

Gurukripa's Guideline Answers to Nov 2015 Exam Questions CA Inter (IPC) Cost Accounting & Financial Management

Question No.1 is compulsory (**4 × 5 = 20 Marks**).

Answer **any five** questions from the **remaining six** questions (**16 × 5 = 80 Marks**). [Answer any 4 out of 5 in Q.7]

Working Notes should form part of the answers.

Note: Numbers for Page References are given as under –

Book Title	Referred as
Padhuka's Students Handbook on Cost Accounting and Financial Management	Handbook
Padhuka's Cost Accounting and Financial Management – A Practical Guide	Prac. Guide

Question 1(a): Labour Turnover Rates

5 Marks

Human Resources Department of A Ltd computed Labour Turnover by Replacement Method at 3% for the quarter ended June 2015. During the quarter, fresh recruitment of 40 workers was made. The number of workers at the beginning and end of the quarter was 990 and 1010 respectively.

You are required to calculate the Labour Turnover Rate by Separation Method and Flux Method.

Solution: Similar to Principles/ Computations in Page No.3.25, Q.No.5 & 6 of Handbook

(a) L = Average Labour Force = $\frac{990 + 1,010}{2} = 1,000$

(b) Labour Turnover by Replacement Method = 3% (Given). So, $\frac{R}{L} = \frac{R}{1,000} = 3\%$. So, **R = 30**.

(c) A (Accessions) = Replacements + New Recruitments = R + N = 30 + 40 = **70**

(d) Also, A = No. of Workers at the end of the Period + No. of Separations (–) No of Workers at the Beginning of the Period
From the above equation, $70 = 1,010 + S (-) 990$. So, **S = 50**

(e) Labour Turnover Rates are computed as under –

(i) **Separation Method:** $\frac{S}{L} = \frac{50}{1,000} = 5\%$ (ii) **Flux Method:** $\frac{S + R + N}{L} = \frac{50 + 30 + 40}{1,000} = 12\%$

Question 1(b): Marginal Costing – Basic Computations

5 Marks

A Company gives the following information:

Margin of Safety	₹ 3,75,000	Margin of Safety (Quantity)	15,000 units
Total Cost	₹ 3,87,500	Break Even Sales in Units	5,000 units

Calculate – (i) Selling Price per unit, (ii) Profit, (iii) Profit / Volume Ratio, (iv) Break Even Sales (in Rupees), and (v) Fixed Cost.

Solution: Similar to Principles/ Computations in Page No.11.14 Illustrations of Handbook

1. Sale Price p.u. = $\frac{\text{MOS Amount}}{\text{MOS Quantity}} = \frac{₹ 3,75,000}{1,500 \text{ Units}} = ₹ 25 \text{ pu}$

2. Profit = Total Sales (–) Total Cost [**Note:** Total Sales = BES + MOS = 15,000 + 5,000 = 20,000 units]
= (15,000 + 5,000) units × ₹ 25 – 3,87,500 = **₹ 1,12,500**

3. Also, Profit = MOS Quantity × Contribution p.u.
On substitution, $1,12,500 = 15,000 \text{ units} \times \text{Contribution p.u.}$ So, Contribution p.u. = **₹ 7.50**

Hence PVR = $\frac{\text{Contribution p.u.}}{\text{Sale Price p.u.}} = \frac{7.5}{25} = 30\%$

4. BES in ₹ = BES Quantity × Sale Price p.u. = 5,000 units × ₹ 25 = **₹ 1,25,000**

5. At BEP, Total Contribution = Fixed Cost .

Total Contribution at BEP = 5,000 units × ₹ 7.50 p.u. So, **Fixed Cost = ₹ 37,500**

Question 1(c): Leverage – Reverse Working to prepare Income Statement

5 Marks

From the following details of X Ltd, prepare the Income Statement for the year ended 31st December 2014:

Financial Leverage	2
Interest	₹ 2,000
Operating Leverage	3
Variable Cost as a Percentage of Sales	75%
Income Tax Rate	30%

Solution: Similar to Page No.17.18, Q.No.18 [N 09 Qn] of Handbook, and Page No.17.11, Q.No.24 & 25 of Practical Guide

Income Statement

Particulars		₹
	Sales (WN 3)	48,000
Less:	Variable Cost (WN 3)	Given = 75% = (36,000)
	Contribution (WN 2)	12,000
Less:	Fixed Cost (WN 2)	(8,000)
	EBIT (WN 1)	4,000
Less:	Interest (given)	(2,000)
	EBT (WN 1)	2,000
Less:	Tax at 30% on EBT	(600)
	EAT (EBT less Tax)	1,400

Notes:

- $$DFL = \frac{EBIT}{EBT} = \frac{EBT + Interest}{EBT} = \frac{EBT + 2,000}{EBT} = \frac{2}{1}$$

