

MOCK TEST PAPER – 1
INTERMEDIATE (IPC): GROUP – I
PAPER – 3: COST ACCOUNTING AND FINANCIAL MANAGEMENT
SUGGESTED ANSWERS/HINTS

1 (a) Statement of Reconciliation

Particulars	Amount (Rs.)	Amount (Rs.)
Net profit as per Cost accounts		10,20,000
Add:		
Administration Overheads over-absorbed	1,20,000	
Interest on investments	1,92,000	
Transfer fees	48,000	
Stores adjustment	28,000	
Dividend received	64,000	4,52,000
Less:		
Factory Overheads under-absorbed	80,000	
Depreciation under charged	1,00,000	
Income-tax provided	1,08,000	
Interest on loan funds	4,90,000	(7,78,000)
Net profit as per Financial accounts		6,94,000

(b)

- (i) **Reorder Quantity (ROQ)** = 1,691 kg. (*Refer to working note*)
- (ii) **Reorder level (ROL)** = Maximum usage × Maximum re-order period
= 900 kg. × 8 weeks = 7,200 kg.
- (iii) **Maximum level** = ROL + ROQ – (Min. usage × Min. re-order period)
= 7,200 kg. + 1,691 kg. – (200 kg. × 4 weeks)
= 8,091 kg.
- (iv) **Minimum level** = ROL – (Normal usage × Normal re-order period)
= 7,200 kg. – (550 kg. × 6 weeks)
= 3,900 kg.
- (v) **Average stock level** = $\frac{1}{2}$ (Maximum level + Minimum level)
= $\frac{1}{2}$ (8,091 kg. + 3,900 kg.) = 5,995.5 kg.

OR

$$= \text{Minimum level} + \frac{1}{2} \text{ ROQ}$$

$$= 3,900 \text{ kg.} + \frac{1}{2} \times 1,691 \text{ kg.} = 4,745.5 \text{ kg.}$$

Working Note

Annual consumption of raw material (A) = (550 kg. × 52 weeks) = 28,600 kg.

Cost of placing an order (O) = Rs. 200

Carrying cost per kg. Per annum (C) = Rs. 20 × 20% = Rs.4

$$\begin{aligned} \text{Economic order quantity (EOQ)} &= \sqrt{\frac{2AO}{C}} \\ &= \sqrt{\frac{2 \times 28,600 \text{ kgs.} \times \text{Rs.}200}{\text{Rs.}4}} = 1,691 \text{ Kg. (Approx.)} \end{aligned}$$

(c) Calculation of Degree of Operating leverage and Degree of Combined leverage

Firm	Degree of Operating Leverage (DOL) = $\frac{\% \text{ change in Operating Income}}{\% \text{ change in Revenue}}$	Degree of Combined Leverage (DCL) = $\frac{\% \text{ change in EPS}}{\% \text{ change in Revenue}}$
P	$\frac{23\%}{25\%} = 0.92$	$\frac{30\%}{25\%} = 1.2$
Q	$\frac{30\%}{27\%} = 1.11$	$\frac{26\%}{27\%} = 0.96$
R	$\frac{36\%}{24\%} = 1.50$	$\frac{20\%}{24\%} = 0.83$
S	$\frac{30\%}{20\%} = 1.50$	$\frac{20\%}{20\%} = 1.00$

(d) (i) Amount to be deposited today to get Rs.10,00,000 after 10 years:

$$PV = \frac{FV}{(1+k)^n}$$

$$\text{or, } PV = \frac{\text{Rs.}10,00,000}{(1+0.06)^{10}}$$

$$= \text{Rs.}5,58,395$$

(ii) Amount to be deposited annually to get Rs.10,00,000 after 10 years:

$$FVA(k,n) = A \left[\frac{(1+k)^n - 1}{k} \right]$$

$$A = \frac{FVA(k,n)}{\left[\frac{(1+k)^n - 1}{k} \right]} = \frac{\text{Rs.}10,00,000}{\left[\frac{(1+0.06)^{10} - 1}{0.06} \right]}$$

$$= \frac{\text{Rs. } 10,00,000}{13.181} = \text{Rs. } 75,867 \text{ (Approx.)}$$

2. (a) Total direct wages

$$= \text{Rs. } 42,000 + \text{Rs. } 54,000 + \text{Rs. } 48,000 = \text{Rs. } 1,44,000$$

