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IPCC May 2017 EXAM

COSTING & FINANCIAL MANAGEMENT

Test Code - I N J 1 1 4 0

BRANCH - (MULTIPLE) (Date :)

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Answer-1 (a) :**Table showing Labour Cost per Article**

Method of Payment	Hours worked	Weekly earnings (Rs.)	Number of articles produced	Labour cost per article (Rs.)
Existing time rate (WN-1)	49	8,425.00	120	70.21
Straight piece rate system (WN-2)	40	8,640.00	135	64.00
Rowan Premium System (WN-3)	40	9,007.41	135	66.72
Halsey Premium System (WN-4)	40	8,600.00	135	63.70

(2 Marks)**Working Notes:****1. Existing time rate**

Weekly wages:

Normal shift (40 hours × Rs. 160) Rs. 6,400

Late shift (9 hours × Rs. 225) Rs. 2,025Rs. 8,425**2. Piece Rate System**15 articles are produced in 5 hours $\frac{5 \text{ hours}}{15 \text{ articles}} \times 135 \text{ articles} = 45 \text{ hours}$.

Therefore, to produce 135 articles, hours required is

Cost of producing 135 articles:

At basic time rate (45 hours × Rs.160) = Rs. 7,200

Add: Bonus @ 20% on basic Piece rate

 $\left(\frac{\text{Rs.7,200}}{135 \text{ articles}} \times 20\% \times 135 \text{ articles} \right) = \underline{\text{Rs. 1,440}}$ Earning for the week Rs. 8,640**3. Rowan Premium System**(i) Time allowed for producing 135 articles $\left(\frac{5 \text{ hours}}{5 \text{ articles}} \times 135 \text{ articles} \times 150\% \right)$ 67.5 hours

(ii) Time taken to produce 135 articles = 40 hours

(iii) Time Saved = 27.5 hours

Earnings under Rowan Premium system:

 $= (\text{Time taken} \times \text{Rate per hour}) + \left(\frac{\text{Time saved}}{\text{Time allowed}} \times \text{Time taken} \times \text{Rate per hour} \right)$ $= (40 \text{ hours} \times \text{Rs.160}) + \left(\frac{27.5 \text{ hours}}{67.5 \text{ hours}} \times 40 \text{ hours} \times \text{Rs.160} \right) = \text{Rs.9,007.41}$ **4. Halsey Premium System** $= (\text{Time taken} \times \text{Rate per hour}) + \left(\frac{1}{2} \times \text{Time saved} \times \text{Rate per hour} \right)$ $= (40 \text{ hours} \times 160) + \left(\frac{1}{2} \times 27.5 \text{ hours} \times 160 \right) = \text{Rs.6,400} + \text{Rs.2,200} = \text{Rs.8,600}$ **(3 Marks)****Answer-1 (b) :****Working Notes:**

- Total Sales = Break -even Sales + Margin of Safety
= Rs. 400 crores + Rs. 120 crores
= Rs. 520 crores
- Variable Cost = Total Sales × (1- P/V Ratio)
= Rs. 520 crores × (1 – 0.3)
= Rs. 364 crores
- Fixed Cost = Break-even Sales × P/V Ratio
= Rs. 400 crores × 30%

$$\begin{aligned}
 &= \text{Rs. 120 crores} \\
 4. \quad \text{Profit} &= \text{Total Sales} - (\text{Variable Cost} + \text{Fixed Cost}) \\
 &= \text{Rs. 520 crores} - (\text{Rs. 364 crores} + \text{Rs. 120 crores}) \\
 &= \text{Rs. 36 crores}
 \end{aligned}$$

(3 Marks)

(i) Revised Sales figure to earn profit of Rs. 56 crores (i.e. Rs. 36 crores + Rs. 20 crores)

$$\begin{aligned}
 \text{Revised Sales} &= \frac{\text{Revised Fixed Cost} + \text{Desired Profit}}{\text{Revised P/V Ratio}^{**}} \\
 &= \frac{\text{Rs.185 crores} + \text{Rs.56 crores}}{28\%} \\
 &= \text{Rs. 860.71 Crores}
 \end{aligned}$$

*Revised Fixed Cost

$$\begin{aligned}
 &= \text{Present Fixed Cost} + \text{Increment in fixed cost} + \text{Interest on additional Capital} \\
 &= \text{Rs. 120 crores} + \text{Rs. 50 crores} + 15\% \text{ of Rs. 100 crores} \\
 &= \text{Rs. 185 crores}
 \end{aligned}$$

