Paper 10– Cost &Management Accounting and Financial Management

Paper-10: - Cost & Management Accounting and Financial Management

Full Marks: 100 **Time allowed:3 hours**

This paper has been divided into two Parts A & B,each carrying 50 marks.
Further each Part has been divided into two sections each.

Part-A
(COST & MANAGEMENT ACCOUNTING)

(50 Marks)

Section-I

Answer the following questions.

1.(a) Choose the most Appropriate alternative for the following **(You may write only the Roman numeral and the alphabet chosen for your answer);** **1 X 6 =6**

(i) The use of management accounting is
(a) Compulsory
(b) **Optional**
(c) Mandatory as per law
(d) None of the above.

(ii) The selling price is 20 per unit,variable cost 12 per unit,and fixed cost 16,000,the break even-point in units will be
(a) 800 units
(b) 3,000 units
(c) **2,000 units**
(d) None of these

(iii) Which of the following departments is most likely responsible for a price variance in direct material?
(a) Warehousing
(b) Receiving
(c) **Purchasing**
(d) Production

(iv)When are the overhead variances recorded in a standard costing system?
(a) When the cost of goods sold is recorded
(b) **When the factory overhead is applied to work-in-process**
(c) When the goods are transferred out of work-in-process
(d) when direct labour is recorded.

(v) The comparison of actual results with expected results is referred to as
(a) **Feedback**
(b) Controlling
(c) a & b
(d) None of these.

(vi) An example of long period budget is…..
(a) **R & D budget**
(b) Master budget
(c) Sales budget
(d) Personnel budget

(b) Match the statement under Column I with the most appropriate statement under Column II (you may opt to write only the numeral and the matched alphabet instead of copying the contents into the answer book): **1X4=4**

	Column I		Column II
1	Learning Curve	(A)	Negotiated Pricing
2	Zero Base Budgeting	(B)	Human Phenomenon
3	Transfer Price	(C)	Fixed Costs are charged to Cost of Production
4	Absorption Costing	(D)	Discretionary Cost

Answer:

1(B)	2(D)	3 (A)	4(C)

(c) Statement whether the following statement are True or False (You may write only the Roman numeral and whether True or False without Copying the Statement into answer book); **1X4=4**

(i)A flexible budget is prepared for more than one level of activity.
(ii) Difference between the standard cost and actual cost is called as variance.
(iii) The objective of uniform costing is wealth maximization.
(iv) Standard formats are used in management accounting for preparation of reports.

Answer:

1(True)	2(True)	3 (True)	4(False)

Section II

2(a) A factory for a production of 1,50,000 units. The variable cost per unit is 28 and fixed cost is 4 per unit. The company fixes its selling price to fetch a profit of 15 % on cost.

(i) What is breakeven point

(ii) What is the profit volume ratio

(iii)If it reduces its selling price by 5% how does the revised selling price affect the BEP and the volume ratio.

(iv)If a profit increase of 10% is desired more than the budget what should be the sale at the reduced prices?

[6]

(b) The following results of a company for the last years are as follows:

Period	Sales(₹)	Profit(₹)
2017	3,00,000	40,000
2018	3,40,000	50,000

you are required to calculate:

(i)P/V ratio

(ii)Fixed cost

(ii) Profit when sales are 5,00,000

(iv)Margin of safety at a pofit of 1,00,000

[6]

Answer: 2(a)

	(₹)
Variable Cost	28
Fixed Cost	4
Total Cost	32
Add:Profit @ 15%	4.80
Selling Price	36.80

Sl.No	Particulars	(₹)
I	Selling Price	36.80
II	Variable Cost	28.00
III	Contribution (I- II)	8.80
IV	Total Contribution (1,50,000 X8.80)	13,20,000
V	Fixed Cost (1,50,000 X 4)	6,00,000
VI	Profit	7,20,000

(i) BEP =6,00,000/8.80=68,182 units(approx)

(ii) P/V ratio (8.80/36.80)23.91 %

(iii)

Sl No	Particulars	(₹)
I	Selling price (36.80 X95%)	34.96
II	Variable cost	28.00
III	Contribution	6.96
IV	P/V ratio (6.96/34.96)X100	19.91%
V	Breakeven point=6,00,000/6.96	86,207

