVF _{15%}	P.V. (₹)	PVF _{30%}	P.V. (₹)
0	(10,00,000)	1.0000	(10,00,000)	1.0000	(10,00,000)
1	9,00,000	0.8696	7,82,640	0.7692	6,92,280
2	2,00,000	0.7561	1,51,220	0.5917	1,18,340
3	1,40,000	0.6575	92,050	0.4552	63,728
4	60,000	0.5718	34,308	0.3501	21,006
5	40,000	0.4972	19,888	0.2693	10,772
	NPV		+80,106		-93,874

NPV of Project B at 15% (Cost of Capital) is ₹ 80,106

IRR of Project B may be calculated by interpolation method as under:

NPV at 30% is (-) 93,874

NPV at 15% is (+) 80,106

$$\therefore \text{IRR} = 15 + \frac{80,106}{80,106 - (-93,874)} (30 - 15)\% = \mathbf{21.91\%}$$

(Note: Though in above calculation of IRR for Project B, discounting factors of 15% and 30% have been used. However, instead of 15%, students may consider 20%. In such a case, the answers of IRR of Project B may slightly vary.)

(ii) The ranking of the projects will be as under:

	NPV	IRR
Project A	1	2
Project B	2	1

There is a conflict in ranking. IRR assumes that the project cash flows are reinvested at IRR whereas the cost of capital is 15%. The two projects are mutually exclusive. In the circumstances, the project which yields the larger NPV will earn larger cash flows. Hence the project with larger NPV should be chosen. Thus, Project A qualifies for selection.

(iii) Inconsistency in ranking arises because if NPV criterion is used, Project A is preferable. If IRR criterion is used, Project B is preferable. The inconsistency is due to the difference in the pattern of cash flows.

Where an inconsistency is experienced, the projects yielding larger NPV is preferred because of larger cash flows which it generates. IRR criterion is rejected because of the following reasons:

- IRR assumes that all cash flows are re-invested at IRR.
- IRR is a percentage, but the magnitude of cash flow is important.
- Multiple IRR may arise if the projects have non-conventional cash flows.

4. (a) Primary Distribution of Overheads

Item	Basis	Total Amount (₹)	Production Departments			Service Departments	
			X (₹)	Y (₹)	Z (₹)	A (₹)	B (₹)
Indirect Material	Actual	5,00,000	80,000	1,20,000	1,80,000	1,00,000	20,000
Indirect Labour	Actual	10,40,000	1,80,000	2,00,000	2,80,000	2,40,000	1,40,000
Supervisor's Salary	Actual	3,84,000	-	-	3,84,000	-	-
Fuel & Heat	Radiator Sections {2:4:6:5:3}	60,000	6,000	12,000	18,000	15,000	9,000
Power	Kilowatt Hours {7:8:6:3:-}	7,20,000	2,10,000	2,40,000	1,80,000	90,000	-
Rent & Rates	Area (Sq. ft.) {22:20:15:12:6}	6,00,000	1,76,000	1,60,000	1,20,000	96,000	48,000
Insurance	Capital Value of Assets {4:6:5:1:2}	72,000	16,000	24,000	20,000	4,000	8,000
Canteen Charges	No. of Employees {6:7:12:3:2}	2,40,000	48,000	56,000	96,000	24,000	16,000
Depreciation	Capital Value of Assets {4:6:5:1:2}	10,80,000	2,40,000	3,60,000	3,00,000	60,000	1,20,000
Total overheads		46,96,000	9,56,000	11,72,000	15,78,000	6,29,000	3,61,000

Re-distribution of Overheads of Service Department A and B

Total overheads of Service Departments may be distributed using simultaneous equation method

Let, the total overheads of A = 'a' and the total overheads of B = 'b'

$$a = 6,29,000 + 0.10b \quad (i)$$

$$\text{or, } 10a - b = 62,90,000 \quad [(i) \times 10]$$

$$b = 3,61,000 + 0.20a \quad (ii)$$

$$\text{or, } -0.20a + b = 3,61,000$$

Solving equation (i) & (ii)

$$\begin{array}{rcl}
 10a - b & = & 62,90,000 \\
 -0.20a + b & = & 3,61,000 \\
 \hline
 9.8a & = & 66,51,000 \\
 a & = & 6,78,673
 \end{array}$$

Putting the value of 'a' in equation (ii), we get

$$b = 3,61,000 + 0.20 \times 6,78,673$$

$$b = 4,96,735$$

Secondary Distribution of Overheads

	Production Departments		
	X (₹)	Y (₹)	Z (₹)
Total overhead as per primary distribution	9,56,000	11,72,000	15,78,000
Service Department A (80% of 6,78,673) (3:3:2)	2,03,602	2,03,602	1,35,734
Service Department B (90% of 4,96,735) (5:8:5)	1,24,184	1,98,694	1,24,184
Total	12,83,786	15,74,296	18,37,918