**Revised P/V Ratio : Let current selling price per unit be Rs. 100.

Therefore, Reduced selling price per unit = Rs. 100 × 90% = Rs. 90

Revised Variable Cost on Sales = 70% + 2% = 72%

Variable Cost per unit = Rs. 90 × 72% = Rs. 64.80

Contribution per unit = Rs. 90 - Rs. 64.80 = Rs. 25.20

$$\text{Revised P/V Ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100 = \frac{\text{Rs.25.2}}{\text{Rs.90}} \times 100 = 28\%$$

$$(ii) \quad (a) \quad \text{Revised Break-even Sales} = \frac{\text{Fixed Cost}}{\text{P/V Ratio}} \times 100 = \frac{\text{Rs.185 crores}}{28\%} = \text{Rs.660.71 crores}$$

(b) Revised P/V Ratio = 28 % (as calculated above)

$$\begin{aligned}
 (c) \quad \text{Revised Margin of safety} &= \text{Total Sales} - \text{Break-even Sales} \\
 &= \text{Rs. 860.71 crores} - \text{Rs. 660.71 crores} \\
 &= \text{Rs. 200 crores.}
 \end{aligned}$$

(2 Marks)

Answer-1 (c) :

Percentage change in earning per share to the percentage change in sales is calculated through degree of combined leverage,

Hence, Computation of percentage of change in earnings per share, if sales increased by 5%

$$\text{Degree of Combined leverage (DCL)} = \frac{\% \text{ change in Earning per share (EPS)}}{\% \text{ Change in sales}}$$

Moreover, Degree of operating leverage (DOL) × Degree of Financial Leverage (DFL) = Degree of combined leverage (DCL)

$$\text{Or, DOL} \times \text{DFL} = \frac{\% \text{ change in Earning per share (EPS)}}{\% \text{ change in sales}}$$

$$\text{Or, } 1.625 \times 3.5 \text{ [Refer to working notes (i) and (ii)]} = \frac{\% \text{ change in Earning per share (EPS)}}{5}$$

$$\text{Or, } 5.687 = \frac{\% \text{ change in Earning per share (EPS)}}{5}$$

Or, % change in EPS = 5.687 × 5 = 28.4375%

So, If sales is increased by 5 percent, Percentage of change in earning per share will be 28.4375 %

(3 Marks)

Working Notes:

$$(i) \quad \text{Degree of operating leverage (DOL)} = \frac{\text{Contribution}}{\text{EBIT}} = \frac{(\text{Rs.1,120} + \text{Rs.700 lakhs})}{\text{Rs.1,120 lakhs}} = 1.625$$

$$(ii) \quad \text{Degree of financial leverage (DFL)} = \frac{\text{EBI}}{\text{PBT}} = \frac{\text{Rs.1,120}}{\text{Rs.320}} = 3.5$$

(2 Marks)

Answer-1 (d) :

Workings:

$$(i) \quad \text{Cost of Equity } (K_e) = \frac{D_1}{P_0} + g = \frac{Rs.3}{Rs.30} + 0.07 = 0.1 + 0.07 = 0.17 = 17\%$$

$$(ii) \quad \text{Cost of Debentures } (K_d) = I(1 - t) = 0.09(1 - 0.4) = 0.054 \text{ or } 5.4\%$$

(2 Marks)

Computation of Weighted Average Cost of Capital (WACC using market value weights)

Source of capital	Market Value of capital (Rs.)	Weight	Cost of capital (%)	WACC (%)
9% Debentures	30,00,000	0.30	5.40	1.62
12% Preference Shares	10,00,000	0.10	12.00	1.20
Equity Share Capital (Rs.30 × 2,00,000 shares)	60,00,000	0.60	17.00	10.20
WACC (%)				
Total	1,00,00,000	1.00		13.02

(3 Marks)

Answer-2 (a) :

Calculation of Unabsorbed Overheads

Manufacturing overheads actually spent	(Rs.) 1,70,000
Less: Manufacturing overheads absorbed	<u>1,50,000</u>
Manufacturing overheads unabsorbed	<u>20,000</u>

(1 Mark)

If the unabsorbed overheads is due to abnormal reasons, the unabsorbed amount of Rs. 20,000 should be charged against Current Costing Profit and Loss A/c and it will reduce the current year profits to the extent of Rs. 20,000.

