PAPER – 4 : COST ACCOUNTING AND FINANCIAL MANAGEMENT

All questions are compulsory.

Working notes should form part of the answer wherever appropriate,
suitable assumptions should be made.

Question 1

Answer any five of the following:

(i) Using Taylor's differential piece rate system, find the earning of A from the following particulars:

Standard time per piece	12 minutes
Normal rate per hour (in a 8 hours day)	Rs. 20
A produced	37 Units

(ii) Briefly discuss, how the synergetic effect help in reduction in costs.

(iii) Explain in brief the explicit cost with examples.

(iv) Explain briefly the conditions when supplementary rates are used.

(v) The average annual consumption of a material is 18,250 units at a price of Rs. 36.50 per unit. The storage cost is 20% on an average inventory and the cost of placing an order is Rs. 50. How much quantity is to be purchased at a time?

(vi) Enumerate the various methods of Time booking. (5 × 2 = 10 Marks)

Answer

(i) Standard output per day $\left(\frac{8 \times 60}{12}\right) = 40\,\text{units}$

Actual output = 37 units

Efficiency percentage $\frac{37}{40} \times 100 = 92.5\%$

Under this method lower rate is 83% of the normal piece rate and is applicable if efficiency of worker is below 100%.

Earning rate per unit = 83% of $\frac{20}{5*}\,\text{or } 3.32\text{ per unit}$

Earning = 37 × 3.32 = Rs. 122.84

* In one hour, production will be = $\frac{60\,\text{minutes}}{\text{standard time per peice, i.e. 12 minutes}} = 5\,\text{units}$

(ii) Two or more products are produced and managed together.

The result of combined efforts are higher than sum of the results of individual products.

Analysis of synergetic effect is helpful in cost control.

(iii) Out of pocket cost, involving immediate payment of Cash. Salaries, Wages, Postage and Telegram, Printing and Stationery, Interest on Loan are some examples of Explicit Costs.

(iv) When the amount of under absorbed and over absorbed overhead is significant or large, because of differences due to wrong estimation, then the cost of product needs to be adjusted by using supplementary rates (under and over absorption/actual overhead) to avoid misleading impression.

(v) Quantity to be purchased

$$\sqrt{\frac{2\times 18{,}250\times 50}{20\%\text{ of }36.50}}=\sqrt{2{,}50{,}000}=500\text{ units}$$

(vi) The various methods of time booking are:

(a) Job ticket.

(b) Combined time and job ticket.

(c) Daily time sheet.

(d) Piece work card.

(e) Clock card.

Question 2

A company has three production departments (M_1, M_2 and A_1) and three service department, one of which Engineering service department, servicing the M_1 and M_2 only. The relevant informations are as follows:

	Product X	Product Y
M_1	10 Machine hours	6 Machine hours
M_2	4 Machine hours	14 Machine hours
A_1	14 Direct Labour hours	18 Direct Labour hours

The annual budgeted overhead cost for the year are

	Indirect Wages	Consumable Supplies
	(Rs.)	(Rs.)
M_1	46,520	12,600
M_2	41,340	18,200
A_1	16,220	4,200
Stores	8,200	2,800

Engineering Service	5,340	4,200
General Service	7,520	3,200

	Rs.	
– Depreciation on Machinery	39,600	
– Insurance of Machinery	7,200	
– Insurance of Building	3,240	(Total building insurance cost for M_1 is one third of annual premium
– Power	6,480	
– Light	5,400	
– Rent	12,675	(The general service deptt. is located in a building owned by the company. It is valued at Rs. 6,000 and is charged into cost at notional value of 8% per annum. This cost is additional to the rent shown above)

– The value of issues of materials to the production departments are in the same proportion as shown above for the Consumable supplies.

The following data are also available:

Department	Book value Machinery (Rs.)	Area (Sq. ft.)	Effective H.P. hours %	Production Direct Labour hour	Capacity Machine hour
M_1	1,20,000	5,000	50	2,00,000	40,000
M_2	90,000	6,000	35	1,50,000	50,000
A_1	30,000	8,000	05	3,00,000	
Stores	12,000	2,000	–		
Engg. Service	36,000	2,500	10		
General Service	12,000	1,500	–		

Required:

(i) Prepare a overhead analysis sheet, showing the bases of apportionment of overhead to departments.

(ii) Allocate service department overheads to production department ignoring the apportionment of service department costs among service departments.

(iii) Calculate suitable overhead absorption rate for the production departments.

(iv) Calculate the overheads to be absorbed by two products, X and Y.