(iv)Desired profit =7,20,000 X(110/100)=₹ 7,92,000
Sales required =[(6,00,000+7,92,000)/6.96] X 34.96= ₹ 69,92,000

(b)
(i) P/V ratio =Change in profit/Change in sales)X100
=(10,000/40,000) X100 =25%

(ii)Fixed Cost =(Sales X P/V ratio)- Profit
=(3,00,000 X 25%)-40,000=₹ 35,000

(iii)Profit at sales 5,00,000 =(Sales X P/V ratio)-Fixed Cost =(5,00,000 X25%)-35,000
=1,25,000 - 35,000 =₹90,000

(iv)Margin of safety at profit of ₹1,00,000 = Profit/PV ratio =1,00,000/25%
=₹ 4,00,000

3(a) The Standard labour complenment and the actual labour complement engaged in a week for a job are as under

a)Standard no. of workers in the gang	32	24	12
b) Standard wage rate per hour ()	6	4	2
c)Actual no. of workers employed in the gang during the week	56	36	8
d)Actual wage rate per hour()	8	6	4

During the 40 hour working week the gang produced 1,800 standard labor hours work.Calculate
i) Labour Efficiency Variance
ii)Mix Variance
iii)Rate Wages Variance
iv)Labour Cost Variance **[6]**

(b) X ltd Uses budgetary control and standard costing system .The following data are available:

Product	Budgeted		Actual	
	Units to be Sold	Sales value()	units sold	Sales Value()
A	100	1,200	100	1,100
B	50	600	50	600
C	100	900	200	1,700
D	75	450	50	300
	325	3,150	400	3,700

Calculate:
(i) Sales Volume Variance
(ii) Sales Price variance
(iii) Sales Variance **[6]**

Answer: 3(a)

Analysis of Given Data

	Standard Data			**Actual Data**		
	Hours	**Rate(₹)**	**Value(₹)**	**Hours**	**Rate(₹)**	**Value(₹)**
Skilled	1280	3	3,840	1,120	4	4,480
Semi Skilled	480	2	960	720	3	2,160
Unskilled	240	1	240	160	2	320
	2,000		5,040	2,000		6,960

Computation of Required Values

	SRSH(1)(₹)	SRRSH(2)(₹)	SRAH(3)(₹)	ARAH(4)(₹)
Skilled	3 x1,152 =3,456	3,840	3x1,120=3,360	4,480
Semi Skilled	2 x432 =864	960	2x720=1,440	2,160
Unskilled	1x216=216	240	1x160 =160	320
	4,536	5,040	4,960	6,960

Computation of SH

SH = $\left(\frac{SHforthatwor\,ker}{SHforallthewor\,ker}\right) xAQ$ for that worker

For Skilled worker= $\left(\frac{1,280}{2,000}\right) x1,800 = 1,152$

For Semi Skilled worker = $\left(\frac{480}{2,000}\right) x1,800 = 432$

For Unskilled worker = $\left(\frac{240}{2,000}\right) x1,800 = 432$

Where
(1) SRSH = Standard Cost of Standard Labour = ₹ 4,536
(2) SRRSH = Revised Standard Cost of Labour =₹ 5,040
(3) SRAH = Standard Cost of Actual Labour =₹ 4,960
(4) ARAH = Actual Cost of Labour = ₹ 6,960
Computation of Labour Variances:
a. Labour Sub-efficiency Variance = (1) – (2) =₹ 504 (A) [₹ (4,536 – 5,040)]
b. Labour Mix or gang Variance = (2) – (3) = ₹ 80 (F) [₹ (5,040 – 4,960)]
c. Labour efficiency Variance = (1) – (3) = ₹ 424 (A) [₹ (4,536 – 4,960)]
d. Labour Rate Variance = (3) – (4) = ₹2,000 (A) [₹ (4,960 – 6,960)]
e. Labour Cost Variance = (1) – (4) = ₹ 2,424 (A) [₹ (4,536 – 6,960)]

3(b)