So, we have $EBT + ₹ 2,000 = 2 EBT$.
On solving, we get $EBT = ₹ 2,000$, and $EBIT = EBT + Interest = ₹ 2,000 + ₹ 2,000 = ₹ 4,000$.
- $$DOL = \frac{Contribution}{EBIT} = \frac{Contribution}{4,000} = \frac{3}{1}$$

So, $Contribution = ₹ 4,000 \times 3 = ₹ 12,000$.
Hence, $Fixed Costs = Contribution \text{ less } EBT = ₹ 12,000 - ₹ 4,000 = ₹ 8,000$.
- Variable Costs = 75%. So, **PV Ratio** = $100\% - 75\% = 25\%$.
So, $Sales = \frac{Contribution}{PVR} = \frac{12,000}{25\%} = ₹ 48,000$.

Question 1(d): Cost of Debt

5 Marks

A Company issues 25,000, 14% Debentures of ₹ 1,000 each. The Debentures are redeemable after the expiry period of 5 years. Tax Rate applicable to the Company is 35% (including Surcharge and Education Cess).

Calculate the Cost of Debt after tax, if Debentures are issued at 5% Discount with 2% Floatation Cost.

Solution: Similar to Page No.18.16, Q.No.2 Handbook [M 06 Qn]

Particulars	₹ in Crores
1. Gross Proceeds [25,000 Debentures × (₹ 1,000 – 5% Discount)]	23.750
2. Floatation Cost at 2%	0.475
3. Net Proceeds (1 – 2)	23.275
4. Redemption Value (Assumed that the Debentures are redeemed at par.)	25.000
5. Average Liability = $\frac{(4) + (3)}{2}$	24.138
6. Post Tax Interest = Interest × (100% – Tax Rate 35%) = ₹ 25 Crores × 14% × 65%	2.275
9. $K_d = (6) \div (5)$	9.425%

Note: Alternatively, K_d may also be computed as $\frac{\text{Post Tax Interest}}{\text{Net Proceeds}} = 9.77\%$ (ignoring the Redemption Value).

Question 2(a): Cost Sheet / Job Costing

8 Marks

ML Auto Ltd is a Manufacturer of auto components and the details of its expenses for the year 2014 are given below:

(i) Opening Stock of Material	₹ 1,50,000
(ii) Closing Stock of Material	₹ 2,00,000
(iii) Purchase of Material	₹ 18,50,000
(iv) Direct Labour	₹ 9,50,000
(v) Factory Overhead	₹ 3,80,000
(vi) Administrative Overhead	₹ 2,50,400

During 2015, the Company has received an order from a Car Manufacturer where it estimates that the Cost of Material and Labour will be ₹ 8,00,000 and ₹ 4,50,000 respectively. ML Auto Ltd charges Factory Overhead as a Percentage of Direct Labour and Administrative Overhead as a Percentage of Factory Cost based on previous year's cost. Cost of Delivery of the components at Customer's Premises is estimated at ₹ 45,000.

You are required to –

- Calculate the Overhead Recovery Rates based on Actual Costs for 2014.
- Prepare a detailed Cost Statement for the order received in 2015 and the price to be quoted if the Company wants to earn a Profit of 10% on Sales.

Solution:

Similar to Page No.1.26, Q.No.5 of Handbook

Particulars	2014 Actuals	Computations	2015 Estimates
Direct Materials (Note)	18,00,000	Given	8,00,000
Direct Labour	9,50,000	Given	4,50,000
Prime Cost	27,50,000	Total of above	12,50,000
Add: POH	3,80,000	$\frac{\text{POH}}{\text{Labour}} = \frac{3,80,000}{9,50,000} = \mathbf{40\% \text{ of Labour}}$	40% of 4,50,000 = 1,80,000
Factory Cost	31,30,000	Total of above	14,30,000
Add: AOH	2,50,400	$\frac{\text{AOH}}{\text{Factory Cost}} = \frac{2,50,400}{31,30,000} = \mathbf{8\% \text{ of Fy.Cost}}$	8% of 14,30,000 = 1,14,400
Cost of Production	33,80,400	Total of above	15,44,400
Add: SOH = Delivery Costs		Given	45,000
Cost of Sales		Total of Cost as above	15,89,400
Add: Profit		1/10 th on Sales = 1/9 th on Cost =	1,76,600
Sale Price			17,66,000

Note: Direct Materials Consumed for 2014 = Opening Stock + Purchases (–) Closing Stock
= ₹ 1,50,000 + ₹ 18,50,000 – ₹ 2,00,000 = ₹ **18,00,000**

Question 2(b): Ratio Analysis – Profit & Loss Statement

8 Marks

VRA Limited has provided the following information for the year ending 31st March 2015.

