PAPER – 8: COST ACCOUNTING & FINANCIAL MANAGEMENT

The following table lists the learning objectives and the verbs that appear in the syllabus learning aims and examination questions:

	Learning objectives	Verbs used	Definition
LEVEL B	KNOWLEDGE What you are expected to know	List	Make a list of
		State	Express, fully or clearly, the details/facts
		Define	Give the exact meaning of
	COMPREHENSION What you are expected to understand	Describe	Communicate the key features of
		Distinguish	Highlight the differences between
		Explain	Make clear or intelligible/ state the meaning or purpose of
		Identity	Recognize, establish or select after consideration
		Illustrate	Use an example to describe or explain something
	APPLICATION How you are expected to apply your knowledge	Apply	Put to practical use
		Calculate	Ascertain or reckon mathematically
		Demonstrate	Prove with certainty or exhibit by practical means
		Prepare	Make or get ready for use
		Reconcile	Make or prove consistent/ compatible
		Solve	Find an answer to
		Tabulate	Arrange in a table
	ANALYSIS How you are expected to analyse the detail of what you have learned	Analyse	Examine in detail the structure of
		Categorise	Place into a defined class or division
		Compare and contrast	Show the similarities and/or differences between
		Construct	Build up or compile
		Prioritise	Place in order of priority or sequence for action
		Produce	Create or bring into existence

Paper – 8: Cost Accounting & Financial Management

Full Marks: 100 **Time Allowed: 3 Hours**

This paper contains 3 questions. All questions are compulsory, subject to instruction provided against each question. All workings must form part of your answer.
Assumptions, if any, must be clearly indicated.

1. Answer all questions: **[2×10=20]**

(a) Enumerate the various methods of Time booking.

Answer:

The various methods of time booking are:

- Daily time sheet
- Weekly time sheet
- Job ticket
- Labour cost card
- Time and job card

(b) A concern producing a single product estimates the following expenses for a production period.

Particulars	₹
Direct Material	**68,750**
Direct Labour	**68,750**
Direct Expenses	**6,875**
Overhead Expenses	**2,88,750**

Estimate the overhead recovery rate based on prime cost.

Answer:

Prime cost = Direct Material + Direct Labour + Direct Expenses = ₹1,44,375
Overhead Expenses = ₹ 2,88,750

Overhead recovery rate based on prime cost = ₹2,88,750/ ₹1,44,375 = 2 times or 200 % of prime cost.

(c) A, B, C and D are products produced by a company. Power is supplied to these production units from the in-house power generator. Cost of power generated for a certain period was ₹1,00,000. Additionally, the committed cost of standby power shop utilities was ₹25,000. The sales value of A, B, C and D were equal and the units produced were in the ratio 1:2:2:3. What amount of power cost will be part of cost of production for each of A, B, C and D? One unit of power is consumed per unit of production of A, B, C &D

Answer:

Cost of power is a utility and hence a direct expense. Direct expense includes the cost of standby utilities. Hence 1,25,000 should be charged to the products in the ratio of units of power per unit of product x no. of products produced. Since units per product are not given, if we assume same rate of power consumption, 125000 in the ratio 1:2:2:3 i.e. 15625, 31250, 31250, 46875 for A, B, C, D.

(d) Products X, Y and Z are manufactured by XYZ Company. Special permit charges of ₹12,00,000 are paid for X and renewable every 4 years. How will the permit charges be treated in Cost Accounts?

Answer:

Special permit charges are direct expenses for X, amortised at ₹3,00,000 per annum, assuming annual production period. Permit charges are treated as direct expenses

(e) Calculate the total wages earned by a workman for a working day of 8 hours under Rowan plan:

- **Standard production per hour** **110 units**
- **Actual production of the day** **1,100 units**
- **Wages rate per hour** **₹ 30**

Answer:

$$\text{Standard time} = \frac{1,100}{110} = 10 \text{ hrs}$$

Total wages in Rowan Plan:

Total wages

$$= (\text{Actual time x wages rate}) + \left(\frac{\text{Standard time - Actual time}}{\text{Standard time}} \right) \text{x Actual Time x wage rate}$$

$$= 8 \text{ x } 30 + \left(\frac{10 - 8}{10} \right) \text{x } 8 \text{ x } 30$$

= ₹ 288.