Percentage absorption of production overhead on the basis of direct wages

$$= \frac{2,88,000}{1,44,000} \times 100 = 200\%$$

(i) Process-I A/c

Particulars	Units	Amt.(Rs.)	Particulars	Units	Amt.(Rs.)
To Materials	7,000	1,40,000	By Normal loss (5% of 7,000 units)	350	3,500
To Other materials	-	62,000	By Process-II*	6,600	3,35,955
To Direct wages	-	42,000	By Abnormal loss*	50	2,545
To Direct expenses	-	14,000			
To Production OH (200% of Rs.42,000)	-	84,000			
	7,000	3,42,000		7,000	3,42,000

$$* \text{ Cost per unit} = \frac{\text{Rs.}(3,42,000 - 3,500)}{(7,000 - 350)\text{units}} = \text{Rs. } 50.9022$$

Process-II A/c

Particulars	Units	Amt.(Rs.)	Particulars	Units	Amt.(Rs.)
To Process-I A/c	6,600	3,35,955	By Normal loss (10% of 6,600 units)	660	6,600
To Other materials	-	1,36,000	By Process-III**	5,200	5,63,206
To Direct wages	-	54,000	By Abnormal loss**	740	80,149
To Direct expenses	-	16,000			
To Production OH (200% of Rs.54,000)	-	1,08,000			
	6,600	6,49,955		6,600	6,49,955

$$** \text{ Cost per unit} = \frac{\text{Rs.}(6,49,955 - 6,600)}{(6,600 - 660)\text{units}} = \text{Rs. } 108.3089$$

Process-III A/c

Particulars	Units	Amt.(Rs.)	Particulars	Units	Amt.(Rs.)
To Process-I A/c	5,200	5,63,206	By Normal loss (5% of 5,200 units)	260	2,600
To Other materials	-	84,200	By Product-X***	4,800	8,64,670
To Direct wages	-	48,000			
To Direct expenses	-	14,000	By Product-Z#	600	21,000

To Production OH (200% of Rs.48,000)	-	96,000	(Rs.35 × 600 units)		
To Abnormal gain***	460	82,864			
	5,660	8,88,270		5,660	8,88,270

$$*** \text{ Cost per unit} = \frac{\text{Rs.}(8,05,406 - 2,600 - 21,000)}{(5,200 - 260 - 600)\text{units}} = \text{Rs.}180.1396$$

$$\# \text{ Realisable value} = \text{Rs.}135 - (85+15) = \text{Rs.}35$$

(b) Workings:

1. Net Profit = 6.25% of Rs. 6,00,00,000 = Rs. 37,50,000

2. Net worth = Rs. 37,50,000 × $\frac{100}{25}$ = Rs. 1,50,00,000

$$\text{Share Capital} = \text{Rs. } 1,50,00,000 \times \frac{7}{10} = \text{Rs. } 1,05,00,000$$

$$\text{Reserves} = \text{Rs. } 1,50,00,000 \times \frac{3}{10} = \text{Rs. } 45,00,000$$

$$\text{Debentures} = \text{Rs. } 6,00,000 \times \frac{100}{15} = \text{Rs. } 40,00,000$$

3. Trade Payables = Rs. 20,00,000

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} = 2$$

$$\text{Current Assets} = 2 \text{ Current Liabilities}$$

$$= 2 \times \text{Rs. } 20,00,000 \text{ (assumed creditors is the only current liabilities)}$$

$$= \text{Rs. } 40,00,000$$

4. Inventory Turnover = $\frac{\text{Cost of Goods Sold}}{\text{Closing Stock}} = 12$

$$\text{Hence, Closing Stock} = \frac{\text{Rs. } 1,80,00,000}{12} = \text{Rs. } 15,00,000$$

5. Current Assets = Trade Receivables + Closing Stock + Cash & Bank

$$\text{Rs. } 40,00,000 = \text{Rs. } 20,00,000 + \text{Rs. } 15,00,000 + \text{Cash \& Bank}$$

$$\text{Cash \& Bank} = \text{Rs. } 40,00,000 - \text{Rs. } 20,00,000 - \text{Rs. } 15,00,000 = \text{Rs. } 5,00,000$$

Calculation of Earnings Before Interest and Tax (EBIT)

Particulars	Amount (Rs.)
Net Profit	37,50,000
Add: Tax @ 40%	25,00,000
Profit Before Tax	62,50,000
Add: Interest on Debentures	6,00,000