SV_1 – Actual Sales realization given = 3,700
SV_2 – Actual Sales at Standard price

Products	Units Sold	Standard Price()	Amount()
A	100	12	1,200
B	50	12	600
C	200	9	1,800
D	50	6	300
	400		3,900

SV_3- Budgeted Sales = 3,150
(i)Sales Price Variance = SV_1- SV_2 = ₹ 3,700 - ₹ 3,900=₹ 200(A)
(ii) Sales Volume Variance = SV_2 – SV_4 =₹ 3,900 - ₹ 3,150 =₹750(F)
(iii) Sales Variance = SV_1- SV_4 =₹ 3,700 -₹3,150=₹ 200(A)

4(a) A glass Manufacturing company requires you to calculate and present the budget for the next year from the following information.

Sales: Toughened glass	₹ 3,60,000
Bent toughened glass	₹ 6,00,000
Direct material cost	60 % of sales
Direct wages	20 workers @ ₹ 180 p.m
Factory Overheads:	
Indirect Labour: Works Manager	₹ 600 per month
Foreman	₹ 480 per month
Stores and spares	$2^1/_2$ on sales

Depreciation on machinery	₹ 14,400
Light and Power	₹ 6,720
Repairs and maintenance	₹ 9,600
other sundries	10 % on direct wages
Administration, Selling and distribution expenses	₹ 16,800 per year

[8]

(b) A firm received an order to make and supply eight units of standard product which involves intricate labour operations. The first unit was made in 10 hours.It is understood that this type of operations is subject to 80% learning rate.The workers are getting a wages rate of 12per hour.

(i) What is the total time and labour cost required to execute the above order?

(ii) If a repeat order of 24 units is also received from the same customer.what is the labour cost necessary. **[4]**

Answer:4(a)

Master Budget Showing Profit for Next Year

	()	()
Sales		
Toughened glass	3,60,000	
Bent toughened glass	6,00,000	9,60,000
Less: Cost		
Material @ 60%	5,76,000	
Direct Wages (20 X 180 X12)	43,200	6,19,200
Gross Profit		3,40,800
Less :Factory Overheads:		
Indirect Labour : Works Manager's Salary [600 X 12]=7,200		
Foreman's Salary [480 X12] =5,760	12,960	
Stores and spares	24,000	
Depreciation on machinery	14,400	
Light and Power	6,720	
Repairs and maintenance	9,600	
other sundries	4,320	
Administration, Selling and distribution expenses	16,800	88,800
Profit		2,52,000

(b) 80% Learning Curve results are given below

Production (Units)	Cumulative Average Time (hours)	Total Time(hours)
1	10	10

2	8	16
4	6.4	25.6
8	5.12	40.96
16	4.096	65.54
32	3.2768	104.86

Labour time required for first eight units = 40.96 hours
Labour cost required for 8 units = 40.96 hours × ₹ 12/hr = ₹ 491.52
Labour time for 32 units = 104.86 hours
Labour time for first eight units = 40.96 hours
Labour time required for 2nd order for 24 units = 63.90 hours
Labour cost for 24 units = 63.90 hours × ₹ 12/hr = ₹ 766.80

5.Write short notes on any three out of the following : 4X3=12

(i) Zero Based Budgeting
(ii) Principal Budget Factor
(iii) Transfer Pricing
(iv) Factors Affecting Learning Curve

Answer:

5(i) Zero based budgeting starts with the premise that the budget for next period is zero so long the demand for a function, process, project or activity is not justified for each rupee from the first rupee spent. The assumptions are that without such a justification no spending will be allowed. The burden of proof thus shifts to each manager to justify why the money should be spent at all and to indicate what would happen if the proposed activity is not carried out and no money is spent. It differs from the conventional system of budgeting mainly it starts from scratch or zero and not on the basis of trends or historical levels of expenditure. In the customary- budgeting system, the last year's figures are accepted as they are, or cut back or increases are granted. The first step in the process of zero base budgeting is to develop an operational plan or decision package. A decision package identifies and describes a particular activity. For this purpose, each package should give details of costs, returns, purpose, expected results, the alternatives available and a statement of the consequences if the activity is reduced or not performed at all.