(f) Calculate the direct expenses as per CAS-10 from the following information: Royalty paid on sales: ₹1,25,000; Royalty paid on production: ₹1,00,000; Design charges ₹26,000; Machine shop expenses ₹45,000; Software development charges related to production: ₹55,000.

Answer:

As per CAS –10, the direct expenses will be the sum of all the items mentioned.
Total direct expenses = 1,25,000 + 1,00,000 + 26,000 + 45,000 + 55,000 = ₹3,51,000

(g) Cost of debt is 9% after tax. Cost of equity is 12% at zero leverage and it keeps increasing as leverage grows. Calculate the weighted average cost of capital at 60% debt proportion under the Net Operating Income Approach.

Answer:

According to NOI approach, the WACC does not get affected by the financing mix. The Cost of equity at zero leverage will be the WACC = 12% always, however, much the leverage changes.

(h) Estimate the operating leverage from the following data:

Sales	**₹1,00,000**
Variable Costs	**75%**
Fixed Costs	**₹18,000**

Answer:

Particulars	₹
Sales	1,00,000
Less: Variable cost at 75%	75,000
Contribution	25,000
Less: Fixed Cost	18,000
Operating Profit	7,000

$$\text{Operating leverage} = \frac{\text{Contribution}}{\text{Operating Profit}} = \frac{25,000}{7,000} = 3.57$$

(i) Z Ltd. Is a manufacturing company having asset turnover ratio of 2 and debt- asset ratio of 0.60 for the year ended 31st March, 2014. If its net profit margin is 5%, calculate the Return on Equity (ROE) of the company.

Answer.

According to Du-Pont Analysis,
ROE= (Net profit /Sales)*((Sales/ Av. Assets)*(Av. Assets/Av. Equity)
Av. Assets/ Av. Equity=1/(1-0.60)=1/0.40=2.50
ROE= 0.05*2*2.5=0.25 i.e 25%.

(j) Cactus Limited paid a dividend of ₹ 10 per share for 2014-15. The company follows a fixed dividend payout ratio of 60%. The company earns a return of 20% on its investment. The cost of capital to the company is 12%. Calculate the expected market price of its share, using the Walter Model.

Answer:

$$EPS = \frac{\text{Dividend}}{\text{Payout Ratio}} = \frac{₹10}{0.60} = 16.67$$

Expected market price according to Walter model:

$$P = \frac{D + (E - D) \times \frac{r}{k}}{K} = \frac{10 + (16.67\text{-}10) \times \frac{0.20}{0.12}}{0.12} = ₹175.97$$

2. Answer any three questions **[3×16=48]**

(a)

(i) Singh Limited has received an offer of quantity discount on its order of materials as under:

Price per tone	Tones number
₹ 9,600	Less than 50
₹ 9,360	50 and less than 100
₹ 9,120	100 and less than 200
₹ 8,880	200 and less than 300
₹ 8,640	300 and above

The annual requirement for the material is 500 tonnes. The ordering cost per order is ₹12,500 and the stock holding cost is estimated at 25% of the material cost per annum.

Required

(I) Compute the most economical purchase level.

(II) Compute EOQ if there are no quantity discounts and the price per tonne is ₹10,500.

[4+2=6]

Answer

(I)

Order size (Q) (Units)	No. of orders A/Q (Units)	Cost of purchase Ax per unit cost	Ordering cost $\frac{A}{Q}$ ×₹12500	Carrying cost $\frac{Q}{2}$ ×C×25%	Total cost (3+4+5)
(1)	(2)	(3)	(4)	(5)	(6)
40	12.5	48,00,000 (500×9600)	1,56,250	48,000 $\left(\frac{40}{2} \times 9600 \times 0.25\right)$	50,04,250
50	10	46,80,000 (500×9360)	1,25,000	58,500 $\left(\frac{50}{2} \times 9360 \times 0.25\right)$	48,63,500
100	5	45,60,000 (500×9120)	62,500	1,14,000 $\left(\frac{100}{2} \times 9120 \times 0.25\right)$	47,36,500
200	2.5	44,40,000 (500×8880)	31,250 (2.5×12500)	2,22,000 $\left(\frac{200}{2} \times 8880 \times 0.25\right)$	46,93,250
300	1.67	43,20,000 (500×8640)	20,875 (1.67×12500)	3,24,000 $\left(\frac{300}{2} \times 8640 \times 0.25\right)$	46,64,875

The above table shows that the total cost of 500 units including ordering and carrying cost is minimum (₹ 46,64,875) where the order size is 300 units. Hence the most economical purchase level is 300 units.