Earnings Before Interest and Tax (EBIT)	68,50,000
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(i) **Calculation of Operating Expenses for the year ended 31st March 2021**

Particulars	Amount (Rs.)	Amount (Rs.)
Sales		6,00,00,000
Less: Cost of Goods Sold	1,80,00,000	
EBIT	68,50,000	2,48,50,000
Operating Expenses		3,51,50,000

(ii) **Balance Sheet as on 31st March, 2021**

Liabilities	Amount (Rs.)	Amount (Rs.)	Assets	Amount (Rs.)	Amount (Rs.)
Share capital		1,05,00,000	Fixed Assets (balancing figure)		1,70,00,000
Reserves		45,00,000	Current Assets:		
15% Debentures		40,00,000	Closing stock	15,00,000	
Trade Payables		20,00,000	Trade Receivables	20,00,000	
			Cash & Bank	5,00,000	40,00,000
		2,10,00,000			2,10,00,000

3. (a) (i) **Product-wise Profitability Statement for the FY 2020-21:**

Particulars	Product-X (Rs.)	Product-Y (Rs.)	Total (Rs.)
Output (units)	8,000	4,000	
Selling price per unit	600	550	
Sales value	48,00,000	22,00,000	70,00,000
Direct material	11,20,000 (Rs.140 × 8,000 units)	6,30,000 (Rs.157.50 × 4,000 units)	17,50,000
Direct wages	7,20,000 (Rs.90 × 8,000 units)	5,30,000 (Rs.132.5 × 4,000 units)	12,50,000
Variable factory overheads*	5,47,200 (76% of Rs.7,20,000)	4,02,800 (76% of Rs.5,30,000)	9,50,000
Other variable costs	3,20,000 (Rs.40 × 8,000 units)	2,80,000 (Rs.70 × 4,000 units)	6,00,000
Contribution	20,92,800	3,57,200	24,50,000
Fixed factory overheads	-	-	12,00,000
Other fixed costs	-	-	4,00,000

Profit		8,50,000
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* Percentage absorption of variable factory overhead on the basis of direct wages

$$= \frac{9,50,000}{12,50,000} \times 100 = 76\%$$

(ii) Preparation of Budget for the FY 2021-22:

Particulars	Product-X (Rs.)	Product-Y (Rs.)	Total (Rs.)
Output (units)	6,400 (8,000 units × 80%)	3,600 (4,000 units × 90%)	
Selling price per unit	480 (Rs.600 × 80%)	440 (Rs.550 × 80%)	
Sales value	30,72,000	15,84,000	46,56,000
Direct material	8,96,000 (Rs.140 × 6,400 units)	5,67,000 (Rs.157.50 × 3,600 units)	14,63,000
Direct wages per unit	6,91,200 (Rs.108 × 6,400 units)	5,72,400 (Rs.159 × 3,600 units)	12,63,600
Variable factory overheads	5,25,312 (76% of Rs.6,91,200)	4,35,024 (76% of Rs.5,72,400)	9,60,336
Other variable costs	2,56,000 (Rs.40 × 6,400 units)	2,52,000 (Rs.70 × 3,600 units)	5,08,000
Contribution	7,03,488	(2,42,424)	4,61,064
Fixed factory overheads	-	-	12,00,000
Other fixed costs (110% of Rs.4,00,000)	-	-	4,40,000
Profit/ (Loss)			(11,78,936)

(b) Calculation of Earnings per share (EPS):

Particulars	Financing Plans		
	Plan I	Plan II	Plan III
	(Rs.)	(Rs.)	(Rs.)
Debt	5,00,000	20,00,000	30,00,000
Equity	45,00,000	30,00,000	20,00,000
Expected Earnings before interest and taxes (EBIT)	10,00,000	10,00,000	10,00,000
Less: Interest [WN (i)]	(45,000)	(2,55,000)	(4,45,000)
Earnings before taxes (EBT)	9,55,000	7,45,000	5,55,000
Less: Taxes @ 40%	3,82,000	2,98,000	2,22,000
Earnings after taxes (EAT)	5,73,000	4,47,000	3,33,000
Number of shares [WN (ii)]	30,000	20,000	16,000

Earnings per share (EPS) [EAT / No. of Shares]	19.10	22.35	20.81
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Financing Plan II (i.e. Raising debt of Rs. 20 lakhs and issue of equity share capital of Rs. 30 lakhs) is the option which maximises the earnings per share.