(b) Forecast Profit and Loss Account for the period 01.04.2020 to 31.03.2021

Particulars	₹	Particulars	₹
Materials consumed 1,20,000 @ ₹ 3	3,60,000	By Sales 1,20,000 @ ₹ 5	6,00,000
Direct wages : 1,20,000 @ ₹ 0.50	60,000		
Overheads : 1,20,000 @ ₹ 1	1,20,000		
Gross profit c/d	60,000		
	6,00,000		6,00,000
Debenture interest (10% of 1,00,000)	10,000	By gross profit b/d	60,000
Net profit c/d	50,000		
	60,000		60,000

Working Capital Requirement Forecast for the year 01.04.2020 to 31.03.2021

Particulars	Period (Weeks)	Total (₹)	Current Assets (₹)				Current Liabilities (₹)
			Raw materials	Work-in- progress	Finished goods	Debtors	Creditors
1. Material							
In store	2		60,000				
In work-in- progress	1			30,000			
In finished goods	3				90,000		
Credit to	<u>3</u>					90,000	

debtors							
	9						
Less : Credit from creditors	<u>2</u>						60,000
Net block period	<u>7</u>	2,10,000					
2. Wages:							
In work-in-progress	1/2			2,500			
In finished goods	3				15,000		
Credit to debtors	<u>3</u>					15,000	
	6½						
Less : Time lag in payment	<u>1</u>						5,000
Net block period	<u>5 ½</u>	27,500					
3. Overheads:							
In work-in-progress	½			5,000			
In finished goods	3				30,000		
Credit to debtors	<u>3</u>					30,000	
Net block period	<u>6½</u>	65,000					
4. Profit							
Credit to debtors	<u>3</u>					15,000	
Net block period	<u>3</u>	15,000					
Total (₹)		3,17,500	60,000	37,500	1,35,000	1,50,000	65,000

Forecast Balance Sheet as on 31.03.2021

	(₹)			(₹)
Issued share capital	6,00,000	Fixed Assets		4,50,000
Profit and Loss A/c	50,000	Current Assets:		
10% Debentures	1,00,000	Stock:		
Sundry creditors	65,000	Raw materials	60,000	
Bank overdraft-		Work-in-progress	37,500	
Balancing figure	17,500	Finished goods	1,35,000	2,32,500
		Debtors		1,50,000
	8,32,500			8,32,500

The Total amount of working capital, thus, stands as follows:

Requirement as per working capital	₹ 3,17,500
Less: Bank overdraft as per balance sheet	17,500
Net requirement	<u>3,00,000</u>

Notes:

- Average monthly production: $1,20,000 \div 12 = 10,000$ units
- Average cost per unit:

Raw Material	$10,000 \times (\text{₹ } 5 \times 0.6) = \text{₹ } 30,000$
Direct wages	$10,000 \times (\text{₹ } 5 \times 0.1) = \text{₹ } 5,000$
Overheads	$10,000 \times (\text{₹ } 5 \times 0.2) = \text{₹ } 10,000$
- Average profit per month: $10,000 \times (\text{₹ } 5 \times 0.1) = \text{₹ } 5,000$
- Wages and overheads accrue evenly over the period and, hence, are assumed to be completely introduced for half the processing time.

5. (a) Apportionment of Joint Cost amongst Joint Products using following methods:

Market Value at the Time of Separation: This method is used for apportioning joint costs to joint products upto the split off point. It is difficult to apply if the market values of the products at the point of separation are not available. The joint cost may be apportioned in the ratio of sales values of different joint products.

Market Value after further Processing: Here the basis of apportionment of joint costs is the total sales value of finished products at the further processing. The use of this method is unfair where further processing costs after the point of separation are disproportionate or when all the joint products are not subjected to further processing.

(b) Four different methods of costing along with their applicability to concerned industry have been discussed as below:

1. **Job Costing:** The objective under this method of costing is to ascertain the cost of each job order. A job card is prepared for each job to accumulate costs. The cost of the job is determined by adding all costs against the job it is incurred. This method of costing is used in printing press, foundries and general engineering workshops, advertising etc.
2. **Batch Costing:** This system of costing is used where small components/ parts of the same kind are required to be manufactured in large quantities. Here batch of similar products is treated as a job and cost of such a job is ascertained as discussed under (1), above. If in a cycle manufacturing unit, rims are produced in batches of 2,500 units each, then the cost will be determined in relation to a batch of 2,500 units.
3. **Contract Costing:** If a job is very big and takes a long time for its completion, then method used for costing is known as Contract Costing. Here the cost of each contract is ascertained separately. It is suitable for firms engaged in the construction of bridges, roads, buildings etc.
4. **Operating Costing:** The method of Costing used in service rendering undertakings is known as operating costing. This method of costing is used in undertakings like transport, supply of water, telephone services, hospitals, nursing homes etc.