(II) EOQ = $\sqrt{\frac{2AO}{c \times i}} = \sqrt{\frac{2 \times 500 \times 12500}{10500 \times 25\%}}$ = 69 tonnes.

(ii) Gross pay ₹12,80,000 (including cost of idle time hours paid to employee ₹85,000); Accommodation provided to employee free of cost [this accommodation is owned by employer, depreciation of accommodation ₹2,00,000, maintenance charges of the accommodation ₹1,00,000, municipal tax paid for this accommodation ₹5,000], Employer's Contribution to P.F. ₹1,00,000 (including a penalty of ₹2,000 for violation of PF rules), Employee's Contribution to P.F. ₹75,000. Compute the Employee cost. [6]

Answer:

Computation of Employee Cost

	Particulars	**Amount(₹)**
	Gross Pay (net of cost of idle time) =[12,80,000 (-) 85,000]	11,95,000
Add	Cost of accommodation provided by employer = Depreciation (+) Municipal Tax paid (+) maintenance charges = 2,00,000 + 5,000 + 1,00,000 = 1,93,000	3,05,000
Add	Employer's Contribution to PF excluding penalty paid to PF authorities [= 1,00,000 (-) 2,000]	98,000
	Employee Cost	**15,98,000**

Note:

- Assumed that the entire accommodation is exclusively used by the employee. Hence, cost of accommodation provided includes all related expenses/costs, since these are identifiable /traceable to the cost centre.
- Cost of idle time hours is an excludible item. Since it is already included in the gross pay, hence excluded.
- Penalty paid to PF authorities is not a normal cost. Since, it is included in the amount of contribution, it is excluded.

(iii) State Explicit costs. How is it different from implicit costs? [4]

Answer.

Explicit costs: These costs are also known as out of pocket costs. They refer to those costs which involves immediate payment of cash. Salaries, wages, postage and telegram, interest on loan etc. are some examples of explicit costs because they involve immediate cash payment. These payments are recorded in the books of account and can be easily measured.

Main points of difference: The following are the main points of difference between explicit and implicit costs.

- Implicit costs do not involve any immediate cash payment. As such they are also known as imputed costs or economic costs.
- Implicit costs are not recorded in the books of account but yet, they are important for certain types of managerial decisions such as equipment replacement and relative profitability of two alternative courses of action.

(b)

(i) XYZ Ltd. manufactures four products A, B, C and D. whose data are given below:

	A	B	C	D
Direct Materials (₹)	**3,000**	**6,000**	**9,000**	**18,000**
Direct Labour (₹)	**1,500**	**3,000**	**4,500**	**9,000**
Direct Labour Hours	**50**	**100**	**150**	**300**
Machine Hours	**30**	**15**	**10**	**5**

Your are required to prepare a statement showing the allocation of factory overheads (Which amount to ₹1,08,000) using the basis of allocation as under:

(I) Direct Material Cost

(II) Direct Labour Cost

(III) Direct Labour Hours

(IV) Machine Hours

Out of these four bases of allocation, which you prefer and why? [2+2+2+2+2]

Answer:

Allocation of Factory overheads of 1,08,000 on the basis of

(I) Direct Material Cost

	A	B	C	D
Factory overhead	$\left(\frac{3000}{36000}x108000\right)$	$\left(\frac{6000}{36000}x108000\right)$	$\left(\frac{9000}{36000}x108000\right)$	$\left(\frac{18000}{36000}x108000\right)$
	= ₹9,000	= ₹18,000	= ₹27,000	= ₹54,000

(II) Direct Labour Costs

	A	B	C	D
Factory overhead	$\left(\frac{1500}{18,000}x108000\right)$	$\left(\frac{3000}{18000}x108000\right)$	$\left(\frac{4500}{18000}x108000\right)$	$\left(\frac{9000}{18000}\times108000\right)$
	= ₹9,000	= ₹18,000	= ₹27,000	= ₹54,000

(III) Direct Labour Hours

	A	B	C	D
Factory overhead	$\left(\frac{50}{600}x108000\right)$	$\left(\frac{100}{600}x108000\right)$	$\left(\frac{150}{600}x108000\right)$	$\left(\frac{300}{600}x108000\right)$
	= ₹9,000	= ₹18,000	= ₹27,000	= ₹54,000