Working Notes (WN):

(i) Calculation of interest on Debt.

Plan I	Rs. 5,00,000 × 9%		Rs. 45,000
Plan II	Rs. 5,00,000 × 9%	Rs. 45,000	
	Rs. 15,00,000 × 14%	<u>Rs. 2,10,000</u>	Rs. 2,55,000
Plan III	Rs. 5,00,000 × 9%	Rs. 45,000	
	Rs. 15,00,000 × 14%	Rs. 2,10,000	
	Rs. 10,00,000 × 19%	<u>Rs. 1,90,000</u>	Rs. 4,45,000

(ii) Number of equity shares to be issued

$$\text{Plan I: } \frac{\text{Rs. 45,00,000}}{\text{Rs. 150 (Market price of share)}} = 30,000 \text{ shares}$$

$$\text{Plan II: } \frac{\text{Rs. 30,00,000}}{\text{Rs. 150 (Market Price of Share)}} = 20,000 \text{ shares}$$

$$\text{Plan III: } \frac{\text{Rs. 20,00,000}}{\text{Rs. 125 (Revised Market Price of Share)}} = 16,000 \text{ shares}$$

4. (a) Workings:

$$\begin{aligned} (1) \text{ Contribution per unit} &= \text{Selling price per unit} - \text{Variable cost per unit} \\ &= \text{Rs. 50} - \{ \text{Rs. (16,00,000 + 4,00,000 + 8,00,000)} \div 80,000 \text{ units} \} \\ &= \text{Rs. 50} - \text{Rs. 35} = \text{Rs. 15} \end{aligned}$$

$$(2) \text{ Profit-Volume (P/V) Ratio} = \frac{\text{Contribution per unit}}{\text{Selling price per unit}} \times 100 = \frac{\text{Rs. 15}}{\text{Rs. 50}} \times 100 = 30\%$$

Calculations:

(i) The number of units to be sold for neither loss nor gain i.e. Break-even units:

$$= \frac{\text{Fixed Overheads}}{\text{Contribution per unit}} = \frac{\text{Rs. 7,20,000}}{\text{Rs. 15}} = 48,000 \text{ units}$$

(ii) The sales needed to earn a profit of 20% on sales:

As we know

$$S = V + F + P$$

(S = Sales; V = Variable Cost; F = Fixed Cost; P = Profit)

Suppose Sales units are x then

$$\text{Rs. } 50x = \text{Rs. } 35x + \text{Rs. } 7,20,000 + \text{Rs. } 10x$$

$$\text{Rs. } 50x - \text{Rs. } 45x = \text{Rs. } 7,20,000$$

$$\text{Or, } x = \frac{\text{Rs. } 7,20,000}{\text{Rs. } 5} = 1,44,000 \text{ units}$$

Therefore, Sales needed = 1,44,000 units × Rs.50 = Rs.72,00,000 to earn a profit of 20% on sales.

(iii) Calculation of extra units to be sold to earn present profit of Rs. 4,80,000 under the following proposed selling price:

		When selling price is reduced by	
		20%	25%
	Selling price per unit (Rs.)	40.00 (Rs. 50 × 80%)	37.50 (Rs. 50 × 75%)
	Less: Variable Cost per unit (Rs.)	35.00	35.00
	Contribution per unit (Rs.)	5.00	2.50
	Desired Contribution:		
	Fixed Overheads (Rs.)	7,20,000	7,20,000
	Desired Profit (Rs.)	4,80,000	4,80,000
		12,00,000	12,00,000
(a)	Sales unit for desired contribution $\left[\frac{\text{Desired Contribution}}{\text{Contribution per unit}} \right]$	$\left[\frac{\text{Rs. } 12,00,000}{\text{Rs. } 5} \right]$ 2,40,000 units	$\left[\frac{\text{Rs. } 12,00,000}{\text{Rs. } 2.5} \right]$ 4,80,000 units
(b)	Units presently sold	80,000 units	80,000 units
(c)	Extra units to be sold {(a) – (b)}	1,60,000 units	4,00,000 units

(iv) Sales price to bring down BEP to 10,000 units:

$$\text{B.E.P (Units)} = \frac{\text{Fixed Cost}}{\text{Contribution per unit}}$$

$$\text{Or, Contribution per unit} = \frac{\text{Rs. } 7,20,000}{10,000 \text{ units}} = \text{Rs. } 72$$

$$\begin{aligned} \text{So, Sales Price (per unit)} &= \text{Variable Cost} + \text{Contribution} \\ &= \text{Rs. } 35 + \text{Rs. } 72 = \text{Rs. } 107 \end{aligned}$$

