

SUGGESTED ANSWER
CA – IPC

COST ACCOUNTING
&
FINANCIAL MANAGEMENT

NOVEMBER 2015

‘NAMIT ARORA CLASSES’

WORK HARD IN SMART WAY....

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QUESTION 1 (a)

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.
(5 Marks)**

Answer

Calculation of labour turnover rate:

Separation Method	=	$\frac{\text{Number of separations}}{\text{Average number of workers}} \times 100$	
	=	$\frac{50 \text{ workers}}{1000 \text{ workers}} \times 100$	= 5%
Flux Method	=	$\frac{\text{No of separations} + \text{No of accessions}}{\text{Average number of workers}} \times 100$	
	=	$\frac{50 + 70}{1000} \times 100$	= 12%

Working Notes:

Average no of workers	=	(Opening workers + Closing workers) ÷ 2	
	=	(990 + 1010) ÷ 2	
	=	1000 workers	
Number of separation	=	workers replaced and discharged	
	=	3% of 1000 + 20	= 50 workers
Number of discharged and resigned	=	Closing + Replaced – Accession – Opening	
	=	1010 + 30 – 70 – 990	= 20 workers
Number of Accessions	=	Replaced + New Joined	
	=	30 + 40	= 70 workers

Note: Alternatively student may calculate flux rate by using no of separations and no of replacements.

QUESTION 1 (b)

A company gives the following information:

Margin of safety	:	₹3,75,000
Total cost	:	₹3,87,500
Margin of safety in units	:	15,000 units
Break even sales in units	:	5,000 units

You are required to calculate:

- (i)** Selling price per unit, **(ii)** Profit, **(iii)** Profit/Volume ratio, **(iv)** Break even sales (in ₹), **(v)** Fixed cost

(5 Marks)

Answer

(i) Selling price per unit	=	$\frac{\text{Margin of safety in rupees}}{\text{Margin of safety in units}}$
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$$\begin{aligned}
 &= \frac{3,75,000}{15,000} = \text{₹}25 \\
 \text{(ii) Profit} &= \text{Total sales} - \text{Total cost} \\
 &= [(15,000 + 5,000) \times 25] - 3,87,500 \\
 &= \text{₹}1,12,500 \\
 \text{(iii) Profit/Volume ratio} &= \frac{\text{Profit}}{\text{Margin of safety in rupees}} \times 100 \\
 &= \frac{1,12,500}{3,75,000} \times 100 = 30\% \\
 \text{(iv) Break even sales in rupees} &= \text{Break even point in units} \times \text{sale price per unit} \\
 &= 5,000 \text{ units} \times 25 = \text{₹}1,25,000 \\
 \text{(v) Fixed cost} &= \text{Break even point in rupees} \times \text{PV ratio} \\
 &= 1,25,000 \times 30\% = \text{₹}37,500
 \end{aligned}$$

QUESTION 1 (c)

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 % of sales	:	75%
Income tax rate	:	30%

(5 Marks)

Answer

Income Statement for the year ended 31st December, 2014

Particulars		₹
Sales		48,000
Less: Variable cost		36,000
	Contribution	12,000
Less: Fixed cost		8,000
	EBIT	4,000
Less: Interest		2,000
	EBT	2,000
Less: Tax @ 30%		600
	EAT	1,400

Working Notes:

(a) Calculation of EBIT:

$$\begin{aligned}
 \text{Financial Leverage} &= \frac{\text{EBIT}}{\text{EBT}} = \frac{\text{EBIT}}{\text{EBIT} - \text{Interest}} \\
 2 &= \frac{\text{EBIT}}{\text{EBIT} - 2,000} \\
 \text{EBIT} &= \text{₹}4,000
 \end{aligned}$$

(b) Calculation of Contribution:

$$\begin{aligned}\text{Operating Leverage} &= \frac{\text{Contribution}}{\text{EBIT}} \\ 3 &= \frac{\text{Contribution}}{4,000} \\ \text{Contribution} &= \text{₹12,000}\end{aligned}$$

(c) Calculation of Sales:

$$\begin{aligned}\text{Sales Value} &= \frac{\text{Contribution}}{\text{PV Ratio}} = \frac{12,000}{100\% - 75\%} \\ &= \text{₹48,000}\end{aligned}$$

QUESTION 1 (d)

A company issues 25,000, 14% debentures of 1,000 each. The debentures are redeemable after the expiry period 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% flotation cost.