(1 Mark)

If the unabsorbed manufacturing overheads due to normal factors, the same should be adjusted to cost of goods sold, work-in-progress and stock of finished goods as follows:

(1 Mark)

Particulars	Percentage	Amount (Rs.)	Proportionate unabsorbed overhead (Rs.)	Total cost(Rs.)
Cost of goods sold	70%	3,36,000	14,000	3,50,000
Work-in-progress	10%	48,000	2,000	50,000
Stock of finished goods	20%	96,000	4,000	1,00,000
Total	100%	4,80,000	20,000	

(3 Marks)

The unabsorbed manufacturing overhead will be added to cost of goods sold, work-in-progress and stock of finished goods by applying supplementary overhead rates. The current profits will get reduced by Rs. 14,000 to the extent of the proportion added to cost of goods sold whereas the balance of Rs. 2,000 and Rs. 4,000 added to work-in-progress and stock of finished goods will be carried to the next accounting year.

(2 Marks)

Answer-2 (b) :

$$\text{Current Ratio} = \frac{\text{Current Assets (CA)}}{\text{Current Liabilities (CL)}} = 2 \text{ i.e. } 2 : 1$$

(2 Marks)

S.No.	Situation	Improve/ Decline/ No Change	Reason
(i)	Payment of	Current Ratio	Rs.1 lakh. If payment of Current Liabilities = Rs.10,000 then,

	Current liability	will improve	CA = 1, 90,000 CL = 90,000. Current Ratio = $\frac{1,90,000}{90,000}$ = 2.11 : 1. When Current Ratio is 2:1 Payment of Current liability will reduce the same amount in the numerator and denominator. Hence, the ratio will improve.
(ii)	Purchase of Fixed Assets by cash	Current Ratio will decline	Since cash will be reduced, Current Asset will decrease and current ratio will fall.
(iii)	Cash collected from Customers	Current Ratio will not change	Cash will increase and Debtors will reduce. Hence No Change in Current Asset.
(iv)	Bills Receivable dishonoured	Current Ratio will not change	Bills Receivable will come down and debtors will increase. Hence no change in Current Assets.
(v)	Issue of New Shares	Current Ratio will improve	As Cash will increase, Current Assets will increase and current ratio will increase.

(6 Marks)

Answer-3 (a) :

(a) Production Budget (in units)

	Product- K (units)	Product- H (units)
Expected sales	8,000	4,200
Add: Closing stock	1,000	2,100
Less: Opening stock	(800)	(1,600)
Units to be produced	8,200	4,700

(2 Marks)

(b) Material Purchase Budget

	Material-X (kg.)	Material-Y (kg.)	Material-Z (Ltr.)
Materials required:			
- Product-K	98,400 (8,200 units × 12 kg.)	1,23,000 (8,200 units × 15 kg.)	65,000 (8,200 units × 8 ltr.)
- Product- H	70,500 (4,700 units × 15 kg.)	28,200 (4,700 units × 6 kg.)	65,800 (4,700 units × 14 ltr.)
Total	1,68,900	1,51,200	1,31,400
Add: Closing stock	30,000	18,000	7,500
Less: Opening stock	(25,000)	(30,000)	(14,000)
Quantity to be purchased	1,73,900	1,39,200	1,24,900
Rate	Rs.15 per kg.	Rs.16 per kg.	Rs.5 per ltr.
Purchase cost	Rs. 26,08,500	Rs. 22,27,200	Rs. 6,24,500

(2 Marks)

(c) Direct Labour Budget

	Unskilled (hours)	Skilled(hours)
For Product K	98,400 (8,200 units × 12 hours)	65,600 (8,200 units × 8 hours)
For Product H	47,000 (4,700 units × 10 hours)	23,500 (4,700 units × 5 hours)
Labour hours required	1,45,400	89,100
Rate	Rs. 40 per hour	Rs. 75 per hour
Wages to be paid	Rs. 58,16,000	Rs. 66,82,500

(2 Marks)

Answer-3 (b) :

(i) Schedule of Changes in Working Capital:

Particulars	31 st March		Working Capital	
	2009 Rs.	2010 Rs.	Increase Rs.	Decrease Rs.
(A) Current Assets				
Stock	9,60,000	17,00,000	7,40,000	
Debtors	12,00,000	15,96,000	3,96,000	
Prepaid Expenses	1,00,000	80,000		20,000
Cash and Bank	<u>2,80,000</u>	<u>1,70,000</u>		1,10,000
Total (A)	25,40,000	35,46,000		
(B) Current Liabilities				
Creditors	8,00,000	11,60,000		3,60,000
Outstanding Expenses	40,000	50,000		10,000
Provision for Taxation	<u>2,00,000</u>	<u>2,40,000</u>		40,000
Total (B)	<u>10,40,000</u>	<u>14,50,000</u>		
Working Capital (A) – (B)	15,00,000	20,96,000	11,36,000	5,40,000
Increase in WorkingCapital	5,96,000			5,96,000
Total	20,96,000	20,96,000	11,36,000	11,36,000

(3 Marks)

(ii) Funds flow from Operations for the year ended March 31, 2010

Adjusted Profit and Loss A/C

Particulars	Rs.	Particulars	Rs.
To General Reserve	66,000	By Balance b/d	5,00,000
To Depreciation:		By Funds from Operations	
On Land & Building	2,00,000	(Balancing figure)	21,26,000
On Plant & Machinery	<u>5,60,000</u>		
To Loss on Sale of Machine	40,000		
To Premium on Redemption of Debentures	80,000		
To Proposed Dividend	7,20,000		
To Interim Dividend	2,40,000		
To Balance c/d	7,40,000		
	26,26,000		26,26,000

(2 Marks)

Working Notes:

(i) Depreciation on Land and Building = Rs.30,00,000 – 28,00,000 = Rs.2,00,000

(ii) Loss on Sale of Old Machine = Rs.2,90,000 (Cost) – 1,50,000 (Cum. Dep.) – 1,00,000 (Sale Value) = 40,000

(iii) Depreciation on Plant and Machinery

Dr.	Rs.	Cr.	Rs.
To Balance b/d	36,00,000	By Bank a/c (sold)	1,00,000
To Bank a/c (Purchases)	6,00,000	By Profit & Loss a/c (Loss on Sales)	40,000
		By Depreciation (Balancing figure)	5,60,000

By Balance c/d

35,00,000

42,00,000**42,00,000****(2 Marks)****(iv) Premium on Redemption of Debentures**

Amount of Debentures Redeemed = Rs. 20,00,000 - 16,00,000 = Rs.4,00,000

Premium = 20% of 4,00,000= Rs. 80,000

(1 Mark)**Answer-4 (a) :**

(1) Statement Showing Allocation of Joint Costs basing on Sales Value at Split-off Stage (Rs.)

Product	Sales value at split-off stage	Proportion %	Joint costs allocation
Caustic soda	15,00,000	50	12,50,000
Chlorine	<u>15,00,000</u>	<u>50</u>	<u>12,50,000</u>
	30,00,000	100	25,00,000

(1 Mark)

(2) Statement Showing Allocation of Joint Costs basing on Physical Measure

Product	Quantity (Tones)	Proportion %	Joint cost allocation (Rs.)
Caustic soda	1,200	60	15,00,000
Chlorine	<u>800</u>	<u>40</u>	<u>10,00,000</u>
	30,00,000	100	25,00,000

(1 Mark)

(3) Statement Showing Allocation of Joint Costs basing on Estimated Net Realizable Value

Product	Estimated Net Saleable value	%	Joint cost allocation
Caustic soda	15,00,000	42.86	10,71,500
Chlorine	<u>20,00,000</u>	<u>57.14</u>	<u>14,28,500</u>
	35,00,000	100	25,00,000

(1 Mark)

(i) Calculation of Estimated Net Realizable Value

Particulars	Caustic Soda	Chlorine
Expected production 1200 tones	1200 tonnes	500 tones
Selling price per tonne Rs. 1,250	<u>Rs.1,250</u>	<u>Rs.5,000</u>
Expected sales	<u>Rs.15,00,000</u>	<u>Rs.25,00,000</u>
Less: Further processing cost	Nil	Rs.5,00,000
Estimated net realizable value at split-off stage	Rs.15,00,000	Rs.20,00,000

(2 Marks)

(ii) Calculation of Gross Margin Percentage of Caustic Soda and PVC under the above three methods

Particulars	Sales value At split off Stage	Physical measure	Estimated Net realiseable value
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Caustic soda