(b) (i) Calculation of Pay-back Period

$$\text{Cash Outlay of the Project} = \text{Rs. } 1,60,00,000$$

$$\text{Total Cash Inflow for the first five years} = \text{Rs. } 1,40,00,000$$

$$\text{Balance of cash outlay left to be paid back in the 6th year} = \text{Rs. } 20,00,000$$

$$\text{Cash inflow for 6th year} = \text{Rs. } 32,00,000$$

So the payback period is between 5th and 6th years, i.e.,

$$5 \text{ years} + \frac{\text{Rs. } 20,00,000}{\text{Rs. } 32,00,000} = 5.625 \text{ years or } 5 \text{ years } 7.5 \text{ months}$$

(ii) Calculation of Net Present Value (NPV) @10% discount rate:

Year	Net Cash Inflow (Rs.)	Present Value Factor at 10% Discount Rate	Present Value (Rs.)
	(a)	(b)	(c) = (a) × (b)
1	28,00,000	0.909	25,45,200
2	28,00,000	0.826	23,12,800
3	28,00,000	0.751	21,02,800
4	28,00,000	0.683	19,12,400
5	28,00,000	0.621	17,38,800
6	32,00,000	0.564	18,04,800
7	40,00,000	0.513	20,52,000
8	60,00,000	0.467	28,02,000
9	40,00,000	0.424	16,96,000
10	16,00,000	0.386	6,17,600
			1,95,84,400

Net Present Value (NPV) = Present Value of Cash Inflows - Cash Outflow

= Rs. 1,95,84,400 - Rs. 1,60,00,000 = 35,84,400

(iii) Calculation of Profitability Index @ 10% discount rate:

Profitability Index = $\frac{\text{Present Value of Cash inflows}}{\text{Cost of the investment}}$

= $\frac{\text{Rs. 1,95,84,400}}{\text{Rs. 1,60,00,000}} = 1.224$

(iv) Calculation of Internal Rate of Return:

Net present value @ 10% discount factor has already been calculated in (ii) above, we will calculate Net present value @15% discount factor.

Year	Net Cash Inflow (Rs.)	Present Value Factor at 15% Discount Rate	Present Value (Rs.)
	(a)	(b)	(c) = (a) × (b)
1	28,00,000	0.870	24,36,000
2	28,00,000	0.756	21,16,800
3	28,00,000	0.658	18,42,400
4	28,00,000	0.572	16,01,600
5	28,00,000	0.497	13,91,600
6	32,00,000	0.432	13,82,400
7	40,00,000	0.376	15,04,000
8	60,00,000	0.327	19,62,000
9	40,00,000	0.284	11,36,000

10	16,00,000	0.247	3,95,200
			1,57,68,000

Net Present Value at 15% = Rs. 1,57,68,000 – Rs. 1,60,00,000 = Rs. -2,32,000

As the net present value @ 15% discount rate is negative, hence internal rate of return falls in between 10% and 15%. The correct internal rate of return can be calculated as follows:

$$\begin{aligned}
 \text{IRR} &= L + \frac{\text{NPV}_L}{\text{NPV}_L - \text{NPV}_H} (H - L) \\
 &= 10\% + \frac{\text{Rs. } 35,84,400}{\text{Rs. } 35,84,400 - (-\text{Rs. } 2,32,000)} (15\% - 10\%) \\
 &= 10\% + \frac{\text{Rs. } 35,84,400}{\text{Rs. } 38,16,400} \times 5\% = 14.7\%
 \end{aligned}$$

5. (a) **Net Realisable Value method:** The realisation on the disposal of the by-product may be deducted from the total cost of production so as to arrive at the cost of the main product. For example, the amount realised by the sale of molasses in a sugar factory goes to reduce the cost of sugar produced in the factory.