(6 + 4 + 3 + 2 = 15 Marks)

Answer

(i) Summary of Apportionment of Overheads

(Rs.)

Items	Basis of Apportionment	Total Amount	Production Deptt.			Service Deptt.		
			M_1	M_2	A_1	Store Service	Engineering Service	General Service
Indirect wages	Allocation given	1,25,140	46,520	41,340	16,220	8,200	5,340	7,520
Consumable stores	Allocation given	45,200	12,600	18,200	4,200	2,800	4,200	3,200
Depreciation	Capital value of machine	39,600	15,840	11,880	3,960	1,584	4,752	1,584
Insurance of Machine	Capital value of machine	7,200	2,880	2,160	720	288	864	288
Insurance on Building	$\frac{1}{3}$ to MI Balance area basis	3,240	1,080	648	864	216	270	162
Power	HP Hr%	6,480	3,240	2,268	324	–	648	–
Light	Area	5,400	1,080	1,296	1,728	432	540	324
Rent	Area	12,675	2,535	3,042	4,056	1,014	1,268	760
Rent of general service	Direct 8% of 6,000	480	–	–	–	–	–	480
Total		2,45,415	85,775	80,834	32,072	14,534	17,882	14,318

(ii) Allocation of service departments overheads

Service Deptt.	Basis of Apportionment	Production Deptt.			Service Deptt.		
		M_1	M_2	A_1	Store Service	Engineering Service	General Service
Store	Ratio of consumable value (126 :182 : 42)	5,232	7,558	1,744	(14,534)	–	–
Engineering service	In Machine hours Ratio of M_1 and M_2 (4 : 5)	7,948	9,934	–	–	(17,882)	–
General service	LHR Basis 20 : 15 : 30	4,406	3,304	6,608	–	–	(14,318)
Production Department allocated in (i)		85,775	80,834	32,072			
Total	2,45,415	1,03,361	1,01,630	40,424			

(iii) Overhead Absorption rate

	M_1	M_2	A_1
Total overhead allocated	1,03,361	1,01,630	40,424
Machine hours	40,000	50,000	–
Labour hours	–	–	3,00,000
Rate per MHR	2.584	2.033	
Rate per Direct labour	–	–	.135

(iv) Statement showing overhead absorption for Product X and Y

Machine Deptt.	Absorption Rate	Product X		Product Y	
		Hours	Rs.	Hours	Rs.
M_1	2.584	10	25.84	6	15.50
M_2	2.033	4	8.13	14	28.46
A_1	.135	14	.54	18	2.43
			34.51		46.39

Question 3

(a) AKP Builders Ltd. Commenced a contract on April 1, 2005. The total contract was for Rs. 5,00,000. Actual expenditure for the period April 1, 2005 to March 31, 2006 and estimated expenditure for April 1, 2006 to December 31, 2006 are given below:

	2005-06 (Actuals) Rs.	2006-07 (9 months) (Estimated) Rs.
Material Issued	90,000	85,750
Labour : Paid	75,000	87,325
Outstanding at the end	6,250	8,300
Plant	25,000	–
Sundry Expenses : Paid	7,250	6,875
Prepaid at the end	625	–
Establishment charges	14,625	–

A part of the material was unsuitable and was sold for Rs. 18,125 (Cost being Rs. 15,000) and a part of plant was scrapped and disposed of for Rs. 2,875. The value of plant at site on 31 March, 2006 was Rs. 7,750 and the value of material at site was Rs. 4,250. Cash received on account to date was Rs. 1,75,000, representing 80% of the work certified. The cost of work uncertified was valued at Rs. 27,375.

The contractor estimated further expenditure that would be incurred in completion of the contract:

- ♦ The contract would be completed by 31st December, 2006.
- ♦ A further sum of Rs. 31,250 would have to be spent on the plant and the residual value of the pant on the completion of the contract would be Rs. 3,750.
- ♦ Establishment charges would cost the same amount per month as in the previous year.
- ♦ Rs. 10,800 would be sufficient to provide for contingencies.

Required:

Prepare Contract account and calculate estimated total profit on this contract. Profit transferrable to Profit and Loss account is to be calculated by reducing estimated Profit in proportion of work certified and contract price. (8 Marks)

(b) A Company produces two joint products P and Q in 70 : 30 ratio from basic raw materials in department A. The input output ratio of department A is 100 : 85. Product P can be sold at the split of stage or can be processed further at department B and sold as product AR. The input output ratio is 100 : 90 of department B. The department B is created to process product A only and to make it product AR.