(c)

S.No.	Finance Lease	Operating Lease
1.	The risk and reward incident to ownership are passed on the lessee. The lessor only remains the legal owner of the asset.	The lessee is only provided the use of the asset for a certain time. Risk incident to ownership belongs only to the lessor.
2.	The lessee bears the risk of obsolescence.	The lessor bears the risk of obsolescence.
3.	The lease is non-cancellable by either party under it.	The lease is kept cancellable by the lessor.
4.	The lessor does not bear the cost of repairs, maintenance or operations.	Usually, the lessor bears the cost of repairs, maintenance or operations.
5.	The lease is usually full payout.	The lease is usually non-payout.

(d) Time value of money means that worth of a rupee received today is different from the worth of a rupee to be received in future. The preference of money now as compared to future money is known as time preference for money.

A rupee today is more valuable than rupee after a year due to several reasons:

- Risk – there is uncertainty about the receipt of money in future.
- Preference for present consumption – Most of the persons and companies in general, prefer current consumption over future consumption.
- Inflation – In an inflationary period a rupee today represents a greater real purchasing power than a rupee a year hence.

- Investment opportunities – Most of the persons and companies have a preference for present money because of availabilities of opportunities of investment for earning additional cash flow.

Many financial problems involve cash flow accruing at different points of time for evaluating such cash flow an explicit consideration of time value of money is required.

6. (a) Budgeted Production 30,000 hours ÷ 6 hours per unit = 5,000 units

Budgeted Fixed Overhead Rate = ₹ 90,00,000 ÷ 5,000 units = ₹ 1,800 per unit

= ₹ 90,00,000 ÷ 30,000 hours = ₹ 300 per hour.

(i) Material Cost Variance = (Std. Qty. × Std. Price) – (Actual Qty. × Actual Price)

= (4,800 units × 10 kg. × ₹200) - ₹1,05,00,000

= ₹ 96,00,000 – ₹ 1,05,00,000

= ₹ 9,00,000 (A)

(ii) Labour Cost Variance = (Std. Hours × Std. Rate) – (Actual Hours × Actual rate)

= (4,800 units × 6 hours × ₹ 110) – ₹31,00,000

= ₹ 31,68,000 – ₹ 31,00,000

= ₹ 68,000 (F)

(iii) Fixed Overhead Cost Variance= (Budgeted Rate × Actual Qty) – Actual Overhead

= (₹ 1,800 × 4,800 units) – ₹ 94,00,000

= ₹ 7,60,000 (A)

OR

= (Budgeted Rate × Std. Hours) – Actual Overhead

= (₹ 300 × 4,800 units × 6 hours) – ₹ 94,00,000

= ₹ 7,60,000 (A)

(iv) Variable Overhead Cost Variance= (Std. Rate × Std. Hours) – Actual Overhead

= (4,800 units × 6 hours × ₹ 200) - ₹ 58,60,000

= ₹ 57,60,000 - ₹ 58,60,000

= ₹ 1,00,000 (A)

(b)

Particulars	
Total Sales	₹ 250 lakhs
Credit Sales (64%)	₹ 160 lakhs
Receivables for 40 days	₹ 96 lakhs
Receivables for 120 days	₹ 64 lakhs
Average collection period [(40 × 0.6) + (120 × 0.4)]	72 days
Average level of Receivables (₹ 1,60,00,000 × 72/360)	₹ 32,00,000

Factoring Commission ($\text{₹ } 32,00,000 \times 3/100$)	₹ 96,000
Factoring Reserve ($\text{₹ } 32,00,000 \times 5/100$)	₹ 1,60,000
Amount available for advance { $\text{₹ } 32,00,000 - (1,60,000 + 96,000)$ }	₹ 29,44,000
Factor will deduct his interest @ 18%: Interest = $\frac{\text{₹ } 32,00,000 \times 18 \times 72}{100 \times 360}$	₹ 1,15,200
Advance to be paid ($\text{₹ } 29,44,000 - \text{₹ } 1,15,200$)	₹ 28,28,800