When the by-product requires some additional processing and expenses are incurred in making it saleable to the best advantage of the concern, the expenses so incurred should be deducted from the total value realised from the sale of the by-product and only the net realisations should be deducted from the total cost of production to arrive at the cost of production of the main product. Separate accounts should be maintained for collecting additional expenses incurred on:

- (i) further processing of the by-product, and
 - (ii) selling, distribution and administration expenses attributable to the by-product.
- (b) Service costing differs from product costing (such as job or process costing) in the following ways due to some basic and peculiar nature.
- (i) Unlike products, services are intangible and cannot be stored, hence, there is no inventory for the services.
 - (ii) Use of Composite cost units for cost measurement and to express the volume of outputs.
 - (iii) Unlike a product manufacturing, employee (labour) cost constitutes a major cost element than material cost.
 - (iv) Indirect costs like administration overheads are generally have a significant proportion in total cost of a service as unlike manufacturing sector, service sector heavily depends on support services and traceability of costs to a service may not economically feasible.

- (c) **The points of distinction between Funds flow and Cash flow are as below:**

Funds flow	Cash flow
(i) It ascertains the changes in financial position between two accounting periods.	(i) It ascertains the changes in balance of cash in hand and bank.
(ii) It analyses the reasons for change in financial position between two balance sheets	(ii) It analyses the reasons for changes in balance of cash in hand and bank

(iii) It reveals the sources and application of finds.	(iii) It shows the inflows and outflows of cash.
(iv) It helps to test whether working capital has been effectively used or not.	(iv) It is an important tool for short term analysis.
	(v) The two significant areas of analysis are cash generating efficiency and free cash flow.

- (d) **Distinguish between 'Profit Maximization' and 'Wealth Maximization':** Profit maximisation is a short-term objective and cannot be the sole objective of a company. It is at best a limited objective. If profit is given undue importance, a number of problems can arise like the term profit is vague, profit maximisation has to be attempted with a realisation of risks involved, it does not take into account the time pattern of returns and as an objective it is too narrow.

Whereas, on the other hand, wealth maximisation, as an objective, means that the company is using its resources in a good manner. If the share value is to stay high, the company has to reduce its costs and use the resources properly. If the company follows the goal of wealth maximisation, it means that the company will promote only those policies that will lead to an efficient allocation of resources.

6. (a) (i) **Material price variance:**

= Actual Quantity_{Consumed} (Std. Price – Actual Price)

$$= 22,000 \text{ pcs} \left(\text{Rs. } 9 - \frac{\text{Rs. } 1,87,000}{22,000 \text{ pcs}} \right) = \text{Rs. } 11,000 \text{ (Favourable)}$$

(ii) **Material usage variance:**

= Std. price per piece (Std. Quantity – Actual Quantity_{consumed})

= Rs. 9 (1,900 units × 10 pcs. – 22,000 pcs.) = Rs. 27,000 (Adverse)

(iii) **Labour rate variance:**

= Actual hours_{paid} (Std. rate – Actual rate)

$$= 5,150 \text{ hours} \left(\text{Rs. } 12 - \frac{\text{Rs. } 51,500}{5,150 \text{ hours}} \right) = \text{Rs. } 10,300 \text{ (Favourable)}$$

(iv) **Labour efficiency variance:**

= Std. rate per hour (Std. hours – Actual hours_{worked})

= Rs. 12 (1,900 units × 2.5 hours – 5,150 hours) = Rs. 4,800 (Adverse)

(v) **Fixed overhead expenditure variance:**

= Budgeted Overhead – Actual Overhead

= Rs. 84,000 – Rs. 92,000 = Rs. 8,000 (Adverse)

(vi) **Fixed overhead efficiency variance:**

= Std. rate per hour (Std. hours - Actual hours_{worked})

= Rs. 16 (1,900 units × 2.5 hours - 5,150 hours) = Rs. 6,400 (Adverse)

Or,

Fixed overhead efficiency variance on the basis of units

$$= \text{Std. rate per unit (Actual output – Standard output for actual hours)}$$

$$= \text{Rs.40 (1,900 units - 5,150 hours / 2.5 hours) = Rs. 6,400 (Adverse)}$$

(vii) Fixed overhead capacity variance:

$$= \text{Std. rate per hour (Actual hours}_{\text{worked}} - \text{Budgeted hours})$$

$$= \text{Rs. 16} \left(5,150 \text{ hours} - \frac{\text{Rs.84,000}}{\text{Rs.16}} \right) = \text{Rs. 1,600 (Adverse)}$$