Debt Equity Ratio	2 : 1	Income Tax Rate	35%
14% Long Term Debt	₹ 50,00,000	Capital Turnover Ratio	1.2 times
Gross Profit Ratio	30%	Opening Stock	₹ 4,50,000
Return on Equity	50%	Closing Stock	8% of Sales

You are required to prepare Trading and Profit and Loss Account for the year ending 31st March 2015.

Solution:

Similar to Page No.14.21, Illustrations of Handbook

Trading and Profit & Loss Account for the year ending 31st March 2015

Particulars	₹	Particulars	₹
To Opening Stock (Given)	4,50,000	By Sales (WN 1)	90,00,000
To Purchases (bal. fig)	65,70,000	By Closing Stock (WN 1)	7,20,000
To Gross Profit (30% on Sales)	27,00,000		
Total	97,20,000	Total	97,20,000
To Other Expenses (bal. fig)	76,923	By Gross Profit b/d	27,00,000
To Net Profit EBIT c/d (WN 2)	26,23,077		

Particulars	₹	Particulars	₹
Total	27,00,000	Total	27,00,000
To Interest on Debt at 14% (WN 2)	7,00,000	By EBIT b/d (WN 2)	26,23,077
To Tax at 35% of 19,23,077	6,73,077		
To Net Profit (EAT) (WN 2)	12,50,000		
Total	26,23,077	Total	26,23,077

Working Notes:

1. Computation of Sales & Closing Stock

- (a) Debt Equity Ratio = $\frac{\text{Debt}}{\text{Equity}} = \frac{50,00,000}{25,00,000} = \frac{2}{1}$ So, Equity = ₹ 25,00,000
- (b) So, Total Capital Employed = Debt + Equity = 50,00,000 + 25,00,000 = ₹ 75,00,000
- (c) Capital Turnover Ratio = $\frac{\text{Turnover}}{\text{Capital Employed}} = \frac{\text{Turnover}}{75,00,000} = 1.2$. Hence Turnover = ₹ 75,00,000 × 1.2 = ₹ 90,00,000.
- (d) Closing Stock = 8% of Sales = ₹ 90,00,000 × 8% = ₹ 7,20,000

2. Computation of EBIT

- (a) Return on Equity (assumed Post-Tax) = $\frac{\text{EAT}}{\text{Equity}} = 50\%$. So, EAT = 50% of 25,00,000 (Equity) = ₹ 12,50,000.
- (b) Since Tax Rate is 35%, EAT represents 100% – 35% = 65% of EBT. So, EBT = $\frac{12,50,000}{65\%} = ₹ 19,23,077$.
- (c) Interest = ₹ 50,00,000 × 14% = ₹ 7,00,000
- (d) EBIT = EBT + Interest = 19,23,077 + 7,00,000 = ₹ 26,23,077

Note: If ROE is assumed as **Pre-Tax**, the above numbers will stand modified as EBT = ₹ 12,50,000, Tax = ₹ 4,37,500, EAT = ₹ 8,12,500, EBIT = ₹ 19,50,000, and Other Expenses as per P&L = ₹ 7,50,000.

Question 3(a): Budgeting – Sales Budget

8 Marks

XY Co. Ltd manufactures two products, viz. X and Y and sells them through two divisions, East and West. For the purpose of Sales Budget to the Budget Committee, following information has been made available for the year 2014–2015:

Product	Budgeted Sales		Actual Sales	
	East Division	West Division	East Division	West Division
X	400 units at ₹ 9	600 units at ₹ 9	500 units at ₹ 9	700 units at ₹ 9
Y	300 units at ₹ 21	500 units at ₹ 21	200 units at ₹ 21	400 units at ₹ 21

Adequate market studies reveal that Product X is popular but under priced. It is expected that if the Price of X is increased by ₹ 1, it will find a ready market. On the other hand, Y is overpriced and if the Price of Y is reduced by ₹ 1, it will have more demand in the market. The Company Management has agreed for the aforesaid price changes. On the basis of these price changes and the reports of salesmen, following estimates have been prepared by the Divisional Managers:

Percentage Increase in Sales over Budgeted Sales

Product	East Division	West Division
X	+ 10%	+5%
Y	+ 20%	+ 10%

With the help of intensive Advertisement Campaign, following additional sales (over and above the above mentioned estimated sales by Divisional Managers) are possible:

Product	East Division	West Division
X	60 units	70 units
Y	40 units	50 units

You are required to prepare Sales Budget for 2015–2016 after incorporating above estimates and also show the Budgeted Sales and Actual Sales of 2014–2015.