(i) Statement Showing Evaluation of Factoring Proposal

		₹
A.	Annual Cost of Factoring to the Firm:	
	Factoring commission ($\text{₹ } 96,000 \times 360/72$)	4,80,000
	Interest charges ($\text{₹ } 1,15,200 \times 360/72$)	<u>5,76,000</u>
	Total	<u>10,56,000</u>
B.	Firm's Savings on taking Factoring Service:	₹
	Cost of credit administration saved	3,00,000
	Bad Debts ($\text{₹ } 1,60,00,000 \times 2/100$) avoided	<u>3,20,000</u>
	Total	<u>6,20,000</u>
C.	Net Cost to the firm (A – B) ($\text{₹ } 10,56,000 - \text{₹ } 6,20,000$)	<u>4,36,000</u>

$$\text{Effective cost of factoring} = \frac{\text{₹ } 4,36,000}{\text{₹ } 28,28,800} \times 100 = 15.41\% \text{ *}$$

* If cost of factoring is calculated on the basis of total amount available for advance, then, it will

$$\text{be} = \frac{\text{₹ } 4,36,000}{\text{₹ } 29,44,000} \times 100 = 14.81\%$$

(ii) If Bank finance for working capital is available at 12%, firm will not avail factoring service as 12% is less than 15.41% (or 14.81%)

7. (a) (i) **Notional profit in Contract costing:** It represents the difference between the value of work certified and cost of work certified.

Notional Profit = Value of work certified – (Cost of works to date – Cost of work not yet certified)

- (ii) **Retention Money in Contract Costing:** A contractor does not receive the full payment of the work certified by the surveyor. Contractee retains some amount to be paid after some time, when it is ensured that there is no default in the work done by the contractor. If any deficiency or defect is noticed, it is to be rectified by the contractor before the release of the retention money. Thus, the retention money provides a safeguard against the default risk in the contracts.

(b)

	Fixed Budget	Flexible Budget
1.	It does not change with actual volume of activity achieved. Thus, it is rigid.	It can be re-casted on the basis of activity level to be achieved. Thus, it is not rigid.
2.	It operates on one level of activity and under one set of conditions.	It consists of various budgets for different level of activity.
3.	If the budgeted and actual activity levels differ significantly, then cost ascertainment and price fixation do not give a correct picture.	It facilitates the cost ascertainment and price fixation at different levels of activity.
4.	Comparisons of actual and budgeted targets are meaningless particularly when there is difference between two levels.	It provided meaningful basis of comparison of actual and budgeted targets.

(c) **Assumptions of Modigliani – Miller Theory**

- (i) Capital markets are perfect. All information is freely available and there is no transaction cost.
- (ii) All investors are rational.
- (iii) No existence of corporate taxes.
- (iv) Firms can be grouped into “equivalent risk classes” on the basis of their business risk.

(d) **Emerging Issues/Priorities Affecting the Future Role of Chief Financial Officer (CFO)**

- (i) **Regulation:** Regulation requirements are increasing and CFOs have an increasingly personal stake in regulatory adherence.
- (ii) **Globalisation:** The challenges of globalisation are creating a need for finance leaders to develop a finance function that works effectively on the global stage and that embraces diversity.
- (iii) **Technology:** Technology is evolving very quickly, providing the potential for CFOs to reconfigure finance processes and drive business insight through ‘big data’ and analytics.
- (iv) **Risk:** The nature of the risks that organisations face is changing, requiring more effective risk management approaches and increasingly CFOs have a role to play in ensuring an appropriate corporate ethos.
- (v) **Transformation:** There will be more pressure on CFOs to transform their finance functions to drive a better service to the business at zero cost impact.
- (vi) **Stakeholder Management:** Stakeholder management and relationships will become important as increasingly CFOs become the face of the corporate brand.
- (vii) **Strategy:** There will be a greater role to play in strategy validation and execution, because the environment is more complex and quick changing, calling on the analytical skills CFOs can bring.
- (viii) **Reporting:** Reporting requirements will broaden and continue to be burdensome for CFOs.

- (ix) **Talent and Capability:** A brighter spotlight will shine on talent, capability and behaviours in the top finance role.
- (e) (i) **Profit Centres** are the part of a business which is accountable for both cost and revenue. These are responsible for generating and maximizing profits. Performance of these centres is measured with the volume of profit it earns.

Investment Centres are the profit centres with additional responsibility for capital investment and possibly for financing. These centres are concerned with earning an adequate return on investment as performance is measured by its returns on investment.

- (ii) The term **trading on equity** means debts are contracted and loans are raised mainly on the basis of equity capital. Those who provide debt have a limited share in the firm's earning and hence want to be protected in terms of earnings and values represented by equity capital. Since fixed charges do not vary with firms' earnings before interest and tax, a magnified effect is produced on earning per share. Whether the leverage is favourable, in the sense, increase in earnings per share more proportionately to the increased earnings before interest and tax, depends on the profitability of investment proposal. If the rate of returns on investment exceeds their explicit cost, financial leverage is said to be positive.