The selling prices per kg. are as under:

Product P Rs. 85

Product Q Rs. 290

Product AR Rs. 115

The production will be taken up in the next month.

Raw materials 8,00,000 Kgs.

Purchase price Rs. 80 per Kg.

	Deptt. A	Deptt. B
	Rs. Lacs	Rs. Lacs
Direct materials	35.00	5.00
Direct labour	30.00	9.00
Variable overheads	45.00	18.00
Fixed overheads	40.00	32.00
Total	150.00	64.00

Selling Expenses:

	Rs. in Lacs
Product P	24.60
Product Q	21.60
Product AR	16.80

Required:

(i) Prepare a statement showing the apportionment of joint costs.

(ii) State whether it is advisable to produce product AR or not. (8 Marks)

Answer

(a) AKP Builders Ltd.

Contract Account (2005–2006)

	Particulars		Rs.		Particulars	Rs.
To	Material issued		90,000	By	Material (sold)	18,125
To	Labour	75,000		By	Plant (sold)	2,875
	Add: Outstanding	6,250	81,250	By	Plant at site	7,750
To	Plant		25,000	By	Material at site	4,250
To	Sundry Expenditure	7,250				
	Less: Pre-paid	625	6,625			
To	Establishment charges		14,625	By	Balance c/d	1,87,625
To	Profit and Loss A/c					
	(Profit on sale of material)		3,125			
			2,20,625			2,20,625
To	Balance b/d		1,87,625	By	Work in progress	
To	Balance c/d		58,500		Certified	2,18,750
					Uncertified	27,375
			2,46,125			2,46,125
To	Profit and Loss A/c*		29,960.55	By	Balance	58,500
To	Work in progress		28,539.45			
			58,500			58,500

* Profit to Profit and Loss A/c = $\text{Estimated Profit} \times \frac{\text{Work certified}}{\text{Contract price}}$

$$68{,}481.25 \times \frac{2{,}18{,}750}{5{,}00{,}000} = \text{Rs. } 29{,}960.55$$

Memorandum Contract Account (9 months)

	Particulars	Rs.	Rs.		Particulars	Rs.
To	Material			By	Contractee's A/c	5,00,000
	(90,000 + 3,125 – 18,125)	75,000				
	Add: New Addition	85,750	1,60,750			
To	Plant (25,000 – 2,875)	22,125				
	Add: New	(+) 31,250				
	Less: Closing	(–) 3,750	49,625			
To	Establishment charges	14,625				
	Add: For nine months					
	$\frac{14,625}{12} \times 9 =$	10,968.75	25,593.75			
To	Sundry Expenditure	6,625				
	Add: New	(+) 6,875				
	Previous prepaid	(+) 625	14,125.00			
To	Labour	81,250				
	Add: (87,325 – 6,250)	(+) 81,075				
	Outstanding	(+) 8,300	1,70,625			
To	Reserve for contingencies		10,800			
To	Estimated Profit		68,481.25			
			5,00,000			5,00,000

(b) Input in Deptt. 'A' 80,000 kgs.

Yield 85%

Therefore Output = 85% of 8,00,000 = 6,80,000 kgs.

Ratio of output for P and Q = 70 : 30.

Product of P = 70% of 6,80,000 = 4,76,000 kgs.

Product of Q = 30% of 6,80,000 = 2,04,000 kgs.

Statement showing apportionment of joint cost

	P	Q	Total
Product kgs.	4,76,000	2,04,000	
Selling price per kg.	Rs. 85.00	290.00	
	Rs. lakhs	Rs. lakhs	Rs. lakhs
Sales	404.60	591.60	996.20

Less: Selling expenses	24.60	21.60	46.20
Net sales	380	570	950
Ratio	40%	60%	100%

	Rs. lakhs
Raw materials (8,00,000 kgs. × Rs. 80)	640
Process cost of department 'A'	150
	790

Apportionment of Joint Cost

(In the ratio of Net Sales i.e. P : Q., 40% : 60%.

Joint Cost of 'P' = Rs. 316 lakhs

Joint Cost of 'Q' = Rs. 474 lakhs

Statement showing the profitability of further processing of product 'P' and converted into product 'AR'

Product 'AR"

Output = 90% of 4,76,000 kgs. = 4,28,400 kgs.

	Rs. lakhs
Joint costs	316.00
Cost of Department B	64.00
Selling expenses	16.80
	396.80
Sales value (Rs. 115 × 4,28,400)	492.66
Profit (492.66 – 396.80)	95.86

If 'P' is not processed profitability is as under.