Or,

Fixed overhead capacity variances on the basis of units

$$= \text{Std. rate per unit (Standard output for actual hours – Budgeted output)}$$

$$= \text{Rs.40 (2,060 units - Rs.84,000 / Rs.40) = Rs. 1,600 (Adverse)}$$

(b) (i) Calculation of Operating Cycle Period

$$\text{Operating Cycle Period} = R + W + F + D - C$$

$$= 25 + 12 + 30 + 45 - 15$$

$$= 97 \text{ days}$$

(ii) Number of Operating Cycle in a Year

$$= \frac{360}{\text{Operating Cycle Period}}$$

$$= \frac{360}{97} = 3.7$$

(iii) Amount of Working Capital Required

$$= \frac{\text{Annual Operating Cost}}{\text{Number of Operating Cycle}}$$

$$= \frac{\text{Annual Operating Cost - Depreciation}}{\text{Number of Operating Cycle}}$$

$$= \frac{\text{₹ 42,00,000 - ₹ 4,20,000}}{3.7} = \text{Rs.10,21,622}$$

(iv) Reduction in Working Capital

$$\text{Operating Cycle Period} = R + W + F - C$$

$$= 25 + 12 + 30 - 15 = 52 \text{ days}$$

$$\text{Amount of Cash Working Capital Required} = \frac{\text{₹ 37,80,000}}{360} \times 52$$

$$= \text{Rs.5,46,000}$$

$$\text{Reduction in Working Capital} = \text{Rs.10,21,622} - \text{Rs.5,46,000}$$

$$= \text{Rs. 4,75,622}$$

7. (a) **Idle capacity costs are treated in the following ways in Cost Accounts:**

- (i) **If the idle capacity cost is due to unavoidable reasons:** A supplementary overhead rate may be used to recover the idle capacity cost. In this case, the costs are charged to the production capacity utilised.
- (ii) **If the idle capacity cost is due to avoidable reasons:** Such as faulty planning, etc. the cost should be charged to Costing Profit and Loss Account.
- (iii) **If the idle capacity cost is due to trade depression, etc.,:** Being abnormal in nature the cost should also be charged to the Costing Profit and Loss Account.
- (iv) **If the idle capacity cost is due to seasonal factors,** then the cost should be charged to cost of production by inflating overhead rate.

(b)

	Industry	Method of Costing	Unit of Cost
(i)	Hotel	Operating Costing	Room day/ per bed
(ii)	Toy Making	Batch Costing	Units/ Batch
(iii)	Steel	Process Costing/ Single Costing	Per Tonne/ Per MT
(iv)	Ship Building	Contract Costing	Project/ Unit

- (c) “Operating risk is associated with cost structure whereas financial risk is associated with capital structure of a business concern”.

Operating risk refers to the risk associated with the firm's operations. It is represented by the variability of earnings before interest and tax (EBIT). The variability in turn is influenced by revenues and expenses, which are affected by demand of firm's products, variations in prices and proportion of fixed cost in total cost. If there is no fixed cost, there would be no operating risk. Whereas financial risk refers to the additional risk placed on firm's shareholders as a result of debt and preference shares used in the capital structure of the concern. Companies that issue more debt instruments would have higher financial risk than companies financed mostly by equity.

(d) **Venture Capital Financing and Factors to be considered in Financing any Risky Project**

Under venture capital financing, venture capitalist makes investment to purchase debt or equity from inexperienced entrepreneurs who undertake highly risky ventures with potential of success.

- (i) Quality of the management team is a very important factor to be considered. They are required to show a high level of commitment to the project.
- (ii) The technical ability of the team is also vital. They should be able to develop and produce a new product / service.
- (iii) Technical feasibility of the new product / service should be considered.
- (iv) Since the risk involved in investing in the company is quite high, venture capitalists should ensure that the prospects for future profits compensate for the risk.
- (v) A research must be carried out to ensure that there is a market for the new product.
- (vi) The venture capitalist himself should have the capacity to bear risk or loss, if the project fails.
- (vii) The venture capitalist should try to establish a number of exit routes.

- (viii) In case of companies, venture capitalist can seek for a place on the Board of Directors to have a say on all significant matters affecting the business.
- (e) (i) **Discretionary Cost Centre:** The cost centre whose output cannot be measured in financial terms, thus input-output ratio cannot be defined. The cost of input is compared with allocated budget for the activity. Example of discretionary cost centres are Research & Development department, Advertisement department where output of these department cannot be measured with certainty and co-related with cost incurred on inputs.
- (ii) Advantages of Electronic Cash Management System
- (1) Decrease in interest costs.
 - (2) More control over time and funds.
 - (3) Faster transfer of funds from one location to another, where required.
 - (4) Making available funds wherever required, whenever required.