Solution: Similar to Principles discussed in Page 12.8 of Handbook

1. Sales Budget for FY 2015–2016

Particulars	East Division	West Division	Total
Product X			
Budgeted Quantity of 2014 – 2015	400	600	1,000
Add: Increase due to Price change	10%= 40	5% = 30	70
Add: Increase due to Advertisement Campaign	60	70	130
Budgeted Quantity of 2015–2016	500	700	1,200
Price for 2015–2016	9+1 = ₹ 10	9+1 = ₹ 10	
Budgeted Sales Value for 2015–2016	₹ 5,000	₹ 7,000	₹ 12,000
Product Y			
Budgeted quantity of 2014 – 2015	300	500	800
Add: Increase due to Price change	20%= 60	10% = 50	110
Add: Increase due to Advertisement Campaign	40	50	90
Budgeted Quantity of 2015–2016	400	600	1,000
Price for 2015–2016	21–1 = ₹ 20	21–1 = ₹ 20	
Budgeted Sales Value for 2015–2016	₹ 8,000	₹ 12,000	₹ 20,000

2. Budgeted and Actual Sales for FY 2014–2015

Particulars	East Division	West Division	Total
Budgeted Sales of X	400 × ₹ 9 = 3,600	600 × ₹ 9 = 5,400	₹ 9,000
of Y	300 × ₹ 21 = 6,300	500 × ₹ 21 = 10,500	₹ 16,800
Total	₹ 9,900	₹ 15,900	₹ 25,800
Actual Sales of X	500 × ₹ 9 = 4,500	700 × ₹ 9 = 6,300	₹ 10,800
of Y	200 × ₹ 21 = 4,200	400 × ₹ 21 = 8,400	₹ 12,600
Total	₹ 8,700	₹ 14,700	₹ 23,400

Question 3(b): Cash Flow Statement

8 Marks

Balance Sheets of KAS Limited as on 31st March, 2014 and 31st March, 2015 are furnished below: (Amount in ₹)

Liabilities	31.03.2014	31.03.2015	Assets	31.03.2014	31.03.2015
Equity Share Capital	75,00,000	1,02,50,000	Goodwill	10,00,000	7,75,000
General Reserve	42,50,000	50,00,000	Land & Building	68,00,000	61,20,000
Profit & Loss Account	15,00,000	18,75,000	Plant & Machinery	75,12,000	1,07,95,000
13% Debentures of FV ₹ 100 each	58,00,000	43,50,000	Investments	25,00,000	21,25,000
Current Liabilities	30,00,000	32,50,000	Stock	33,00,000	27,50,000
Proposed Dividend	7,50,000	9,10,000	Debtors	24,45,000	36,20,000
Provisions for Income Tax	22,50,000	24,75,000	Cash and Bank	14,93,000	19,25,000
Total	2,50,50,000	2,81,10,000	Total	2,05,50,000	2,81,10,000

The following additional information is available:

- During the Financial Year 2014–2015, the Company issued Equity Shares at par.
- Debentures were redeemed on 1st April 2014 at a Premium of 10%.
- Some Investments were sold at a Profit of ₹ 75,000 and the Profit was credited to General Reserve Account.
- During the year an old Machine Costing ₹ 23,50,000 was sold for ₹ 6,25,000. Its Written Down Value was ₹ 8,00,000.
- Depreciation is to be provided on Plant and Machinery at 20% on the Opening Balance.
- There was no Purchase or Sale of Land and Buildings.
- Provision for Tax made during the year was ₹ 4,50,000.

You are required to prepare a Cash Flow Statement for the year ended 31st March 2015.

Solution: Similar to Page No.15.23, Q.No.7 of Practical Guide [N 08 Qn]

1. Plant and Machinery Account

Particulars	₹	Particulars	₹
To balance b/d	75,12,000	By Bank A/c (Sale of Assets)	6,25,000
To Bank A/c (bal.figure – Assets purchased)	55,85,400	By P&L A/c (Loss on Sale of Assets)	1,75,000
		By Depreciation(20% on Opening Bal.)	15,02,400
		By balance c/d (given)	1,07,95,000
Total	1,30,97,400	Total	1,30,97,400

2. Investments Account

Particulars	₹	Particulars	₹
To balance b/d	25,00,000	By Bank A/c (bal.fig investments sold)	4,50,000
To Profit on Sale of Investments – Transfer to GR	75,000	By balance c/d	21,25,000
Total	25,75,000	Total	25,75,000

3. Provision for Taxation Account

Particulars	₹	Particulars	₹
To Bank – Tax paid during the year (bal.fig)	2,25,000	By balance b/d	22,50,000
To balance c/d	24,75,000	By P&L – Current Year Provn for Txn	4,50,000
Total	27,00,000	Total	27,00,000