	Rs. lakhs
Sales	380.00
Less: Joint expense	316.00
Profit	64.00

Further processing of product 'P' and converting into product 'AR' is beneficial to the company because the profit increaser by Rs. 31.86 lakhs (95.86 – 64.00).

Question 4

Answer any three of the following:

(i) Discuss the treatment of spoilage and defectives.

(ii) What items are generally included in good uniform costing manual?

(iii) "Operation costing is defined as refinement of Process costing." Explain it.

(iv) Enumerate the factors which cause difference in profits as shown in Financial Accounts and Cost Accounts. (3 × 3 = 9 Marks)

Answer

(i) Treatment of spoilage and defectives:

Spoilage:

Normal spoilage are included in cost either by charging the loss to the production order or charging it to production overhead. The cost of abnormal spoilage is charged to costing profit and loss account.

Defectives:

Normal defectives can be recovered	:	charged to good production
	:	charged to general overhead
	:	charged to department.

If defectives are abnormal and are due to causes beyond the control of organization then they should be charged to profit and loss account.

(ii) Uniform costing manual includes essential informations and instructions to implement accounting procedures.

(a) Introduction: It includes objects and scope of the planning.

(b) Accounting procedure and planning includes rules, and general principle to be followed.

(c) Cost accounting planning includes methods of costing, relation between cost and financial accounts and methods of integration.

(iii) Operation costing is concerned with the determination of the cost of each operation rather than the process:

- In the industries where process consist of distinct operations, the operation costing method is applied.
- It offers better control and facilitates, the computation of unit operation cost at the end of each operation.

(iv) Causes of difference:

(a) Items included in financial accounts but not in cost accounts such as:

Interest received on bank deposits, loss/profit on sale of fixed assets and investments, dividend, rent received.

(b) Items included in cost accounts on notional basis such as rent of owned building, interest on own capital etc.

(c) Items whose treatment is different in the two sets of accounts such as inventory valuation.

Question 5

Answer any five of the following:

(i) Define Modified Internal Rate of Return method.

(ii) Explain the need of debt-service coverage ratio.

(iii) Explain the term ‘Ploughing back of Profits’.

(iv) ABC Limited has an average cost of debt at 10 per cent and tax rate is 40 per cent. The Financial leverage ratio for the company is 0.60. Calculate Return on Equity (ROE) if its Return on Investment (ROI) is 20 per cent.

(v) Explain in brief the assumptions of Modigliani-Miller theory.

(vi) A person is required to pay four equal annual payments of Rs. 4,000 each in his Deposit account that pays 10 per cent interest per year. Find out the future value of annuity at the end of 4 years. (5 × 2 = 10 Marks)

Answer

(i) Modified Internal Rate of Return (MIRR): There are several limitations attached with the concept of the conventional Internal Rate of Return. The MIRR addresses some of these deficiencies. For example, it eliminates multiple IRR rates; it addresses the reinvestment rate issue and produces results, which are consistent with the Net Present Value method.

Under this method, all cash flows, apart from the initial investment, are brought to the terminal value using an appropriate discount rate(usually the cost of capital). This results in a single stream of cash inflow in the terminal year. The MIRR is obtained by assuming a single outflow in the zeroth year and the terminal cash in flow as mentioned above. The discount rate which equates the present value of the terminal cash in flow to the zeroth year outflow is called the MIRR.

(ii) Debt Service Coverage Ratio: Lenders are interested in this ratio to judge the firm’s ability to pay off current interest and installments.

$$\text{Debt service coverage ratio} = \frac{\text{Earnings available for debt service}}{\text{Interest} + \text{Instalment}}$$

Where,

Earning for debt service = Net profit

+ Non-cash operating expenses like depreciation and other amortizations

+ Non-operating adjustments like loss on sale of

+ Fixed assets + Interest on Debt Fund.

(iii) Ploughing back of Profits: Retained earnings means retention of profit and reinvesting it in the company as long term funds. Such funds belong to the ordinary shareholders and increase the net worth of the company. A public limited company must plough back a reasonable amount of profit every year keeping in view the legal requirements in this regard and its own expansion plans. Such funds also entail almost no risk. Further, control of present owners is also not diluted by retaining profits.

(iv) ROE = [ROI + {(ROI – r) × D/E}] (1 – t)

= [0.20 + {(0.20 – 0.10) × 0.60}] (1 – 0.40)

=[0.20 + 0.06] × 0.60 = 0.1560

ROE = 15.60%

(v) Assumptions of Modigliani – Miller Theory

(a) Capital markets are perfect. All information is freely available and there is no transaction cost.