(IV) Machine Hours

	A	B	C	D
Factory overhead	$\left(\frac{30}{60}\times 108000\right)$	$\left(\frac{15}{60}\text{x}108000\right)$	$\left(\frac{10}{60}\text{x}108000\right)$	$\left(\frac{5}{60}\text{x}108000\right)$
	= ₹54,000	= ₹27,000	= ₹18,000	= ₹9,000

The best method for allocation of factory overhead is machine hours as it represents the machine hours used in production of each item, whereas the other basis of factory overheads provides wrong allocation of the factory overheads. Hence, XYZ Ltd. should allocate factory overheads on the basis of Machine Hour.

(ii) The Budgeted annual production of a company is 1,20,000 units, each unit requiring 2½ hours at an hourly wage rate of ₹ 15. Currently the average efficiency of the production workers is only 60%. The management has a scheme to raise this to 75%. The scheme involves realigning the machinery and intensive training of the production workers, at a onetime cost of ₹ 10 lakhs. The scheme also proposes to raise the wage rate to ₹ 16 to ensure the full co-operation of workers. Calculate the scheme and state whether it can be accepted.

[4+2]

Answer:

Budgeted annual Production = 1,20,000 units

Standard Hours required for production @ 2½ hours per unit = 3,00,000 hours

Statement of Comparative labour cost before and after the implementation of the scheme		
	Before	After
Standard Time required for production	3,00,000 hrs	3,00,000 hrs
Labour efficiency	60 %	75 %
Estimated labour hours likely to be taken	5,00,000 hrs	4,00,000 hrs
	(3,00,000 / 60%)	(3,00,000 / 75%)
Wage Rate / hour	₹ 15	₹ 16
Total estimated wages per year	₹ 75,00,000	₹ 64,00,000

So, net savings for change of scheme is (75-64) = 11 lakhs

Since the net savings ie ₹ 11 lakhs exceeds the total cost of implementing the project ie ₹ 10 lakhs the scheme should be accepted by the management.

(c)

(i) Stocks are issued at a standard price and the following transactions occurred for a specific material:

1st June	**Opening Stock**	**10 tonnes at ₹240 per ton**
4th June	**Purchased**	**5 tonnes at ₹260 per ton**
5th June	**Issued**	**3 tons**
12th June	**Issued**	**4 tons**
13thJune	**Purchased**	**3 tons at ₹250 per ton**
19thJune	**Issued**	**4 tons**
26thJune	**Issued**	**3 tons**
30thJune	**Purchased**	**4 tons at ₹280 per ton**

31stJune Issued 3 tons.

The debit balance of price variation on 1st June was ₹20. Show the stock account for the material for the month of June, indicating how would you deal with the difference in material price variance, when preparing the Profit and Loss Account for the month. [8]

Answer:

Standard Price = (240x10) +20/10

= ₹ 242

Stores Ledger Account

Date	Receipts			Issue			Balance	
	Qty.	Price ₹	Value ₹	Qty.	Price ₹	Value ₹	Qty.	Price ₹
1st June	--	--	--	--	--	--	10	2,400
4th June	5	260	1,300	--	--	--	15	3,700
5th June	--	--	--	3	242	726	12	2,974
12th June	--	--	--	4	242	968	8	2,006
13th June	3	250	750	--	--	--	11	2,756
19th June	--	--	--	4	242	968	7	1,788
26th June	--	--	--	3	242	726	4	1,062
30th June	4	280	1,120	--	--	--	8	2,182
31st June	--	--	--	3	242	726	5	1,456

Material price variance is ₹ 246 which is to be transferred to debit of costing P & L A/c.