(5 Marks)

Answer

$$\begin{aligned}K_d &= \frac{I(1-t) + \left(\frac{RV - NP}{n} \right)}{\frac{RV + NP}{2}} \times 100 \\ &= \frac{140(1-0.35) + \left(\frac{1000 - 930}{5} \right)}{\frac{1000 + 930}{2}} \times 100 = \text{10.88\%}\end{aligned}$$

$$\text{Net Proceeds} = 1,000 - 5\% \text{ Discount} - 2\% \text{ Flotation cost} = 930$$

Note: Flotation cost has been calculated on the basis of face value i.e. 2% of ₹1,000 otherwise student may take a different assumption i.e. 2% of issue price.

QUESTION 2 (a)

M.L. Auto Ltd. is a manufacturer of auto components and the details of its expenses for the year 2014 are given below:

Opening stock of materials	₹1,50,000
Closing stock of materials	₹2,00,000
Purchase of materials	₹18,50,000
Direct labour	₹9,50,000
Factory overheads	₹3,80,000
Administrative overheads	₹2,50,400

During 2015, the company has received an order from a car manufacturer where it estimates the cost of materials and labour will be ₹8,00,000 and ₹4,50,000 respectively.

M.L. Auto Ltd. charges factory overhead as a percentage of direct labour and administrative overheads 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:

(i) Calculate the overhead recovery rates based on actual cost of 2014.

SUGGESTED ANS FOR IPCC COST FM NOV 2015 BY NAMIT ARORA CLASSES 'NAC'

- (ii) Prepared a detailed cost statement for the order received in 2015 and the price to be quoted if company wants to earn a profit of 10% on sales.

(8 Marks)

Answer

- (i) **Calculation of overhead recovery rates based on actual cost of 2014:**

$$\begin{aligned}\text{Factory overhead rate} &= \frac{\text{Factory overhead}}{\text{Direct labour cost}} \times 100 \\ &= \frac{3,80,000}{9,50,000} \times 100 = 40\% \\ \text{Admin overhead rate} &= \frac{\text{Admin overhead}}{\text{Factory cost}} \times 100 \\ &= \frac{2,50,400}{31,30,000} \times 100 = 8\%\end{aligned}$$

Working Note:

$$\begin{aligned}\text{Factory cost} &= \text{Opening stock of materials} + \text{Purchase of materials} - \text{Closing of materials} + \text{Labour} + \text{Factory overhead} \\ &= 1,50,000 + 18,50,000 - 2,00,000 + 9,50,000 + 3,80,000 \\ &= 31,30,000\end{aligned}$$

(ii) Statement of Cost and Price

Particulars	₹
Direct materials	8,00,000
Direct wages	4,50,000
Prime cost	12,50,000
Factory overheads @ 40% of 4,50,000	1,80,000
Factory cost	14,30,000
Administration overheads @ 8% of 14,30,000	1,14,400
Cost of goods sold	15,44,400
Cost of delivery	45,000
Cost of sales	15,89,400
Profit @ 10% of sales	45,000
Sales (15,89,400/90%)	17,66,000

QUESTION 2 (b)

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

Debt Equity Ratio	2 : 1
14% long term debt	₹50,00,000
Gross Profit Ratio	30%
Return on equity	50%
Income Tax Rate	35%
Capital Turnover Ratio	1.2 Times
Opening Stock	₹4,50,000
Closing Stock	8% of sales

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

(8 Marks)