Zero-base Budgeting is more suitably applicable to discretionary- cost areas. These costs may have no relation to volume or activity and generally arise as a result of management policies. Where standards are determinable, those costs associated with the inputs should be controlled through the use of standard costing

(ii) Principal Budget Factor: Budgets cover all the functional areas of the organization. For the effective implementation of the budgetary system, all the functional areas are to be considered which are interlinked. Because of these interlinks, certain factors have the ability to affect all other budgets. Such factor is known as principle budget factor.

Principal Budget factor is the factor the extent of influence of which must first be assessed in order to ensure that the functional budgets are reasonably capable of fulfillment. A principal budget factor may be lack of demand, scarcity of raw material, non-availability of skilled labour,

inadequate working capital etc. If for example, the organization has the capacity to produce 2500 units per annum. But the production department is able to produce only 1800 units due to non-availability of raw materials. In this case, non-availability of raw materials is the principal budget factor (limiting factor). If the sales manger estimates that he can sell only 1500 units due to lack of demand. Then lack of demand is the principal budget factor. This concept is also known as key factor, or governing factor. This factor highlights the constraints with in which the organization functions.

(iii) Transfer Pricing:

A 'Transfer Price' is that notional value at which goods and services are transferred between divisions in a decentralized organization. Transfer Pricing has become necessary in highly decentralized companies where number of divisions/departments are created as a part and parcel of the decentralized organization. Transfer Pricing is one of the tools in the hands of management for measuring the performance of divisions or departments.

Transfer Prices are normally set for intermediate products, which are goods and services that are supplied by the selling division to the buying division. In large organization, each division is treated as a 'profit center' as a part and parcel of decentralization. Their profitability is measured by fixation of 'transfer price' for inter-divisional transfers. The transfer Price can have a big impact on the division's performance and hence a lot of care is to be taken in the fixation of the same. The transfer Price should motivate the divisional managers to maximize the profitability of their divisions. It should allow 'Goal Congruence', which means that the objectives of divisional managers match with those of the organization.

(iv) Factors Affecting Learning Curve

1. While pricing for bids, general tendency is to set up a very high initial labour cost so as to show a high learning curve. This should the learning curve useless and sometimes misleading.
2. The method of production, i.e. whether it is labour oriented or machine oriented influences the slop of the learning.
3. When labour turnover rate is high management has to train new workers frequently. In such situations the company may never reach its maximum efficiency potential. One of the important requisites of the learning curve concept is that there should be uninterrupted flow of work. The fewer the interruptions, the grater will be the improvement in efficiency.
4. Changes in a product or in the methods of production, designs, machinery, or the tools/used affect the slope of the learning curve. All these have the effect of starting learning a fresh because of new conditions If the changes are frequent, there may be no learning at all.
5. Also other factors influencing the learning curve are labour strikes, lock outs and shut downs due to other cause also/affect the learning curve. In each such case there is interruption in the progress of learning.

As far as possible the effects of above factors should be carefully separated from the data used to establish the curve. The effects of these factors must also be separated from the actual costs used to measure the performance. Unless this is done analysis of the projected cost or the actual cost will not be meaningful.

Part B(Financial Management)
Section III

6. Answer the following questions:

(a) Choose the correct answer from the given four alternatives: **[1×6=6]**

(i) The capital of PQR Limited is as follows :
9% preference shares of ₹10 each ₹3,00,000
Equity shares of ₹10 each ₹8,00,000
Following further information is available:
Profit after Tax ₹2,70,000
Equity Dividend paid 20%
The market price of equity shares ₹40 each
Then the EPS is:
(A) **₹3.04**
(B) ₹10.00
(C) ₹2.84
(D) None of the above

Answer:

EPS = (PAT – Preference Dividend)/ No. of Equity Shares
=(₹2,70,000 – ₹27,000) / 80,000 = ₹3.04

(ii) _____ _____may be defined as a % increase in EPS associated with a given percentage increase in the level of EBIT.
(A) Operating Leverage
(B) **Financial Leverage**
(C) Combined Leverage
(D) None of the above