Working:

Stock at standard price = 5 x 242= 1,210

Material Price Variance = 1,210 – 1,456 = 246 (A)

(ii) A manufacturing unit produces two products A and B. The following information is furnished:

Particulars	Product A	Product B
Units produced (Qty)	**20,000**	**15,000**
Units sold (Qty)	**15,000**	**12,000**
Machine hours utilized	**10,000**	**5,000**
Design charges	**21,000**	**24,000**
Software development	**20,000**	**30,000**

Royalty paid on sales ₹54,000 [@₹2 per unit sold, for the products]; Royalty paid on units produced ₹35,000 [@Re.1 per unit purchased, for both the products], Hire charges of equipment used in manufacturing process of product A only ₹5,000, Compute the direct expenses as per CAS-10. [6]

Answer:

Computation of Direct expenses as per CAS-10

	Particulars	Product A	Product B
	Royalty paid on sales	30,000	24,000
Add	Royalty paid on units produced	20,000	15,000
Add	Hire charges of equipment used in manufacturing process of product A only	5,000	------
Add	Design charges	21,000	24,000
Add	Software development charges related to the production	20,000	30,000
	Direct r Expenses	96,000	93,000

Note:

(I) Royalty on production and royalty on sales are allocated on the basis of units produced and units sold respectively. These are directly identifiable and traceable to the number of units produced and units sold. Hence, this is not apportionment.

(II) No adjustment are made related to units held, i.e. closing stock.

(iii) State the objective of CAS-2 and CAS-8. [1+1]

Answer:

CAS-2(Capacity Determination): To bring uniformity and consistency in the principles and methods of determination of capacity with reasonable accuracy.

CAS-8(Cost of utilities): To bring uniformity and consistency in the principles and methods of determining the cost of utilities with reasonable accuracy.

(d)

(i) A factory incurred the following expenditure during the year 2013:

		₹
Direct material consumed		**15,00,000**
Manufacturing Wages		**10,00,000**
Manufacturing overhead:		
Fixed	**4,00,000**	
Variable	**3,50,000**	**7,50,000**
		32,50,000

In the year 2014, following changes are expected in production and cost of production.

(I) Production will increase due to recruitment of 50% more workers in the factory.

(II) Overall efficiency will decline by 10% on account of recruitment of new workers.

(III) There will be an increase of 15% in Fixed overhead and 70% in Variable overhead.

(IV) The cost of direct material will be decreased by 5%.

(V) The company desire to earn a profit of 10% on selling price.

Ascertain the cost of production and selling price. [8]

Answer:

Budgeted Cost Sheet for the year 2014:

Particulars			Amount ₹
Direct material consumed		15,00,000	
Add: 35% due to increased output		5,25,000	
		20,25,000	
Less: 5% for decline in price		1,01,250	19,23,750
Direct wages (manufacturing)		10,00,000	
Add: 50% increase		5,00,000	15,00,000
Prime cost			34,23,750
Manufactured Overhead:			
Fixed	4,00,000		
Add: 15% increase	60,000		
		4,60,000	
Variable	3,50,000		
Add: 70% increase	2,45,000		
		5,95,000	10,55,000
Cost of production			44,78,750.00
Add: 1/9 of Cost or 10% on selling price			4,97,638.88
Selling price			49,76,388.88

Production will increase by 50% but efficiency will decline by 10%.
150 – 10% of 150 = 135%
So increase by 35%.

Note: If we consider that variable overhead once will change because of increase in production (From 3,50,000 to 5,95,000) then with efficiency declining by 10% it shall be 5,35,500 and then again as mentioned in point No. (iii) of this question it will increase by 70% then variable overhead shall be ₹ 5,35,500 × 170% = 9,10,350. Hence, total costs shall be ₹ 47,94,100 and profit shall be 1/9th of ₹ 47,94,100 = 5,32,678. Thus, selling price shall be 53,26,778.

(ii) List out the advantages of Cost control. [4]

Answer:

Advantages of Cost Control

The advantages of cost control are mainly as follows

- Achieving the expected return on capital employed by maximizing or optimizing profit
- Increase in productivity of the available resources
- Reasonable price of the customers
- Continued employment and job opportunity for the workers
- Economic use of limited resources of production
- Increased credit worthiness
- Prosperity and economic stability of the industry

(iii) Discuss the treatment of overtime wages in Cost Accounts. [4]

Answer:

Overtime wages and its Treatment:

Work done by a worker beyond his normal working hours is known as overtime. Payment made to the worker for working overtime is known as overtime premium. Normal working hours may be as specified in the Factories Act, 1948 or work agreement with the union. The overtime is paid at a higher rate than the normal rate - usually double - one for normal wages during extra time and the other for additional wages for overtime.