Answer

**Trading and Profit & Loss Account
(For the year ending 31st March, 2015)**

Particulars	₹	Particulars	₹
To Opening Stock	4,50,000	By Sales	90,00,000
To Purchase & Conversion Cost (b.f.)	65,70,000	By Closing Stock (8% of 90 Lacs)	7,20,000
To Gross Profit c/d (30% of 90 Lacs)	27,00,000		
	97,20,000		97,20,000
To Operating Expenses (b.f.)	76,923	By Gross Profit b/d	27,00,000
To Interest on debt (14% of 50 Lacs)	7,00,000		
To Income tax	6,73,077		
To Net Profit	12,50,000		
	27,00,000		27,00,000

Working Notes:

(i) Calculation of Equity:

$$\frac{\text{Debt}}{\text{Equity}} = 2 : 1$$

$$\text{Equity} = \text{Debt} \div 2 = 50,00,000 \div 2 = \text{₹}25,00,000$$

(ii) Calculation of Net Profit After Tax (PAT):

$$\text{Return on Equity} = \frac{\text{PAT}}{\text{Equity}} \times 100 = 50\%$$

$$\text{Profit After Tax} = 50\% \text{ of } 25,00,000 = \text{₹}12,50,000$$

(iii) Calculation of Income Tax:

$$\text{Income Tax} = 35\% \text{ of PBT} = 35\% \text{ of } \frac{\text{PAT}}{1 - t}$$

$$= 35\% \text{ of } \frac{12,50,000}{1 - .35} = \text{₹}6,73,077$$

(iv) Calculation of Sales:

$$\text{Capital Turnover Ratio} = \frac{\text{Sales}}{\text{Capital}} = \frac{\text{Sales}}{\text{Equity} + \text{Debt}}$$

$$\frac{\text{Sales}}{25,00,000 + 50,00,000} = 1.2 \text{ times}$$

$$\text{Sales} = 75,00,000 \times 1.2 = \text{₹}90,00,000$$

QUESTION 3 (a)

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:

SUGGESTED ANS FOR IPCC COST FM NOV 2015 BY NAMIT ARORA CLASSES 'NAC'

Percentage increase in sales over budgeted sales:

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

With the help of the 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 2015 – 2016 after incorporating above estimates and also show the Budgeted Sales and Actual Sales of 2014 – 2015.

(8 Marks)

Answer

Sales Budget

Product X						
Particulars	Budgeted Sales 15 -16		Budgeted Sales 14 -15		Actual Sales 14 – 15	
	East Division	West Division	East Division	West Division	East Division	West Division
No of units to be sold	500 units	700 units	400 units	600 units	500 units	700 units
Sale price per unit	₹10	₹10	₹9	₹9	₹9	₹9
Sales in (₹)	₹5,000	₹7,000	₹3,600	₹5,400	₹4,500	₹6,300
Product Y						
Particulars	Budgeted Sales 15 -16		Budgeted Sales 14 -15		Actual Sales 14 – 15	
	East Division	West Division	East Division	West Division	East Division	West Division
No of units to be sold	400 units	600 units	300 units	500 units	200 units	400 units
Sale price per unit	₹20	₹20	₹21	₹21	₹21	₹21
Sales in (₹)	₹8,000	₹12,000	₹6,300	₹10,500	₹4,200	₹8,400

Working notes:

Calculation of budgeted sales of product X for 15 -16 in units

East division	=	(400 units + 10%) + 60 units	=	500 units
West division	=	(600 units + 5%) + 70 units	=	700 units

Calculation of budgeted sales of product Y for 15 -16 in units

East division	=	(300 units + 20%) + 40 units	=	400 units
West division	=	(500 units + 10%) + 50 units	=	600 units

QUESTION 3 (b)

Balance sheet of KAS Limited as on 31st March, 2014 and 31st March, 2015 are furnished below:

Liabilities	31.03.14	31.03.15	Assets	31.03.14	31.03.15
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 A/c	15,00,000	18,75,000	Plant & machinery	75,12,000	1,07,95,000
13% debentures	58,00,000	43,50,000	Investment	25,00,000	21,25,000
(Face value ₹100 each)			Stock	33,00,000	27,50,000
Current liabilities	30,00,000	32,50,000	Debtors	24,45,000	36,20,000
Proposed dividend	7,50,000	9,10,000	Cash and bank	14,93,000	19,25,000
Provision for tax	22,50,000	24,75,000			
	2,50,50,000	2,81,10,000		2,50,50,000	2,81,10,000