Sales	15,00,000	15,00,000	15,00,000
Less : Joint Costs allocated	<u>12,50,000</u>	<u>15,00,000</u>	<u>10,71,500</u>
Gross margin (Rs.)	<u>2,50,000</u>	=	=
Gross margin (as % of sales)	<u>16.67%</u>	=	<u>28.57%</u>
PVC			
Sales (500 tonnes @ Rs.5,000)	25,00,000	25,00,000	25,00,000
Less : Joint cost allocated	12,50,000	10,00,000	14,28,500
Less : Further processing cost	<u>5,00,000</u>	<u>5,00,000</u>	<u>5,00,000</u>
Gross margin	<u>7,50,000</u>	<u>10,00,000</u>	<u>5,71,500</u>
Gross margin (as % of sales)	3%	40%	22.86%

(2 Marks)

(iii) Incremental Revenue from Further Processing of Chlorine into PVC

Rs.

Incremental revenue	(500 tonnes x Rs.5,000) – (800 tonnes x Rs.1,875)	10,00,000
Incremental cost of further processing into PVC		<u>5,00,000</u>
Incremental income from further processing		<u>5,00,000</u>

Suggestion – Since there is an incremental revenue is Rs.5,00,000 from further processing of chlorine into PVC, hence it is suggested to go for further process.

(1 Mark)

Answer-4 (b) :

(i) **Computation of Earnings per Share (EPS)**

Plans	P (Rs.)	Q (Rs.)	R (Rs.)
Earnings before interest & tax (EBIT)	18,00,000	18,00,000	18,00,000
Less: Interest charges	—	(2,00,000)	—
Earnings before tax (EBT)	18,00,000	16,00,000	18,00,000
Less : Tax @ 50%	<u>(9,00,000)</u>	<u>(8,00,000)</u>	<u>(9,00,000)</u>
Earnings after tax (EAT)	9,00,000	8,00,000	9,00,000
Less : Preference share dividend	—	—	(2,00,000)
Earnings available for equity shareholders	<u>9,00,000</u>	<u>8,00,000</u>	<u>7,00,000</u>
No. of equity shares	<u>2,00,000</u>	<u>1,00,000</u>	<u>1,00,000</u>
E.P.S	4.5	8	7

(4 Marks)

(ii) **Computation of Financial Break-even Points**

Proposal 'P'	= 0
Proposal 'Q'	= Rs. 2,00,000 (Interest charges)
Proposal 'R'	= Earnings required for payment of preference share dividend
	i.e. Rs. 2,00,000 ÷ 0.5 (Tax Rate) = Rs. 4,00,000

(1 Mark)

(iii) **Computation of Indifference Point between the Proposals**

Combination of Proposals

(a) Indifference point where EBIT of proposal "P" and proposal 'Q' is equal

$$\frac{\text{EBIT} (1 - 0.5)}{2,00,000 \text{ shares}} = \frac{(\text{EBIT} - \text{Rs.}2,00,000)(1 - 0.5)}{1,00,000 \text{ shares}}$$

$$0.5 \text{ EBIT} = \text{EBIT} - \text{Rs.} 2,00,000$$

$$\text{EBIT} = \text{Rs.} 4,00,000$$

(b) Indifference point where EBIT of proposal 'P' and proposal 'R' is equal:

$$\frac{\text{EBIT} (1 - 0.50)}{2,00,000 \text{ shares}} = \frac{\text{EBIT} (1 - 0.50) - \text{Rs.}2,00,000}{1,00,000 \text{ shares}}$$

$$\frac{0.5 \text{ EBIT}}{2,00,000 \text{ shares}} = \frac{0.5 \text{ EBIT} - \text{Rs.}2,00,000}{1,00,000 \text{ shares}}$$

$$0.25 \text{ EBIT} = 0.5 \text{ EBIT} - \text{Rs. } 2,00,000$$

$$\text{EBIT} = \frac{\text{Rs. } 2,00,000}{0.25} = \text{Rs. } 8,00,000$$

(c) Indifference point where EBIT of proposal 'Q' and proposal 'R' are equal

$$\frac{(\text{EBIT} - \text{Rs. } 2,00,000)(1 - 0.5)}{1,00,000 \text{ shares}} = \frac{\text{EBIT} (1 - 0.5) - \text{Rs. } 2,00,000}{1,00,000 \text{ shares}}$$

$$0.5 \text{ EBIT} - \text{Rs. } 1,00,000 = 0.5 \text{ EBIT} - \text{Rs. } 2,00,000$$

There is no indifference point between proposal 'Q' and proposal 'R'

Analysis: It can be seen that financial proposal 'Q' dominates proposal 'R', since the financial break-even-point of the former is only Rs. 2,00,000 but in case of latter, it is Rs. 4,00,000.