(iii) Which of the following is/are important theory/theories of capital structure?
(A) Net Income Approach
(B) Net Operating Income Approach
(C) The Traditional view
(D) All of the above

(iv) _____ _____ are book costs relating to the past
(A) Historical Costs
(B) Future Costs
(C) Composite Cost
(D) Average Cost

(v) Computation of cost capital of a firm involveswhich of the following steps:
(A) Computation of cost of specific sources of a capital, viz., debt, preference capital, equity and retained earnings;
(B) Computation of weighted average cost of capital
(C) Both (A) and (B)
(D) None of the above

(vi) From the following select one factor which is not determinants of dividend policy of a company.

(A) Inflation
(B) Owner consideration
(C) Capital market conditions
(D) **None of the above**

(b) Match the statement under Column I with the most appropriate statement under Column II (you may opt to write only the numeral and the matched alphabet instead of copying the contents into the answer book): **[1×4=4]**

Column I	Column II
(i) Unsecured Promissory Note	(a) Weighted average cost of capital
(ii) Operating Lease	(b) Zero Based Budgeting
(iii) Budgeting starts from scratch	(c) Service Lease
(iv) Composite cost	(d) Commercial Paper (CP)

(c) Statement whether the following statement are True or False (You may write only the Roman numeral and whether True or False without Copying the Statement into answer book); **[1×4=4]**

(i) According to this model founded by Myron Gordon, the dividend policy of the company has an impact on share valuation.
(ii) Retained earnings refer to the distributed profits of a firm.
(iii) Pay-back Period is the number of years to recover the original capital invested in a project.
(iv) Current ratios are used for measuring the short term solvency of an entity.

Answer:

(i) True;
(ii) False;
(iii) True
(iv) True.

Section IV

Answer any three Question from Q. No 7, 8, 9 and 10. Each Question carries 12 Marks.

7.(a) The following accounting information and financial ratios of Bhalu Ltd. relate to the year ended 31st March, 2015:

Inventory Turnover Ratio (considering cost of goods sold)	6 times
Creditors Turnover Ratio	10 times
Debtors Turnover Ratio	12 times
Current Ratio	2.4
Gross Profit Ratio	25%

Total sales ₹60 lakhs; cash sales 25% of credit sales; cash purchases ₹ 4,60,000; working capital ₹7,14,000; closing inventory is ₹1,60,000 more than opening inventory.
You are required to calculate:

(i) Average Inventory
(ii) Purchases
(iii) Average Debtors
(iv) Average Creditors
(v) Average Payment Period
(vi) Average Collection Period

[7]

(b) Amit Co. gives its statement of sources and utillisation of funds as under-

Source of Fund	Amount ₹	Application of Fund	Amount ₹
Equity Share Capital	0.50	Increase in working capital	1.50
Loan at 12%	2.50	Increase in Fixed Assets	1.50
Reduction on Investment	0.25	Loan as per P&L A/c	1.00
Sale of Assets	0.25		
Depreciation for the year	0.50		
Total	4.00	Total	4.00

The company current ratio at the beginning of the year was 2. The current liabilities of the company as at 1st January (beginning of the year) stood at ₹ 3 lakhs. It was disclosed that during the year, the turnover to capital employed ratio declined from 1.5 to 1.25. You are required to critically appraise the financial operations of the company during the year.

[5]

Answer: 7(a)

(i) Computation of Average Inventory:

Gross Profit =25% of ₹60,00,000 = ₹15,00,000

Cost of goods sold (COGS) =₹60,00,000 - ₹15,00,000= ₹45,00,000

Inventory Turnover Ratio =COGS/Average Inventory ₹45,00,000/Average Inventor

= 6 Average Inventory = ₹7,50,000

(ii) Computation of Purchases:
Purchases = COGS + Increase in Inventory = ₹45,00,000 + ₹1,60,000 = ₹46,60,000

(iii) Computation of Average Debtors:
Let credit sales be ₹100 then cash sales = 25% of 100 = ₹25, and total sales = ₹125