Additional information:

- (i) During the financial year 2014 - 15 the company issued equity shares at par.
- (ii) Debentures were redeemed on 1st April, 2014 at a premium of 10%
- (iii) Some investments were sold at a profit of ₹75,000 and the profit were credited to general reserve account.
- (iv) During the year an old machine costing ₹23,50,000 was sold for ₹6,25,000. Its written down value was ₹8,00,000.
- (v) Depreciation is to be provided on plant and machinery at 20% on the opening balance.
- (vi) There was no purchase or sale of land and building.
- (vii) Provision for tax made during the year was ₹4,50,000.

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

(8 Marks)

Answer

**Cash Flow Statement
(For the year ending 31.03.2015)**

I. Cash Flows From Operating Activities:	
Difference in P/L (18,75,000 – 15,00,000)	3,75,000
Add: Proposed dividend of current year	9,10,000
Transfer to general reserve [50,00,000 – (42,50,000 + 75,000)]	6,75,000
Provision for income tax	4,50,000
Depreciation on plant and machinery	15,02,400
Depreciation on land and building (68,00,000 – 61,20,000)	6,80,000
Goodwill w/o (10,00,000 – 7,75,000)	2,25,000
Loss on sale of machine	1,75,000
Premium on redemption of debenture [10% of (58,00,000 – 43,50,000)]	1,45,000
Interest on debenture (13% of 43,50,000)	5,65,500
Fund From Operation Before Working Capital Changes	57,02,900
Adjustment for Working Capital:	
Add: Decrease in stock	5,50,000
Increase in current liabilities	2,50,000
Less: Increase in debtors	(11,75,000)
Cash generated from operation before Tax	53,27,900
Less: Income Tax paid	(2,25,000)
Cash Flows From Operating Activities (I)	51,02,900
II. Cash Flow From Investing Activities:	
Sale of plant and machinery	6,25,000
Sale of investment	4,50,000
Purchase of plant and machinery	(55,85,400)
Cash Used in Investing Activities (II)	(45,10,400)
III. Cash flow from financing Activities:	
Issue of share capital (1,02,50,000 – 75,00,000)	27,50,000
Redemption of debentures including premium [(58,00,000–43,50,000)+10%]	(15,95,000)
Dividend Paid (proposed dividend of previous year)	(7,50,000)
Interest on Debentures	(5,65,500)
Cash Used in Financing Activities (III)	(1,60,500)
Total Cash Flow (I + II + III)	4,32,000
Add: Opening Cash & Cash Equivalents	14,93,000
Closing Cash & Cash Equivalents	19,25,000

Working Notes:

Provision for Tax A/c

To Bank (Tax paid) b.f.	2,25,000	By Balance b/d	22,50,000
To Balance c/d	24,75,000	By P/L A/c (provision for tax)	4,50,000
	27,00,000		27,00,000

General Reserve A/c

To Balance c/d	50,00,000	By Balance b/d	42,50,000
		By Investment A/c	75,000
		By P/L A/c (b.f.)	6,25,000
	50,00,000		50,00,000

Investment A/c

To Balance b/d	25,00,000	By Bank (sale of investment) b.f.	4,50,000
To General reserve (profit)	75,000	By Balance c/d	21,25,000
	25,75,000		25,75,000

Plant and Machinery A/c

To Balance b/d	75,12,000	By Depreciation (20% of 75,12,000)	15,02,400
To Bank (Purchase) b.f.	55,85,400	By Bank (sale of plant)	6,25,000
		By P/L A/c (8,00,000 – 6,25,000)	1,75,000
		By Balance c/d	1,07,95,000
	1,30,97,400		1,30,97,400

QUESTION 4 (a)

The following information is furnished by ABC Company for Process – II of its manufacturing activity for the month of April 2015:

- | | | |
|-----|------------------------------------|--|
| (1) | Opening work-in process | Nil |
| (2) | Units transferred from Process – I | 55,000 units at ₹3,27,800 |
| (3) | Expenses debited to Process – II: | |
| | Consumables | ₹1,57,200 |
| | Labour | ₹1,04,000 |
| | Overheads | ₹52,000 |
| (4) | Units transferred to Process – III | 51,000 units |
| (5) | Closing WIP | 2,000 units |
| | Degree of completion: | |
| | Consumables | 80% |
| | Labour | 60% |
| | Overheads | 60% |
| (6) | Units scrapped | 2,000 units, scrapped units were sold at ₹5 per unit |
| (7) | Normal loss | 4% of units introduced |

You are required to

- Prepare a Statement of Equivalent Production.
- Determine the cost per unit.
- Determine the value of WIP and units transferred to Process – III.

(8 Marks)

Answer

(a) Statement of Equivalent Production

Particulars	Units	Materials 1		Material 2		Labour & OH	
		%	E. Units	%	E. Units	%	E. Units
Normal Loss (55,000 × 4%)	2,200	-	-	-	-	-	-
Units transferred to Process - III	51,000	100	51,000	100	51,000	100	51,000
Units in Closing WIP	2,000	100	2,000	80	1,600	60	1,200
Less: Abnormal Gain	(200)	100	(200)	100	(200)	100	(200)
Total	55,000	-	52,800	-	52,400	-	52,000

(b) Statement of Cost Per Unit

Elements	Cost	Equivalent Units	Cost Per Unit
Materials 1	3,27,800 - 11,000 (2,200 × 5) = 3,16,800	52,800	6.00
Materials 2	1,57,200	52,400	3.00
Labour	1,04,000	52,000	2.00
Overhead	52,000	52,000	1.00
			12.00

(c) Statement Showing Value of WIP and Units Transferred to Process - III

Particulars	Elements	Equivalent Units	Cost Per Unit	₹
1. Closing WIP	Materials 1	2,000	6.00	12,000
	Materials 2	1,600	3.00	4,800
	Labour	1,200	2.00	2,400
	Overheads	1,200	1.00	1,200
				20,400
2. Units transferred to Process - III	All (M, L, OH)	51,000	12.00	6,12,000

QUESTION 4 (b)

RST Ltd. is expecting an EBIT of ₹4,00,000 for F.Y. 2015-16. Presently the company is financed by equity share capital ₹20,00,000 with equity capitalization rate of 16%. The company is contemplating to redeem 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 value of the company; its overall cost of capital under different options and also state which is the best option. (8 Marks)

Answer

Statement of Value of Firm and Cost of Capital

Particulars	All equity	30% Debt	50% Debt
Earnings before interest and tax	4,00,000	4,00,000	4,00,000
Less: Interest @ 10% of ₹6,00,000 or @ 12% of ₹10,00,000	-	60,000	-
	-	-	1,20,000
Earning available for Equity	4,00,000	3,40,000	2,80,000
÷ K _e	16%	17%	20%
Value of Equity (E) [PBT ÷ K _e]	25,00,000	20,00,000	14,00,000
Value of Debt (D)	-	6,00,000	10,00,000
Value of Firm (V)	25,00,000	26,00,000	24,00,000
K_o (EBIT ÷ V)	16%	15.38%	16.67%

Decision: Company should opt for 30% debt finance having higher Value of firm and lower K_o.

QUESTION 5 (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

(4 Marks)

Answer

S.N.	Industries	Method of Costing	Unit of Cost
(i)	Hotel	Operating Costing	Room-day
(ii)	Toy-making	Batch Costing	Units
(iii)	Steel	Process Costing/ Single Costing	Tonne
(iv)	Ship Building	Contract Costing	Project/ Unit

QUESTION 5 (b)

How would you account for idle capacity cost in Cost Accounting?

(4 Marks)

Answer

Treatment of idle capacity cost in Cost Accounting:

It is that part of capacity of a plant, machine or equipment which cannot be effectively utilised in production. The idle capacity may arise due to lack of product demand, non availability of raw-materials, shortage of skilled labour, shortage of power etc. Costs associated with idle capacity mostly fixed in nature. These costs remain unabsorbed or unrecovered due to under-utilisation of plant and service capacity. 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. 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 seasonal factors:** The cost should be charged to the cost of production by inflating overhead rates.