4. Cash Flow Statement for the year ended 31st March 2015

Particulars	₹	₹
A. CASH FLOW FROM OPERATING ACTIVITIES:		
Profit made during the year = Increase in P&L A/c bal. = ₹ 18,75,000 – ₹ 15,00,000	3,75,000	
Add: Provision for Taxation for the year	4,50,000	
Proposed Dividends (for Year 2015)	9,10,000	
Transfer to Reserve during the year (₹ 50,00,000 – ₹ 42,50,000 – ₹ 75,000)	6,75,000	
Net Profit before Taxation	24,10,000	
Add back: Goodwill written off (₹ 10,00,000 – ₹ 7,75,000)	2,25,000	
Depreciation on Plant and Machinery (WN 1)	15,02,400	
Depreciation on Building (₹ 68,00,000 – ₹ 61,20,000)	6,80,000	
Loss on Sale of Machinery (WN 1)	1,75,000	
Prem. on Redemption of Debentures (₹ 58,00,000 – ₹ 43,50,000) × 10%	1,45,000	
Operating Profit before Working Capital changes	51,37,400	
Add / Less: Adjustments for changes in Current Assets / Liabilities		
Decrease in Stock (₹ 33,00,000 – ₹ 27,50,000)	5,50,000	
Increase in Current Liabilities (₹ 32,50,000 – ₹ 30,00,000)	2,50,000	
Increase in Debtors (₹ 24,25,000 – ₹ 36,20,000)	(11,75,000)	
Cash Generated from Operations	47,62,400	
Less: Income Taxes Paid (WN 3)	(2,25,000)	
Net Cash Flow from / (used in) Operating Activities		45,37,400
B. CASH FLOW FROM INVESTING ACTIVITIES:		
Purchase of Plant and Machinery (WN 1)	(55,85,400)	
Proceeds from Sale of Machinery (WN 1)	6,25,000	
Proceeds from Sale of Investments (WN 2)	4,50,000	
Net Cash Flow from / (used in) Investing Activities		(45,10,400)
C. CASH FLOW FROM FINANCING ACTIVITIES:		
Issue of Equity Shares at Par	27,50,000	
Redemption of Debentures at Premium (₹ 14,50,000 + ₹ 1,45,000)	(15,95,000)	
Dividend paid (for Year 2014)	(7,50,000)	
Net Cash Flow from / (used in) Financing Activities		4,05,000
D. Net Increase / (Decrease) in Cash and Cash Equivalents (A+B+C)		4,32,000
E. Cash and Cash Equivalents at the beginning of the year		14,93,000
F. Cash and Cash Equivalents at the end of the year		19,25,000

Question 4(a): Process Costing – Equivalent Production – Subsequent Process – Abnormal Gain **8 Marks**

ABC Company furnishes you the following information for Process –II for the month of April 2015. Prepare:

- Prepare a Statement of Equivalent Production.
- Determine the Cost per unit
- Determine the Value of Work-in-Process and Units transferred to Process – III.

<ul style="list-style-type: none"> Opening Work-in-Progress – Nil Units transferred from Process I – 55,000 units at ₹ 3,27,800 Expenses debited to Process – II: <table style="margin-left: 20px;"> <tr> <td>Consumables</td> <td>₹ 1,57,200</td> </tr> <tr> <td>Labour</td> <td>₹ 1,04,000</td> </tr> <tr> <td>Overhead</td> <td>₹ 52,000</td> </tr> </table> 	Consumables	₹ 1,57,200	Labour	₹ 1,04,000	Overhead	₹ 52,000	<ul style="list-style-type: none"> Units transferred to Process III – 51,000 units Closing WIP – 2,000 units (Degree of Completion): Consumables – 80%, Labour – 60%, Overhead – 60% Units Scrapped – 2,000 units, scrapped units were sold at ₹ 5 per unit. Normal Loss – 4% of units introduced
Consumables	₹ 1,57,200						
Labour	₹ 1,04,000						
Overhead	₹ 52,000						

Solution:

Similar to Page No.8.25, Q.No.15 of Handbook

1. Statement of Equivalent Production

Particulars	Input	Particulars	Output	Material A		Material B		Labour & OH	
				%	E.U	%	E.U	%	E.U
Opg. WIP	NIL	Transfer to P-III	51,000	100%	51,000	100%	51,000	100%	51,000
Transfer in from P-I	55,000	Normal Loss	2,200	–	–	–	–	–	–
		Abnormal Gain (b/f)	(200)	100%	(200)	100%	(200)	100%	(200)
		Closing WIP	2,000	100%	2,000	80%	1,600	60%	1,200
Total	55,000	Total	55,000		52,800		52,400		52,000

Note:

- Material A** = Brought Forward from Process I, **Material B** = Consumables introduced in Process II.
- Normal Loss = 4% of Units Introduced = 50,000 × 4% = 2,200 Units.
- Abnormal Gain is taken as 100% complete in all respects, since it represents actual good production.