- Overtime hours at normal rate are treated as labour cost and charged to production accordingly but premium paid during the overtime is recovered as production overhead through overhead recovery rate.
- If overtime is for a specific job to meet the deadlines or to carry out specific rush orders for which extra revenue is received, then the entire labour cost, should be charged to that job.
- If overtime wages are paid due to carelessness or negligence of a worker of a particular department, then the entire overtime cost is charged to that department.
- If overtime premium is paid due to abnormal causes such as floods, earthquakes, etc., it should be charged to Costing Profit and Loss A/c.

3. Answer any two questions [2×16=32]

(a)

(i) Pioneer Technology Ltd. is foreseeing a growth rate of 12% per annum in the next 2 years. The growth rate is likely to fall to 10% for the third year and fourth year. After that the growth rate is expected to stabilize at 8% per annum. If the last dividend paid was ₹1.50 per share and the investors' required rate of return is 16%, what would be the intrinsic value per equity share of Pioneer Technology Ltd. as of date?

Note: You may use the following table:

Years	0	1	2	3	4	5
P.V Interest factors at 16%	1.00	0.86	0.74	0.64	0.55	0.48

[10]

Answer:

PIONEER TECHNOLOGY LTD.

(I) Calculation of Present value of Dividend Stream:

@ 12% p.a in the first two years:

= [1.50 x (1.12)x 0.86] + 1.50 x$(1.12)^2$ x 0.74

= 1.44 + 1.39

= ₹2.83

(II) @ 10% p. a in the next two years (i.e. 3rd & 4th years)

1.50 x$(1.12)^2$ = ₹ 1.88

Therefore,

[1.88 x (1.10) x 0.64] + [1. 88 x $(1.10)^2$ x 0.55]

= 1.32 + 1.25 =₹ 2.57

(III) Market value of Equity shares at the end of 4th year applying the constant dividend growth model:

$P_4 = D_5/(K_e - g)$

Where,

P_4 = Market price of Equity shares at the end of 4th yr.

D_5 = Dividend in 5th yr.

K_e = Required rate of return

g = Growth rate

Now we get,

K_e =0.16, g = 0.08, $D_4 = 1.50 (1.12)^2 \times (1.10)^2$

= 2 .28

$D_5 = D_4 (1+g)$

= 2.28 x (1.08) =₹ 2.46

P_4 = 2.46/ (0.16 - 0.08) =2.46/0.08 = ₹ 30.75

Present Market value of P_4 = 30.75 x 0.55

= ₹16.91

Hence, the intrinsic value per Equity Shares of Pioneer Technology Ltd. would be:

(i)+ (ii) + (iii) = 2.83 + 2.57 + 16.91 = ₹22.31

(ii) The financial highlights of AMTEK LTD. for the year 2013 – 2014 are as given under:

EBIT	**₹830 crore**
Depreciation	**₹6 core**
Effective Tax rate	**30%**
EPS	**₹4.00**
Book value	**₹30 per share**
Number of Outstanding shares	**33 crore**
D/E ratio	**1.5:1**

Required:

(I) Calculate degree of financial leverage.

(II) What is the Financial Break- even Point of Amtek Ltd.

(III) What should be the impact of EPS if the EBIT is increased by 5%. **[3+2+1]**

Answer:

(I)

AMTEK LTD.

	(Amount in ₹ Crore)
EBDIT	830.00
Less: Depreciation	6.00
EBIT	824.00
Less: Interest Charges	635.43

(EBIT – EBT) : (824 – 188.57)	
EBT	188.57
Less: Tax (30%)	56.57
EAT	132.00

Degree of Financial Leverage (DFL): (824/188.57) = 4.37

Working Notes:
EAT: EPS x No of Shares = 4 x 33 = ₹132 Crore,
EBT: EAT / (1 – t) = 132/(1 – 0.30) = ₹188.57 Crore.

(II) Financial break – Even point is at that level of EBIT at which EPS = 0
∴ EBIT – I = 0
Or, EBIT – 635.43 = 0
∴ EBIT = ₹635.43 Crore.