QUESTION 5 (c)

Distinguish between Net Present Value (NPV) and Internal Rate of Return (IRR) methods for evaluating projects.

(4 Marks)

Answer

NPV versus IRR:

NPV and IRR methods differ in the sense that the results regarding the choice of an asset under certain circumstances are mutually contradictory under two methods.

In case of mutually exclusive investment projects, in certain situation, they may give contradictory result such that if the NPV method finds one proposal acceptable, IRR favors another. The difference rankings given by the NPV and IRR methods could be due to size disparity problem, time disparity problem and unequal expected lives.

In the NPV cash flows are assumed to be re-invested at cost of capital rate. In IRR reinvestment is assumed to be made at IRR rates.

The NPV expressed in financial value whereas IRR is expressed in percentage terms.

QUESTION 5 (d)

What is meant by venture capital financing? State its various methods.

(4 Marks)

Answer

Venture Capital Financing:

The venture capital financing refers to financing of new high risky venture promoted by the qualified entrepreneurs who lack experience and funds to give shape to their ideas. In broad sense, under venture capital financing venture capitalist make investment to purchase equity or debt securities from inexperienced entrepreneurs who undertake highly risky ventures with a potential of success.

Some Common Methods of Venture Capital Financing:

- (i)** Equity Financing,
- (ii)** Conditional Loan,
- (iii)** Income Note,
- (iv)** Participating Debenture.

QUESTION 6 (a)

PVK Constructions commenced a contract on 1st April, 2014. The total contract value was ₹1,00,00,000. The contract is expected to be completed by 31st December, 2016. Actual expenditure during the period 1st April, 2015 to 31st March, 2016 and estimated expenditure for the period 1st April, 2016 to 31st December, 2016 are as follows:

Details of Expenses	Actual 01.04.15 to 31.03.16	Estimated 01.04.16 to 31.12.16
Materials 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	-

A part of 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, 2016 was ₹2,50,000 and the value of material at site was ₹73,000. Cash received on account to date was ₹3,60,000 representing 80% of the work certified. The cost of work uncertified was valued at ₹5,40,000.

Estimated further expenditure for completion of the contract is as follows:

- A 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.
- Site office expenses would be the same amount per month as charged in the previous year.
- An amount of ₹1,57,500 would have to be incurred towards consultancy charges.

Required:

Prepare Contract Account and calculate estimated total profit on this contract.

(8 Marks)

Answer

**PVK Construction Contract Account
(For the period 01.04.2015 to 31.03.2016)**

Particulars	Amount	Particulars	Amount
To Material issued	15,30,000	By Work in progress:	
To Labour paid 10,12,500		Work certified	45,00,000
Add: Outstanding 80,000	10,92,500	(36,00,000 ÷ 80%)	
To Depreciation on plant	4,20,000	Work uncertified	5,40,000
(7,50,000 – 80,000 – 2,50,000)		By Cost of materials sold	2,55,000
To Expenses paid 3,25,000		By Materials at site	73,000
Less: Prepaid (68,000)	2,57,000		
To Site office expenses	3,00,000		
To Notional profit	17,68,500		
	53,68,000		53,68,000
To P/L A/c	5,97,600	By Notional profit	17,68,500
To Working progress A/c	11,70,900		
	17,68,500		17,68,500

*** Profit to be transferred to Profit and Loss A/c:**

$$= \text{Estimated Profit} \times \frac{\text{Cash Received}}{\text{Contract price}} = 16,60,000 \times \frac{36,00,000}{1,00,00,000} = \mathbf{5,97,600}$$

Calculation of Estimated Profit

Particulars	Amount	Amount
Contract price		1,00,00,000
Less: Total cost:		
Cost to date (45,00,000 + 5,40,000 – 17,68,500)		(32,71,500)
Further estimated cost:		
Materials issued	21,00,000	
Materials at site at 1 st April, 2016	73,000	
Depreciation on plant (2,50,000 + 4,62,500 – 67,500)	6,45,000	
Direct Wages paid	12,25,000	
Add: Closing Outstanding	1,15,000	
Less: Opening Outstanding	(80,000)	
Expenses paid	5,40,000	
Add: Opening prepaid	68,000	
Site office expenses (3,00,000 ÷ 12 months) × 9 months	2,25,000	
Consultancy charges	1,57,500	(50,68,500)
Estimated Profit		16,60,000

Author note: Student may calculate profit transfer to P/L by using any other formula.