2. Statement of Cost per Equivalent Unit

Cost Element	Total Costs	Equivalent Units	Cost per Equivalent Unit
Material A (From P-I)	3,27,800		
Less: Scrap Value of Normal Loss	(11,000)		
Material B (Consumables)	₹ 1,57,200	52,400	₹ 3
Labour	₹ 1,04,000	52,000	₹ 2
Overhead	₹ 52,000	52,000	₹ 1
Total	₹ 6,30,000		

3. Statement of Cost Apportionment

Item	Material A at ₹ 6/eu	Material B at ₹ 3/eu	Labour at ₹ 2/eu	Overhead at ₹ 1/eu	Total
Tfr to Pr-III	51,000×6= 3,06,000	51,000× 3=1,53,000	51,000× 2= 1,02,000	51,000× 1 = 51,000	6,12,000
Abnormal Gain	(200) × 6 = (1,200)	(200) × 3 = (600)	(200) × 2 = (400)	(200) × 1 = (200)	(2,400)
Closing WIP	2,000 × 6 = 12,000	1,600× 3 =4,800	1,200 × 2 = 2,400	1,200 × 1 = 1,200	20,400
Total	3,16,800	1,57,200	1,04,000	52,000	6,30,000

Question 4(b): Cost of Capital & Capital Structure – Effect of different modes of Financing on Value of Firm **8 Marks**

RST Ltd is expecting an EBIT of ₹ 4 Lakhs for F.Y. 2015–16. Presently the Company is financed entirely by Equity Share Capital of ₹ 20 Lakhs with Equity Capitalization Rate of 16%. The Company is contemplating to redeem a part of the capital by introducing Debt Financing. The Company has two options to raise Debt to the extent of 30% or 50% of the Total Fund.

It is expected that for Debt Financing upto 30%, the Rate of Interest will be 10% and Equity Capitalization Rate will increase to 17%. If the Company opts for 50% Debt, then the Interest Rate will be 12% and Equity Capitalization Rate will be 20%.

You are required to compute the Value of the Company and its Overall Cost of Capital under different options, and also state which is the best option.

Solution: Similar to Page No.18.38, Q.No.37 of Handbook

Plan	Present: 0% Debt	Plan 1: 30% Debt	Plan 2: 50% Debt
Debt	Nil	₹ 6,00,000	₹ 10,00,000
Equity Capital (given at Present Level)	₹ 20,00,000	₹ 14,00,000	₹ 10,00,000
Total Assets	₹ 20,00,000	₹ 20,00,000	₹ 20,00,000
EBIT	₹ 4,00,000	₹ 4,00,000	₹ 4,00,000
Less: Interest at 10% & 12% under Plan 1 & 2	–	₹ 60,000	₹ 1,20,000
EBT	₹ 4,00,000	₹ 3,40,000	₹ 2,80,000
K_e	16%	17%	20%
Value of Equity (E) = $\frac{EBT}{K_e}$	₹ 25,00,000	₹ 20,00,000	₹ 14,00,000
Add: Value of Debt (D) (taken at Book Value)	–	₹ 6,00,000	₹ 10,00,000
Value of Firm = V = (E + D)	₹ 25,00,000	₹ 26,00,000	₹ 24,00,000
$K_o = WACC = \frac{EBIT}{\text{Value of Firm}}$	16.00%	15.38%	16.67%

Inference: The Firm should opt for Plan 1, i.e. 30% Debt, being the **Optimum** Capital Structure. This is the point at which **WACC is minimum**, and Value of the Firm is maximum.

Question 5: Various Chapters – Theory Questions

4 X 4 = 16 Marks

Question	Answer Reference
(a) State the Method of Costing and also the Unit of Cost for the following industries: (i) Hotel (ii) Toy-Making (iii) Steel (iv) Ship Building	Page No.1.16, Para 1.4.2 Point Method of Costing Unit of Cost (i) Operating Guest Days, Room Days (ii) Batch Per Batch (iii) Process Per Tonne (iv) Contract Per Ship
(b) How would you account for Idle Capacity Cost in Cost Accounting?	Answer: Refer Page No.4.9, Para 4.3.4 of Handbook For Question Refer: Page 4.37, Q.No.24 of Practical Guide, RTP, N 83, M 97, N 01, M 09 Qn.
(c) Distinguish between NPV and IRR Methods for evaluating projects.	Answer: Refer Page 20.7, Para 20.2.7 & 20.2.10 of Handbook
(d) What is meant by Venture Capital Financing? State its various methods.	Answer: Refer Page No.21.7, Para 21.3.9 of Handbook For Question Refer: Page 21.2, Q.No.17 of Practical Guide RTP, N 02, M 05, N 07, N 08, M 09, M 10, M 13 Qn