(3 Marks)

Answer-5 (a) :

Difference between Cost Control and Cost Reduction

Cost Control	Cost Reduction
1. Cost control aims at maintaining the costs in accordance with the established standards.	1. Cost reduction is concerned with reducing costs. It challenges all standards and endeavours to better them continuously
2. Cost control seeks to attain lowest possible cost under existing conditions.	2. Cost reduction recognises no conditions permanent, since a change will result in lower cost.
3. In case of Cost Control, emphasis is on past and present	3. In case of cost reduction it is on present and future.
4. Cost Control is a preventive function	4. Cost reduction is a corrective function. It operates even when an efficient cost control system exists.
5. Cost control ends when targets are achieved	5. Cost reduction has no visible end.

(4 Marks)

Answer-5 (b) :

Let, the percentage of factory overheads on direct labour is 'x' and the percentage of office overheads on factory cost is 'y', then the total cost of product A and product B will be as follows:

	Product A (Rs.)	Product B (Rs.)
Direct Materials	19,000	15,000
Direct labour	<u>15,000</u>	<u>25,000</u>
Prime Cost	34,000	40,000
Factory overheads (Direct labour X x)	<u>150 x</u>	<u>250 x</u>
Factory cost (i)	34,000 + 150 x	40,000 + 250 x
Office overheads (Factory cost * y) (ii)	<u>340 y + 1.5 x y</u>	<u>400 y + 2.5 x y</u>
Total Cost [(i) + (ii)]	34,000 + 150 x + 340 y + 1.5 x y	40,000 + 250 x + 400 y + 2.5 x y

(2 Marks)

Total cost on the basis of sales is:

	Product A (Rs.)	Product B (Rs.)
Sales	60,000	80,000
Less: Profit		
Product A – 25% on cost or 20% on Sales	12,000	
Product B – 25% on sales		20,000
Total Cost	48,000	60,000

(2 Marks)

Thus,

$$\begin{aligned}
 \text{Total Cost of A is} & \quad 34,000 + 150x + 340y + 1.5xy = 48,000 \\
 & \quad \text{Or, } 150x + 340y + 1.5xy = 14,000 \dots\dots\dots (i) \\
 \text{Total Cost of B is} & \quad 40,000 + 250x + 400y + 2.5xy = 60,000 \\
 & \quad \text{Or, } 250x + 400y + 2.5xy = 20,000 \dots\dots\dots (ii) \\
 \text{Equation (ii) multiplied by 0.6 and after deducting from equation (i), we get} & \\
 & \quad 150x + 340y + 1.5xy = 14,000 \dots\dots\dots (i) \\
 & \quad \underline{150x + 240y + 1.5xy} = \underline{12,000} \dots\dots\dots (ii) \\
 & \quad \quad \quad 100y = 2,000 \\
 & \quad \quad \quad \text{Or, } y = 20
 \end{aligned}$$

Putting value of y in equation (i), we get

$$\begin{aligned}
 150x + 340 \times 20 + 1.5x \times 20 & = 14,000 \\
 \text{Or, } 150x + 30x & = 14,000 - 6,800 \\
 \text{Or, } 180x & = 7,200 \\
 \text{Or, } x & = 40
 \end{aligned}$$

Hence, (i) the factory overheads on direct labour = 40% and
(ii) the office overheads on factory cost = 20%.

(2 Marks)

Answer-5 (c) :

Financial Instruments in the International Market

Some of the various financial instruments dealt with in the international market are:

- (a) Euro Bonds
- (b) Foreign Bonds
- (c) Fully Hedged Bonds
- (d) Medium Term Notes
- (e) Floating Rate Notes
- (f) External Commercial Borrowings
- (g) Foreign Currency Futures
- (h) Foreign Currency Option
- (i) Euro Commercial Papers.