(b) All investors are rational.

(c) No existence of corporate taxes.

(d) Firms can be grouped into “Equivalent risk classes” on the basis of their business risk.

(vi) $\text{FVA} = \text{A}\left(\frac{(1+\text{i})^{\text{n}}-1}{\text{i}}\right)$

$4{,}000\left(\frac{(1+.10)^{\text{n}}-1}{.10}\right)$

4,000 × 4.641 = Rs. 18,564

Future Value of Annuity at the end of 4 years = Rs. 18,564

Question 6

The Balance Sheet of JK Limited as on 31st March, 2005 and 31st March, 2006 are given below:

Balance Sheet as on (Rs. '000)

Liabilities	31.03.05	31.03.06	Assets	31.03.05	31.03.06
Share Capital	1,440	1,920	Fixed Assets	3,840	4,560
Capital Reserve	–	48	Less: Depreciation	1,104	1,392
General Reserve	816	960		2,736	3,168
Profit and Loss Account	288	360	Investment	480	384
9% Debenture	960	672	Cash	210	312
Current Liabilities	576	624	Other Current Assets		
Proposed Dividend	144	174	(including Stock)	1,134	1,272
Provision for Tax	432	408	Preliminary Expenses	96	48
Unpaid Dividend	–	18			
	4,656	5,184		4,656	5,184

Additional Informations:

(i) During the year 2005-2006, Fixed Assets with a book value of Rs. 2,40,000 (accumulated depreciation Rs. 84,000) was sold for Rs. 1,20,000.

(ii) Provided Rs. 4,20,000 as depreciation.

(iii) Some investments are sold at a profit of Rs. 48,000 and Profit was credited to Capital Reserve.

(iv) It decided that stocks be valued at cost, whereas previously the practice was to value stock at cost less 10 per cent. The stock was Rs. 2,59,200 as on 31.03.05. The stock as on 31.03.06 was correctly valued at Rs. 3,60,000.

(v) It decided to write off Fixed Assets costing Rs. 60,000 on which depreciation amounting to Rs. 48,000 has been provided.

(vi) Debentures are redeemed at Rs. 105.

Required:

Prepare a Cash Flow Statement. (15 Marks)

Answer

Cash flow Statement (31st March, 2006)

(A)	Cashflows from Operating Activities			
	Profit and Loss A/c (3,60,000 – (2,88,000 + 28,800)			43,200
	Adjustments:			
	Increase in General Reserve	1,44,000		
	Depreciation	4,20,000		
	Provision for Tax	4,08,000		
	Loss on Sale of Machine	36,000		
	Premium on Redemption of Debenture	14,400		
	Proposed Dividend	1,74,000		
	Preliminary Exp. w/o	48,000		
	Fixed Assets w/o	12,000		12,56,400
	Funds from Operation			12,99,600
	Increase in Sundry Current Liabilities			48,000
	Increase in Current Assets 12,72,000 – (11,34,000 + 28,800)			(1,09,200)
	Cash before Tax			12,38,400
	Tax paid			4,32,000
	Cash from Operating Activities			8,06,400
(B)	Cash from Investing Activities			
	Purchases of fixed assets		(10,20,000)	
	Sale of Investment		1,44,000	
	Sale of Fixed Assets		1,20,000	(7,56,000)
(C)	Cash from Financing Activities			
	Issue of Share Capital		4,80,000	
	Redemption of Debenture		(3,02,400)	
	Dividend paid		(1,26,000)	51,600
	Net increase in Cash and Cash equivalents			1,02,000
	Opening Cash and Cash equivalents			2,10,000
	Closing Cash			3,12,000

Fixed Assets Account

	Particulars	Rs.		Particulars	Rs.
To	Balance b/d	27,36,000	By	Cash	1,20,000
To	Purchases (Balance)	10,20,000	By	Loss on sales	36,000
			By	Depreciation	4,20,000
			By	Assets w/o	12,000
			By	Balance	31,68,000
		37,56,000			37,56,000

Depreciation Account

	Particulars	Rs.		Particulars	Rs.
To	Fixed Assets (on sales)	84,000	By	Balance b/d	11,04,000
To	Fixed Assets w/o	48,000	By	Profit and Loss a/c	4,20,000
To	Balance	13,92,000			
		15,24,000			15,24,000

Question 7

(a) The following details of RST Limited for the year ended 31March, 2006 are given below:

Operating leverage	1.4
Combined leverage	2.8
Fixed Cost (Excluding interest)	Rs. 2.04 lakhs
Sales	Rs. 30.00 lakhs
12% Debentures of Rs. 100 each	Rs. 21.25 lakhs
Equity Share Capital of Rs. 10 each	Rs. 17.00 lakhs
Income tax rate	30 per cent

Required:

(i) Calculate Financial leverage

(ii) Calculate P/V ratio and Earning per Share (EPS)

(iii) If the company belongs to an industry, whose assets turnover is 1.5, does it have a high or low assets leverage?