When total sales is ₹60 lakhs then credit sales = ₹60,00,000 × 100/125 = ₹48,00,000 and Cash sales = ₹12,00,000
Debtors Turnover = Net Credit Sales/Average Debtors = 12
Average Debtors = ₹48,00,000 /12 = ₹4,00,000

(iv) Computation of Average Creditors:

Credit Purchase = Purchases ₹46,60,000 – Cash purchase ₹4,60,000 = ₹42,00,000
Creditors Turnover = Credit Purchases/Average Creditors

Average Creditors = ₹42,00,000/10 = ₹4,20,000

(v) Computation of Average Payment Period:
Average Payment Period = Average Creditors × 365/Credit Purchase
=₹4,20,000 × 365/ ₹42,00,000 = 36.5 days
Or 365/Creditors Turnover = 365/10 = 36.5 days

(vi) Computation of Average Collection Period:
Average Collection Period = Average Debtors × 365/Net Credit Sales
=₹4,00,000 × 365/ ₹48,00,000 = 30.417 days
Or 365/Debtors Turnover = 365/12 = 30.417

(b) Analysis of Funds Flow Statement

1. Cash Loss during the year: There is a total loss of ₹ 1 Lakh of which Depreciation constitutes ₹ 0.50 Lakh. Hence, the balance constitutes Cash Loss either due to reduction in sales prices or volume or increase in costs and overheads. Cash Loss is not a good sign for the Company vis-a-vis Going Concern.
2. Reduction in Capital Turnover Ratio: The Capital Turnover Ratio (i.e. Sales/Capital Employed) has come down from Capital Employed 1.50 to 1.25. The higher the turnover ratio, the better it is for the Firm. Fall in Capital Employed Turnover Ratio represents deterioration of activity levels and Sales, and also overcapitalization and idle funds with the Firm.
3. Mismatch of funds: Increase in Working Capital (a short-term application) has been financed out of long-term and permanent sources of funds (i.e. Share Capital, Loans at 12%, Sale of Investments and Assets). This is not a prudent financial practice, since there is no proper matching between long-term and short-term sources and applications.
4. Debt Equity Funding: In view of Cash Losses, the Firm should have gone in for obtaining equity funds since debt involves fixed commitment towards interest and principal. However, the Firm has obtained more Debt Funds at a cost of 12%, which may increase the Cash Losses in the subsequent years.
5. Excessive Current Assets: The Current Ratio at the start of the year was 2:1 which is a satisfactory one. However, during the year, there has been further increase in net Current Assets, which will cause a further increase in the Current Ratio. A high Current Ratio may indicate poor collection of Debtors, piling up of unsold Finished Goods, delays in production cycle and consequent increase in WIP, slow-moving Raw Materials, etc. The firm should monitor Working Capital items closely and adopt suitable techniques for maintaining a reasonable liquidity position.

8.(a) A company manufactures a small computer component. The component is sold for ₹1,000 and its variable cost is ₹700. The company sold on an average, 300 units every month in 2016-17. At present the company grants one month credit to its customers. The company plans to extend the credit to 2 months on account of which the following is expected:
Increase in sales is 25%
Increase in stock is ₹1,50,000
Increase in creditors ₹60,000
Should the company extend the credit terms if —

(A) All customers avail of the extended period of 2 months.
(B) Only new customers avail of 2 months credit, assuming that the increase in sales in due to new customers.
The company expects a minimum rate of return of 30% on its investment. (Consider debtors at sales value) [8]

(b) Following are the details regarding two companies A Ltd. and B Ltd.:

Details	A.Ltd.	B.Ltd.
Internal Rate of Return	15%	5%
Cost of equity capital	10%	10%
Earnings per share	₹8	₹8

Calculate the value of an equity share of each of these companies according to Walter's model when dividend payout ratio is 75%.
What should be each company's strategy to maximize the market value of its share? [4]

Answer:

Incremental Profit – all customers:

Particulars	Amount (₹)
Increment sales revenue 75 × 12 × 1,000	9,00,000
Less:- increased variable costs 9,00,000 × 0.70	6,30,000
Incremental contribution	2,70,000
Less:- cost of additional working capital	1,21,500
Incremental Profit	1,48,500