(6 Marks)

Answer-6 (a) :

**Arnav Construction Ltd. Contract A/c
(November 1, 2012 to Oct. 31, 2013)**

Particulars	Amount (Rs.)	Amount (Rs.)	Particulars	Amount (Rs.)	Amount (Rs.)
To Materials issued		6,75,000	By Plant returned to store on 31/03/13 at cost	75,000	
To Labour paid	4,50,000		Less: Depreciation for 5 months @ 33.33%	<u>(10,417)</u>	64,583
Less: Prepaid wages	<u>(25,000)</u>	4,25,000	By W-I-P:		
To Plant purchased & issued		3,75,000	Work certified	20,00,000	
To Expenses paid	2,00,000		Work un-certified	<u>75,000</u>	20,75,000
Add: Outstanding exp.	<u>50,000</u>	2,50,000	By Plant at site (Rs. 3,75,000 – Rs. 75,000)	3,00,000	
To Notional profit c/d		6,89,583	Less: Depreciation @33.33%	<u>1,00,000</u>	2,00,000
			By Material at site		75,000
		24,14,583			24,14,583
To Costing P & L A/c. (Working Note-1)		1,48,580	By Notional Profit b/d		6,89,583
To Work-in –progress (Profit transferred to reserve)		5,41,003			
		6,89,583			6,89,583

(4 Marks)

Arnav Construction Ltd. Contract A/c (November 1, 2012 to March 31, 2014)
(For computing estimated profit)

Particulars	Amount (Rs.)	Particulars	Amount (Rs.)
To Material issued (Rs. 6,75,000 + Rs. 12,37,500)	19,12,500	By Material at site	37,500
To Labour (Paid & Outstanding) (Rs.4,25,000 + Rs.5,87,500 +Rs.2,500)	10,15,000	By Plant returned to stores on 31/03/13	64,583
To Plant purchased	3,75,000	By Plant returned to stores on 31/03/14	
To Expenses (2,50,000 + 3,25,000)	5,75,000	WDV on 31/10/2013	2,00,000
		Less: Depreciation for 5 months @ 33.33% <u>(27,778)</u>	1,72,222
To Estimated profit	3,34,305	By Contractee A/c	39,37,500
	42,11,805		42,11,805

(3 Marks)

Working Note:**Profit to be taken to Costing Profit & Loss A/c on prudent basis:**

$$\text{Estimated profit} \times \frac{\text{Cash received}}{\text{Work certified}} \times \frac{\text{Work certified}}{\text{Total Contract}}$$

$$\text{Rs. } 3,34,305 \times \frac{\text{Rs. } 17,50,000}{\text{Rs. } 20,00,000} \times \frac{\text{Rs. } 20,00,000}{\text{Rs. } 39,37,500} = \text{Rs. } 1,48,580$$

(1 Mark)

Answer-6 (b) :

(1) Calculation of Saving in Bad Debt Losses

(Rs.)

Current bad debts	(40,000 X 35 X 3/100)	42,000
Proposed bad debts	(39,000 X 35 X 1/100)	<u>13,650</u>
Saving in bad debts		28,350

(1.5 Marks)

(2) Calculation of Saving in Investment in Receivables

(Rs.)

Current investment in receivables	(40,000 X 35 X 60/360)	2,33,333
Proposed investment in receivables	(39,000 X 35 X 45/360)	<u>1,70,625</u>
Saving in investment in receivables		62,708

(1.5 Marks)

(3) Calculation of Total Saving

(Rs.)

Saving in bad debt		28,350
Saving in investment in receivables	(62,708 X 20/100)	<u>12,542</u>
Total saving on adoption of new credit policy		40,892

(1.5 Marks)

Increase in Collection Charges

(Rs.)

Current collection charges		15,000
Proposed collection charges		25,000
Increase in collection charges		10,000

(1.5 Marks)

Reduction in profit due to loss of sales = 1000 units X (Rs. 35 - Rs. 28) = Rs. 7,000
 Incremental Cost = 10,000 + 7,000 = Rs. 17,000
 Incremental profit from adoption of new credit policy = 40,892 - 17,000 = Rs. 23,892
 Analysis - Since the existing profit will increase by Rs. 23,892 by adoption of new the new credit policy.
 Hence, the scheme is suggested to adopt.