QUESTION 6 (b)

A firm has total sales as ₹200 lakhs of which 80% is on credit. It is offering credit term 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?

(8 Marks)

Answer

(i) Statement of Effective Cost of Factoring to the Firm

Particulars	₹
(A) Cost of factoring:	
Factoring commission ($₹1,06,667 \times \frac{360 \text{ Days}}{120 \text{ Days}}$)	3,20,000
Interest charges ($₹2,81,600 \times \frac{360 \text{ Days}}{120 \text{ Days}}$)	8,44,800
Total (A)	11,64,800
(B) Savings:	
Saving in credit administration cost	2,40,000
Saving in bad debts ($1\% \times 80\% \times ₹2,00 \text{ Lakhs}$)	1,60,000
Saving in cash discount ($2\% \times \frac{1}{2} \times 80\% \times ₹200 \text{ Lakhs}$)	1,60,000
Total (B)	5,60,000
Effective cost of factoring (A - B)	6,04,800
Rate of effective cost $\left(\frac{6,04,800}{44,11,733} \times 100 \right)$	13.71%

Working Notes:

Calculation of advance:

Particulars	₹
Average receivables ($₹200 \text{ Lakhs} \times 80\% \times \frac{120}{360}$)	53,33,333
Less: Factor reserve @ 10% of ₹53,33,333	5,33,333
Maximum possible advance	48,00,000
Less: Commission @ 2% of ₹53,33,333	1,06,667
Advance net of commission	46,93,333
Less: Interest ($₹46,93,333 \times 18\% \times \frac{120}{360}$)	2,81,600
Amount of advance	44,11,733

Assumptions:

- (1)** Cash discount will be discontinued after factoring agreement, otherwise student may take different assumption of continuance of cash discount, in that case average payment period will be 80 Days ($40 \times 50\% + 120 \times 50\%$) and cash discount will not be considered at the time of computation of effective cost of factoring.
- (2)** Factoring commission will be paid in advance.
- (3)** Factor will bear bad debt losses (Non recourse factoring).

(ii) Statement of Evaluation

Particulars	Factoring	Bank
Cost to Company:		
Factoring commission	1,60,000	-
Interest charges:		
In case of Factoring	8,44,800	-
In case of Bank ($₹200 \text{ Lakhs} \times 80\% \times 14\% \times \frac{80}{360}$)	-	4,97,778
Credit administration cost	-	2,40,000
Bad debts	-	1,60,000
Cash discount	-	1,60,000
Total Cost	10,04,000	10,57,778

Advise: Firm should avail factoring service having lower cost than bank finance.

QUESTION 7 (a)

Explain the treatment of over and under absorption of overheads in cost accounting.

(4 Marks)

Answer

Treatment of over and under absorption of overheads are:

- (1) Writing off to Costing Profit and Loss Account:** Small difference between the actual and absorbed amount should simply be transferred to Costing Profit and Loss Account, if difference is large then investigate the causes and after that abnormal loss or gain should be transferred to Costing Profit and Loss Account.
- (2) Use of Supplementary Rate:** Under this method the balance of under and over absorbed overheads may be charged to cost of WIP, Finished Stock and Cost of Sales proportionately with the help of supplementary rate of overhead.
- (3) Carry Forward to Subsequent Year:** Difference should be carried forward in the expectation that next year the position will be automatically corrected. This would really mean that costing data of two years would be wrong.

QUESTION 7 (b)

Describe the various steps involved in adopting standard costing system in an organization.