(III) DFL = Percentage change in EPS/ Percentage change in EBIT
4.37 = Percentage change in EPS/5%
∴ Percentage change in EPS = 21.85%
Hence, EPS will be increased by 21.85% if the EBIT is increased by 5%

(b)

(i) ABC Limited has made plans for the year 2013-2014. It is estimated that the Company will employ total assets of ₹ 25,00,000; 30% of assets being financed by debt at an interest cost of 9%p.a. The direct cost for the year are estimated at ₹ 15,00,000 and all other operating expenses are estimated at ₹ 2,40,000. The sales revenue is estimated at ₹ 22,50,000. Tax rate is assumed to be 50%. Required to calculate:
(I) Net profit margin
(II) Return on assets
(III) Assets turnover and
(IV) Return on equity. **[2.5x4=10]**

Answer:

The net profit is calculated as follows:

Sales revenue	22,50,000
Less: Direct Costs	15,00,000
Gross profits	7,50,000
Less: Operating Expenses	2,40,000
EBIT	5,10,000
Less: Interest (9% x 7,50,000)	67,500
EBT	4,42,500
Less: Taxes @ 50%	2,21,250
PAT	2,21,250

Debt= 25,00,000 × 30% = ₹ 7,50,000

Equity= 25,00,000 × 70% = ₹ 17,50,000

(I) Net Profit Margin= EBIT (1 - t) x 100/Sales
=5,10,000 (1 - 0.5)/ 22,50,000
=11.33%

(II) Return on Assets (ROA)
ROA=EBIT (1 - t)/ Total Assets
=5,10,000 (1 - .5)/ 25,00,000
=3,06,000/ 25,00,000
=0.102
=10.2%

(III) Assets Turnover=Sales/Assets
=22,50,000/ 25,00,000
=0.9

(IV) Return on Equity (ROE)
ROE=PAT/ Equity
=2,21,250/ 17,50,000
=12.64%

(ii) The annual turnover of AOULAKH Limited is ₹ 12 million of which 80% is on credit. Debtors are allowed one month to clear off the dues. ALLBANK Factors Ltd. (a factor company) is willing to advance 90% of the bill raise on credit for a fee of 2% a month plus a commission of 3% on the total amount of debts. Aoulakh Ltd. as a result of this arrangement is likely to save ₹43,200 annually in management costs and avoid bad debts at 1% on the credit sales. A scheduled bank has come forward to make an advance equal to 90% of the debts at an interest rate of 12% p.a. However its processing fee will be at 2% on the debts. Should the company avail of the factoring service or the offer of the bank? Give reasons. [6]

Answer:

AOULAKH LIMITED

Cost of factoring :	₹
Fee of 2% on 90% of ₹ 8 lakh (80% of 120 lakhs = 96 lakh /12 = 8 lakh monthly credit sales)	14,400
Commission at 3% on ₹ 8 lakh	24,000
	38,400
Less : Saving in cost:	
Savings in management cost is ₹ 43,200 p.a.	
Hence for a month : (43200 /12)	(3,600)
1% saving of Bad debts on ₹ 8 lakh	(8,000)
	(11,600)
Net cost in factoring	26,800

Cost of Bank Advance:

	₹
Interest at 12% p.a. for one month on 90% of ₹ 8 lakh	7,200
Processing fee at 2% on ₹ 8 lakh	16,000
Add: Bad debts loss that cannot be avoided (1%)	8,000
	31,200

RECOMMENDATION:

Since cost of Bank advance (₹31,200) is higher than the effective cost of factoring (₹26,800), the company should avail of factoring service.

(c)

(i) From the following figures, prepare a statement showing the changes in the working capital and fund flow statement during the year 2014:-

Assets	**Dec.31,2013**	**Dec.31,2014**
Fixed Assets (net) ₹	**5,10,000**	**6,20,000**
Investment	**30,000**	**80,000**
Current Assets	**2,40,000**	**3,75,000**
Discount on debentures	**10,000**	**5,000**
	7,90,000	**10,80,000**
Liabilities		
Equity share capital	**3,00,000**	**3,50,000**
Preference share capital	**2,00,000**	**1,00,000**
Debentures	**1,00,000**	**2,00,000**
Reserves	**1,10,000**	**2,70,000**
Provision for doubtful debts	**10,000**	**15,000**
Current liabilities	**70,000**	**1,45,000**
	7,90,000	**10,80,000**

You are informed that during the year:

- ✓ **A machine costing ₹ 70,000 book value ₹ 40,000 was disposed of for ₹ 25,000.**
- ✓ **Preference share redemption was carried out at a premium of 5% and**
- ✓ **Dividend at 10% was paid on equity share for the year 2013.**

Further:

- ➢ **The provision for depreciation stood at ₹ 1,50,000 on 31.12.13 and at ₹ 1,90,000 on 31.12.14; and**
- ➢ **Stock which was valued at ₹ 90,000 as on 31.12.13; was written up to its cost, ₹ 1,00,000 for preparing Profit and Loss account for the year 2014.** **[3+5]**