Question 6(a): Contract Costing – Estimation of Total Profit

8 Marks

PVK Constructions commenced a Contract on 1st April 2014. Total Contract Value was ₹ 100 Lakhs. The contract is expected to be completed by 31st December 2016. Actual Expenditure during the period 1st April 2014 to 31st March 2015 and estimated expenditure for the period 1st April 2015 to 31st December 2016 are as follows:

Particulars	Actual (₹)	Estimated (₹)
Period	1 st April 2014 to 31 March 2015	1 st April 2015 to 31 st December 2016
Material issued	15,30,000	21,00,000
Direct Wages Paid	10,12,500	12,25,000
Direct Wages Outstanding	80,000	1,15,000
Plant Purchased	7,50,000	–
Expenses Paid	3,25,000	5,40,000
Prepaid Expenses	68,000	–
Site Office Expenses	3,00,000	–

Part of the Material procured for the contract was unsuitable and was sold for ₹ 2,40,000 (cost being ₹ 2,55,000) and a part of Plant was scrapped and disposed off for ₹ 80,000. The value of Plant at site on 31st March 2015 was ₹ 2,50,000 and the value of Materials at site was ₹ 73,000. Cash received on account to date was ₹ 36,00,000, representing 80% of the Work Certified. The Cost of Work Uncertified was valued at ₹ 5,40,000.

Estimated further expenditure for completion of contract is as follows:

- (i) An additional amount of ₹ 4,62,500 would have to be spent on the Plant, and the Residual Value of the Plant on the completion of the contract would be ₹ 67,500.
- (ii) Site Office Expenses would be the same amount per month as charged in the previous year.
- (iii) An amount of ₹ 1,57,500 would have to be incurred towards Consultancy Charges.

Required: Prepare Contract Account and calculate the Estimated Total Profit on this contract.

Solution:

Similar to Page No.6.27, Q.No.11 of Handbook [M 07 Qn]

1. Statement of Current & Total Profits

Particulars	Till date	Additional	Total
A. Income:			
Work Certified	$\frac{36,00,000}{80\%} = 45,00,000$		Given = 1,00,00,000
Work Uncertified	Given = 5,40,000		
Total	50,40,000		1,00,00,000
B. Expenditure:			
Materials (WN a)	12,02,000	21,73,000	33,75,000
Labour (WN b)	10,92,500	12,60,000	23,52,500
Expenses (WN c)	2,57,000	6,08,000	8,65,000
Depreciation (WN d)	4,20,000	6,45,000	10,65,000
Site Office Expenses	3,00,000	$(3,00,000 \times 21/12) = 5,25,000$	8,25,000
Consultancy (Given)	–	1,57,500	1,57,500
Total	32,71,500	50,68,500	86,40,000
C. Profit (A – B)	17,68,500 Notional Profit	–	13,60,000 Estimated Total Profit

Working Notes for above Statement:

Particulars	Upto 31 st March 2015	1 st April 2015 to 31 st Dec. 2016
(a) Materials Consumed	Opg Stock+Issues–Closing Stock–Cost of Sales = Nil + 15,30,000 – 73,000 – 2,55,000 = 12,02,000	Opening Stock + Issues – Closing Stock = 73,000 + 21,00,000 – Nil = 21,73,000
(b) Labour Cost incurred	Paid + O/S at end = 10,12,500 + 80,000 = 10,92,500	Paid during the year + O/S at end – O/S at beginning = 12,25,000 + 1,15,000 – 80,000 = 12,60,000
(c) Expenses	Paid – Prepaid at end = 3,25,000 – 68,000 = 2,57,000	Prepaid of prev. period + paid during the year = 5,40,000 + 68,000 = 6,08,000
(d) Depreciation (See Note)	Cost – Disposed – Residual Value = 7,50,000 – 80,000 – 2,50,000 = 4,20,000	Opening Value + Purchases – Residual Value = 2,50,000 + 4,62,500 – 67,500 = 6,45,000

Note: It is assumed that Plant scrapped and disposed off for ₹ 80,000 is at cost. Hence, Loss / Gain thereon is ignored.

2. Contract Account for the year ending 31st March 2015

Particulars	₹	Particulars	₹
To Material Consumed	12,02,000	By Work in Progress	
To Labour (Paid + O/s)	10,92,500	–Work Certified	45,00,000
To Expenses (Paid – Prepaid)	2,57,000	–Work Uncertified	5,40,000
To Depreciation	4,20,000		
To Site Office Expenses	3,00,000		
To Notional Profit c/d	17,68,500		
Total	50,40,000	Total	50,40,000

Note: Contract Account can also be prepared by alternative presentation, with respect to Materials, Plant, etc.

In the absence of information as to recognition of Profit, the 2nd and 3rd segments of Contract A/c are not prepared.