(2 Marks)

Answer-7 (a) :

Annual requirement of raw material in kg. (A) = $\frac{1,00,000 \text{ units}}{2.5 \text{ units per kg}} = 40,000 \text{ kg.}$

Ordering Cost (Handling & freight cost) (O) = Rs. 360 + Rs. 390 = Rs. 750

Carrying cost per unit per annum i.e. inventory carrying cost + working capital cost (c × i)
 = (Rs. 0.5 × 12 months) + Rs. 9
 = Rs. 15 per kg.

(2 Marks)

(i) E.O.Q. =
$$= \sqrt{\frac{2 \times 40,000 \text{ kgs.} \times \text{Rs.}750}{\text{Rs.}15}} = 2,000 \text{ kg.}$$

(1 Mark)

(ii) Frequency of orders for procurement:

Annual consumption (A) = 40,000 kg.

Quantity per order (EOQ) = 2,000 kg.

No. of orders per annum $\left(\frac{A}{\text{EOQ}}\right) = \frac{40,000 \text{ kg}}{2,000 \text{ kg.}} = 20 \text{ times}$

Frequency of placing orders (in months) = $\frac{12 \text{ months}}{20 \text{ orders}} = 0.6 \text{ months}$

Or, (in days) = $\frac{365 \text{ days}}{20 \text{ orders}} = 18 \text{ days (approx.)}$

(1 Mark)

(iii) Percentage of discount in the price of raw materials to be negotiated:

	Quarterly order	EOQ
Size of the order	10,000 kg.	2,000 kg.
No. of orders	4	20
Cost of placing orders	Rs.3,000 (4 order × Rs. 750)	Rs.15,000 (20 orders × Rs. 750)
Inventory carrying cost	Rs.75,000 (10,000 kg. × ½ × Rs.15)	Rs.15,000 (2,000 kg. × ½ × Rs. 15)
Total Cost	Rs.78,000	Rs.30,000

When order is placed on quarterly basis the ordering cost and carrying cost increased by Rs. 48,000 (Rs.78,000 - Rs.30,000). This increase in total cost should be compensated by reduction in purchase price per kg. to make quarterly order placement rational.

Reduction per kg. in the purchase price of raw material = $\frac{\text{Increase in total cost}}{\text{Annual requirement}}$
 = $\frac{\text{Rs.}48,000}{40,000 \text{ units}} = \text{Rs.}1.2 \text{ per kg.}$

Discount in the price of raw material to be negotiated = $\frac{\text{Rs.}1.20}{\text{Rs.}60} = 2\%$

(2 Marks)

Answer-7 (b) :

Factors to be taken into consideration while determining the requirement of working capital:

(i) Production Policies

(ii) Nature of the business

(iii) Credit policy

(iv) Inventory policy

(v) Abnormal factors

(vi) Market conditions

(vii) Conditions of supply

(viii) Business cycle

- (ix) Growth and expansion
(xi) Dividend policy
(xiii) Operating efficiency.

- (x) Level of taxes
(xii) Price level changes

(4 Marks)

Answer-7 (c) :

Budgeted Production 30,000 hours ÷ 6 hours per unit = 5,000 units

Budgeted Fixed Overhead Rate

= Rs. 4,50,000 ÷ 5,000 units = Rs. 90 per unit Or

= Rs. 4,50,000 ÷ 30,000 hours = Rs. 15 per hour.

(i) Material Cost Variance

= (Std. Qty. × Std. Price) – (Actual Qty. × Actual Price)

= (4,800 units × 10 kg. × Rs.10) - Rs. 5,25,000

= Rs. 4,80,000 – Rs. 5,25,000

= Rs. 45,000 (A)

(ii) Labour Cost Variance

= (Std. Hours × Std. Rate) – (Actual Hours × Actual rate)

= (4,800 units × 6 hours × Rs. 5.50) – Rs.1,55,000

= Rs. 1,58,400 – Rs. 1,55,000

= Rs. 3,400 (F)

(iii) Fixed Overhead Cost Variance

= (Budgeted Rate × Actual Qty) – Actual Overhead

= (Rs. 90 × 4,800 units) – Rs. 4,70,000

= Rs. 38,000 (A)

OR

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

= (Rs. 15 × 4,800 units × 6 hours) – Rs. 4,70,000

= Rs. 38,000 (A)

(iv) Variable Overhead Cost Variance

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

= (4,800 units × 6 hours × Rs. 10) - Rs. 2,93,000

= Rs. 2,88,00 - Rs. 2,93,000

= Rs. 5,000 (A)

(6 Marks)