Answer:

Fund flow statement

Sources	**Amount (₹)**	**Applications**	**Amount (₹)**
Sale of fixed assets	25,000	Increase in working capital	50,000
Fund from operation	2,80,000	Purchase of fixed assets	2,20,000
Issue of shares	50,000	Purchase of investment	50,000

Debentures	1,00,000	Redemption of preference shares	1,05,000
		Dividend paid	30,000
	4,55,000		4,55,000

Working note

1. Change in working capital:

	2013	**2014**
Current Assets	2,40,000	3,75,000
(+) Stock under valued	10,000	
Current liabilities	70,000	1,45,000
Net working capital	1,80,000	2,30,000
Increase in working capital	50,000	

2. Depreciation

	(₹)
Opening provision	1,50,000
(-) Provided on sale of asset	30,000
	1,20,000
(+) Provided during the year (b /f)	70,000
Closing provision	1,90,000

3. Purchase & sale of Fixed Assets

	(₹)
Opening (2014)	5,10,000
(-) Provided on sale of asset	40,000
Sold	4,70,000
(-) Depreciation provided	70,000
	4,00,000
(+) Purchases (b /f)	2,20,000
Closing 2014	6,20,000

P & L Adjustment A/c

Particulars	**Amount (₹)**	**Particulars**	**Amount (₹)**
To depreciation	70,000	By balance b/d (1,10,000+10,000)	1,20,000
To loss on sale of fixed assets	15,000	By fund from operations (Bal. figure)	2,80,000
To loss on redemption of shares	5,000		
To discount written off	5,000		
To provision for doubtful debt	5,000		
To dividend	30,000		
To balance c/d	2,70,000		
	4,00,000		4,15,000

(ii) Write short note on Inflation and financial management. [5]

Answer

Inflation and financial management: Financial management is basically concerned with the proper management of finance which is regarded as the life blood of business enterprise. The direct consequence of inflation has been to distort the significance of operating results and utility of financial statements (based on historical cost) for various managerial accounting and decision making purposes. Even though it is beyond the scope of finance manager to control inflation. He, however, tries to measure the impact of inflation on his business so as to re-orient various financial management policies according to the fast changing circumstances. Some of the prominent areas which are affected by inflation and are required to be re-oriented are as follows:

- Financing decisions: This involves identifying the sources from which the finance manager should raise the quantum of funds required by a company. The debentureholder and preference shareholders are interested in fixed income while equity shareholders are interested in higher profits to earn high dividend. The finance manager is required to estimate the amount of profits he is going to earn in future. While estimating the revenue and costs, he must take into consideration the inflation factor.
- Investment decisions: The capital budgeting decisions will be biased if the impact of inflation is not correctly factored in the analysis. This is because the cash flows of an investment project occur over a long period of time. Therefore, the finance manager should be concerned about the impact of inflation on the project's profitability.
- Working Capital decisions: The finance manager is required to consider the impact of inflation while estimating the requirements of working capital. This is because of the increasing input prices and manufacturing costs, more funds may have to be tied up in inventories and receivables.
- Dividend payout policy: This involves the determination of the percentage of profits earned by the enterprise which is to be paid to the shareholders. While taking this decision, the finance manager has to keep in mind the inflation factor. Therefore, while making this decision he has to see that the capitals of the company remain intact even after the payment of dividend. This is because in a inflationary situation the depreciation provided on the basis of historical costs of assets would not provide adequate funds for replacement of fixed assets at the expiry of their useful lives.

(iii) State the importance of Cost of Capital. [3]

Answer:

Importance of Cost of Capital

The Cost of Capital is very important in Financial Management and plays a crucial role in the following areas:

- **Capital budgeting decisions:** The cost of capital is used for discounting cash flows under Net Present Value method for investment proposals. So, it is very useful in capital budgeting decisions.

- **Capital structure decisions:** An optimal capital is that structure at which the value of the firm is maximum and cost of capital is the lowest. So, cost of capital is crucial in designing optimal capital structure.
- **Evaluation of final Performance:** Cost of capital is used to evaluate the financial performance of top management. The actual profitably is compared with the actual cost of capital of funds and if profit is greater than the cost of capital the performance nay be said to be satisfactory.