Question 6(b): Working Capital Management – Debtors – Factoring vs Bank Finance **8 Marks**

A Firm has a total sales of ₹ 200 Lakhs of which 80% is on credit. It is offering credit terms of 2/40, net 120. Of the total, 50% of customers avail of discount and the balance pay in 120 days. Past experience indicates that Bad Debt losses are around 1% of Credit Sales. The Firm spends about ₹ 2,40,000 per annum to administer its credit sales. These are avoidable as a Factor is prepared to buy the Firm's Receivables. He will charge 2% Commission. He will pay Advance against Receivables to the Firm at an Interest Rate of 18% after withholding 10% as Reserve.

- (i) What is the Effective Cost of Factoring? Consider year as 360 days.
(ii) If Bank Finance for Working Capital is available at 14% Interest, should the Firm avail of factoring service?

Solution: **Similar to Page No.16.49, Q.No.34 of Handbook [M 09 Qn]**

Notes:

- Credit Terms 2/40 net 120 is the general credit policy of the Company, irrespective of Factoring Arrangement. Hence, cost of Discount Allowed is not considered in the computations.
- Weighted Average Collection Period = $(50\% \times 40 \text{ days}) + (50\% \times 120 \text{ days}) = 80 \text{ days}$.

1. Computation of Effective Cost of Factoring

Particulars	Computation	₹
1. Average Debtors = Annual Credit Sales × Credit Period	$₹ 200 \text{ Lakhs} \times 80\% \times \frac{80}{360}$	35,55,556
2. Reserve at 10% on Debtors	10% on ₹ 35,55,556	3,55,556
3. Amount of Finance (i.e. Amt on which Interest is computed)	(1 – 2)	32,00,000
4. Interest thereon at 18% (for 80 days)	$₹ 32,00,000 \times 18\% \times \frac{80}{360}$	1,28,000
5. Commission at 2% on Debtors	2% on ₹ 35,55,556	71,111
6. Total Cost of Factoring, for 80 days = Commission + Interest	(4 + 5)	1,99,111
7. Amount received by the Firm from the Factor = (3 – 4 – 5) Note: This is the Average Liability to the Factor, throughout the year.	(3 – 4 – 5)	30,00,889
8. Annual Total Cost of Factoring = (Interest + Commission) × $\frac{360}{80}$	$(4 + 5) \times \frac{360}{80}$	8,96,000
9. Effective Cost of Factoring p.a. = $\frac{(8)}{(7)}$	$\frac{8,96,000}{30,00,889}$	29.86%

2. Comparison with Bank Finance for Working Capital

Particulars	Computation	₹
(a) Bad Debts at 1% on Credit Sales	$₹ 200 \text{ Lakhs} \times 80\% \times 1\%$	1,60,000
(b) Interest on Average Debtors at 14%	$₹ 160 \text{ Lakhs} \times 14\% \times \frac{80}{360}$	4,97,778
(c) Credit Administration Costs	Given	2,40,000
Total Costs per annum		8,97,778

Conclusion: Annual Cost of Factoring (₹ 8,96,000) is marginally less than Annual Cost of Bank Working Capital (₹ 8,97,778). Hence, Factoring System may be preferred.

Question 7: Various Chapters – Theory Questions – Answer any four of the following: **4 X 4 = 16 Marks**

Question	Answer Reference
(a) Explain the treatment of over and under absorption of Overheads in Cost Accounting.	Answer: Refer Page No.4.12, Para 4.3.12 of Handbook. For Question, Refer: Page 4.38, Q.No.32 of Practical Guide RTP, M 86, N 89, M 94, N 98, M 04, M 06, M 10 Qn
(b) Describe the various steps involved in adopting Standard Costing System in an organization.	Answer: Refer Page No.10.2, Para 10.1.4,5 of Handbook. For Question, Refer: Page 10.34, Q.No.4 & 5 of Practical Guide N 74, N 75 Qn.
(c) Evaluate the role of Cash Budget in effective Cash Management System.	Answer: Refer Page No.16.9, Para 16.2.8 of Handbook. For Question, Refer: Page 16.49, Q.No.22 of Practical Guide.
(d) Discuss the Risk–Return considerations in financing Current Assets.	Answer: Refer Page No.16.21, Para 16.4.3 of Handbook. For Question, Refer: Page 16.49, Q.No.51 of Practical Guide N 04 Qn

	Question	Answer Reference
(e)	Distinguish between the following: (i) 'Scraps' and 'Defectives' in Costing	Answer: Refer Page No.2.30, Para 2.5.13 of Handbook. For Question, Refer: Page 2.32, Q.No.80 of Practical Guide
	(ii) Preference Shares and Debentures	Answer: Page No.21.2, Para 21.2.2 and Page No.21.4, Para 21.3.1 of Handbook.

STUDENTS' NOTES