Workings:
(A)

(i) Present investment in debtors	300 ×12 × 700/12	₹2,10,000
(ii) Proposed investment in debtors	375 × 12 × 700/6	₹5,25,000
(iii) Additional investment in debtors	(ii) - (i)	3,15,000
Add:- increase in stock		1,50,000
Less increase in creditors		60,000
(iv) Additional working capital required		4,05,000
(v) Minimum return expected	4,05,000 × 0.30	1,21,500

(B) **Incremental Profit: New customers**

Particulars	Amount (₹)
Incremental sales revenue 75 × 12 × 1,000	9,00,000
Less:- increased variable costs 9,00,000 × 0.70	6,30,000
Incremental contribution	2,70,000
Less:- cost of addition working capital	58,500
Incremental Profit	2,11,500

Additional investment in debtors	75 ×12 ×700/6	₹1,05,000
Add increase in stock		1,50,000

		2,55,000
Less increase in creditors		60,000
Additional working capital required		1,95,000
Minimum return expected	1,95,000 × 0.30	58,500

(b)When DP ratio is 75%, Dividend per share is 75% of ₹ 8 = ₹6 per share

Value of an equity share $= \frac{[D+(r/k)\times(E-D)]}{k}$

Computation of value per share

Particulars	A Ltd.	B Ltd.
When D/P ratio 75% =	[6 +(0.15 / 0.10)× 2]/ 0.10 =₹90	[6 +(0.05 / 0.10)× 2]/ 0.10 =₹70

Inference:

A Ltd: A Ltd. is treated as Growth firm. IRR exceeds cost of capital. When (r) retained earnings exceeds capitalisation rate (k) the market value per share increases and D/P ratio decreases. The market value per share will be maximum when it retains all its earnings without distributing any dividend. The optimum payment ratio is 0

B Ltd: B Ltd; is treated as a decline firm. IRR is less than cost of capital. In case of declining firms, where r is less than k, the market value per share increases as D/P ratio increases. It is beneficial to the company if it distributes the earnings to its shareholders.

The market value per share will be maximum when it declares 100% dividend without retaining its earnings optimum D/P ratio is 100% .

9.(a) Dharma Limited has obtained funds from the following sources, the specific cost are also given against them:

Sources of funds	Amount (₹)	Cost of capital
Equity shares	30,00,000	15%
Preference shares	8,00,000	8%
Retained Earnings	12,00,000	11%
Debenture	10,00,000	9%(before tax)

You are required to calculate the weighted average cost of capital assuming that corporate tax rate is 30%. **[5]**

(b) Annu Ltd. is examining two mutually exclusive investment proposals. The management uses Net Present Value Method to evaluate new investment proposals. Depreciation is charged using Straight-line Method. Other details relating to these proposals are:

Particulars	Proposal X	Proposal Y
Annual Profit before tax (₹)	13,00,000	24,50,000
Cost of the Project (₹)	90,00,000	180,00,000
Salvage Value (₹)	1,20,000	1,50,000
Working Life	4 years	5 Years

Cost of capital	10%	10%
Corporate Tax Rate	30%	30%

The present value of ₹1 at 10% discount rates at the end of first, second, third, fourth and fifth year are 0.9091; 0.8264; 0.7513; and 0.6209 respectively.

You are required to advise the company on which proposal should be taken up by it. **[7]**

Answer: 9(a)

Computation of WACC

Component	₹	%	Individual Cost	WACC
Equity Shares	30,00,000	50.00%	Ke (Given) =	7.50%
Preference Shares	8,00,000	13.33%	Kp (Given) =	1.07%
Retained Earnings	12,00,000	20.00%	Kr (Given) =	2.20%
Debentures	10,00,000	16.67%	Kd =9% x (100% - 30%) = 6.30%	1.05%
Total	60,00,000	100.00%	WACC = Ko	11.82%

(b) Calculation of Annual Cash Inflow and Present Values:

Particulars	Proposal X ₹	Proposal Y ₹
Annual Profit Before Tax	13,00,000	24,50,000
Less: tax @ 30%	3,90,000	7,35,000
Annual Profit After Tax	9,10,000	17,15,000
Add: Depreciation (Annual) Proposal X: (90,00,000 -1,20,000)/4 Proposal Y: (1,80,00,000-1,50,000)/5	22,20,000 -	35,70,000
Annual Cash inflow	31,30,000	52,85,000
P. V. of ₹1 for 1 to 4 year	3.1698	-
P. V. of ₹1 for 1 to 5 year	-	3.7907
Present value of Annual Cash Inflows	99,21,474	2,00,33,850
Add: Present value of salvage value: Proposal X: 1,20,000 × 0.683 Proposal Y: 1,50,000 × 0.6209	81,960 -	-93,135
Total Present value	1,00,03,434	2,01,26,985
Less: Initial outflow	90,00,000	1,80,00,000
Net Present Value	10,03,434	21,26,985

Advice: Proposal Y should be accepted as it gives higher net present value.

10. Write short note on any three of the following: **[3×4=12]**

(a) Limitations of Fund Flow Statement;
(b) Factoring;
(c) Features of Appropriate Capital Structure;

(d) Importance of Cost of Capital.

Answer :10

(a) Limitations of Fund Flow Statement:

Following are the limitations of Fund Flow Statement:

1. Funds Flow Statement is not a substitute of Income Statement or a Balance Sheet.
2. This statement lacks originality. It is simply rearrangement accounting data.
3. It **shows only either increase in working capital or decrease** in working capital. But, the effect of transactions between current assets and current liabilities are not reflected in the funds flow statement.
4. It **does not provide information about changes in cash** which are more important and relevant than working capital.
5. The current year **funds flow statement is used for current year only** and not useful for future operation and decision making purpose also.

(b) Factoring:

Factoring, as a fund based financial service, provides resources to finance receivables as well as facilitates the collection of receivables. It is another method of raising short-term finance through account receivable credit offered by commercial banks and factors. A commercial bank may provide finance by discounting the bills or invoices of its customers. Thus, a firm gets immediate payment for sales made on credit. A factor is a financial institution which offers services relating to management and financing of debts arising out of credit sales. Factoring is becoming popular all over the world on account of various services offered by the institutions engaged in it. Factors render services varying from bill discounting facilities offered by commercial banks to a total take-over of administration of credit sales including maintenance of sales ledger, collection of accounts receivables, credit control and protection from bad debts, provision of finance and rendering of advisory services to their clients.

Factoring, may be on a recourse basis, where the risk of bad debts is borne by the client, or on a non-recourse basis, where the risk of credit is borne by the factor.

At present, factoring in India is rendered by only a few financial institutions on a recourse basis.

The most critical fall outs of factoring include — (i) the high cost of factoring as compared to other sources of short-term finance, (ii) the perception of financial weakness about the firm availing factoring services, and (iii) adverse impact of tough stance taken by factor, against a defaulting buyer, upon the borrower resulting into reduced future sales.

(c) Features of Appropriate Capital Structure:

A capital structure will be considered to be appropriate if it possesses following features:

(i) Profitability: The capital structure of the company should be most profitable. The most profitable capital structure is one that tends to minimize cost of financing and maximize earnings per equity share.

(ii) Solvency: The pattern of capital structure should be so devised as to ensure that the firm does not run the risk of becoming insolvent. Excess use of debt threatens the solvency of the company. The debt content should not, therefore, be such that which increases risk beyond manageable limits.

(iii) Flexibility: The capital structure should be flexible to meet the requirements of changing conditions. Moreover, it should also be possible for the company to provide funds whenever needed to finance its profitable activities.

(iv) Conservatism: The capital structure should be conservative in the sense that the debt content in the total capital structure does not exceed the limit which the company can bear. In other words, it should be such as is commensurate with the company's ability to generate future cash flows.

(v) Control: The capital structure should be so devised that it involves minimum risk of loss of control of the company.

(d) Importance of Cost of Capital:

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

(i) 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.

(ii) 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.

(iii) 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.

(iv) Other financial decisions: Cost of capital is also useful in making such other financial decisions as dividend policy, capitalization of profits, making the rights issue, etc.