(4 Marks)

Answer

Various steps involved in adopting standard costing system are as below:

- (i) Setting of standards:** The first step is to set standards which are to be achieved.
- (ii) Ascertainment of actual cost:** Actual cost for each component of cost is ascertained.
- (iii) Comparison of actual cost and standard cost:** Actual costs are compared with the standards costs and variances are determined.
- (iv) Investigation of variances:** Variances arises are investigated for further action. Based on this performance is evaluated and appropriate actions are taken.
- (v) Disposal of variance:** Variance arise are disposed off by transferring it the relevant accounts (costing profit and loss account) as per the accounting method (plan) adopted.

QUESTION 7 (c)

Evaluate the role of cash budget in effective cash management system.

(4 Marks)

Answer

Cash budget is the most significant device to plan for and control cash receipts and payments. This represents cash requirements of business during the budget period and help in effective cash management system.

- (1)** It coordinate the timings of cash needs, it identifies the period when there might either be a shortage of cash or an abnormally large cash requirement;
- (2)** It also helps to pinpoint period when there is likely to be excess cash;
- (3)** It enables the firm which has sufficient cash to take advantage like cash discounts on its account payables; and
- (4)** Lastly it helps to plan/arrange adequately needed (avoiding excess/shortage of cash) on favorable terms.

On the basis of cash budget, the firm can decide to invest surplus cash in marketable securities and earn profits.

QUESTION 7 (d)

Discuss the risk-return considerations in financing current assets.

(4 Marks)

Answer

The financing of current assets involves a trade off between risk and return. A firm can choose from short or long term sources of finance. Short term financing is less expensive than long term financing but at the same time, short term financing involves greater risk than long term financing.

Depending on the mix of short term and long term financing, the approach followed by a company may be referred as matching approach, conservative approach and aggressive approach.

In matching approach, long term finance is used to finance fixed assets and permanent current assets and short term financing to finance temporary or variable current assets and hence medium risk of facing the problem of shortage of funds with medium cost of financing.

Under the conservative plan, the firm finance its permanent and also a part of temporary current assets with long term financing and hence less risk of facing the problem of shortage of funds with high cost of financing.

An aggressive policy is said to be followed by a firm when it uses more short term financing than warranted by the matching plan and finance a part of permanent current assets with short term financing and hence high risk of facing the problem of shortage of funds with less cost of financing.

In determining the optimum level of current assets, the firm should balance the profitability - solvency tangle by minimizing total cost: cost of liquidity and cost of illiquidity in other words maintain the balance between risk and return.

QUESTION 7 (e)

Distinguish between the following:

- (i) 'Scraps' and 'Defectives' in costing
- (ii) Preference Shares and Debentures

(4 Marks)

Answer

(i) Difference between Scraps and Defectives

<i>S.N.</i>	<i>Scrap</i>	<i>Defectives</i>
<i>1</i>	It is loss connected with output.	This type of loss connected with the output but it can be in input as well.
<i>2</i>	Scraps are not intended but cannot be eliminated due to nature of materials or process itself.	Defectives also are not intended but can be eliminated through proper control.
<i>3</i>	Generally scraps are not used or rectified.	Defectives can be used after rectification.
<i>4</i>	Scraps have insignificant recoverable value.	Defectives are sold at lower value from that of good one.

(ii) Difference between Preference Shares and Debentures

<i>S.N.</i>	<i>Preference Shares</i>	<i>Debentures</i>
<i>1</i>	Preference share forms part of owner's capital.	Debenture is debt item, it don't form part of owner's capital.
<i>2</i>	Preference capital has priority of payment of dividend and capital redemption over equity capital.	Debenture has priority of payment of interest and redemption over preference capital and equity capital.
<i>3</i>	Preference dividend is after tax item.	Interest on debenture is before tax item.
<i>4</i>	Preference share capital is more risky than debenture.	Debenture is less risky than preference share capital.
<i>5</i>	Preference share capital has higher cost than debenture.	Debenture has lower cost than preference share capital.
<i>6</i>	Dividend is not paid in case of loss to non cumulative preference share capital.	Interest is paid to debenture either company is loss or in profit.