(iv) At what level of sales the Earning before Tax (EBT) of the company will be equal to zero?

(b) The turnover of PQR Ltd. is Rs. 120 lakhs of which 75 per cent is on credit. The variable cost ratio is 80 per cent. The credit terms are 2/10, net 30. On the current level of sales, the bad debts are 1 per cent. The company spends Rs. 1,20,000 per annum on administering its credit sales. The cost includes salaries of staff who handle credit checking, collection etc. These are avoidable costs. The past experience indicates that 60 per cent of the customers avail of the cash discount, the remaining customers pay on an average 60 days after the date of sale.

The Book debts (receivable) of the company are presently being financed in the ratio of 1 : 1 by a mix of bank borrowings and owned funds which cost per annum 15 per cent and 14 per cent respectively.

A factoring firm has offered to buy the firm's receivables. The main elements of such deal structured by the factor are:

(i) Factor reserve, 12 per cent

(ii) Guaranteed payment, 25 days

(iii) Interest charges, 15 per cent, and

(iv) Commission 4 per cent of the value of receivables.

Assume 360 days in a year.

What advise would you give to PQR Ltd. - whether to continue with the in house management of receivables or accept the factoring firm's offer? (8 + 8 = 16 Marks)

Answer

(a) (i) Financial leverage

Combined Leverage = Operating Leverage (OL) × Financial Leverage (FL)

2.8 = 1.4 × FL

FL = 2

Financial Leverage = 2

(ii) P/V Ratio and EPS

$$\text{P/V ratio} = \frac{C}{S} \times 100$$

$$\text{Operating leverage} = \frac{C}{C - F} \times 100$$

$$1.4 = \frac{C}{C - 2,04,000}$$

1.4 (C – 2,04,000) = C

1.4 C – 2,85,600 = C

$$C = \frac{2,85,600}{0.4}$$

C = 7,14,000

$$P/V = \frac{7,14,000}{30,00,000} \times 100 = 23.8\%$$

Therefore, P/V Ratio = 23.8%

$$EPS = \frac{\text{Profit after tax}}{\text{No. of equity shares}}$$

EBT = Sales – V – FC – Interest

= 30,00,000 – 22,86,000 – 2,04,000 – 2,55,000

= 2,55,000

PAT = EBT – Tax

= 2,55,000 – 76,500 = 1,78,500

$$EPS = \frac{1,78,500}{1,70,000} = 1.05$$

(iii) Assets turnover

$$\text{Assets turnover} = \frac{\text{Sales}}{\text{Total Assets}} = \frac{30,00,000}{38,25,000} = 0.784$$

0.784 < 1.5 means lower than industry turnover.

(iv) EBT zero means 100% reduction in EBT. Since combined leverage is 2.8, sales have to be dropped by 100/2.8 = 35.71%. Hence new sales will be

30,00,000 × (100 – 35.71) = 19,28,700.

Therefore, at 19,28,700 level of sales, the Earnings before Tax of the company will be equal to zero.

(b) In-house Decision

	Rs.
Cash discount (Rs. 90 lakhs × .60 × .02)	1,08,000
Bad debts losses (90,00,000 × .01)	90,000
Administration cost	1,20,000
Cost of funds in receivables*	1,08,750
	4,26,750

*Average collection period (10 × .6) + (60 days × .40) = 30 days

$$\text{Average investments in debtors} = \frac{90}{12} = 7.5 \text{ lakhs}$$

Cost of Bank funds $\left(\text{Rs. }7.5\times\frac{1}{2}\times.15\right)$	56,250	
Cost of Owned funds $\left(\text{Rs. }7.5\times\frac{1}{2}\times.14\right)$	52,500	
	1,08,750	

Offer Alternative

Factoring commission (Rs. 90 lakhs × .04)	3,60,000
Interest charges .88(90 lakhs – 3,60,000) = 76,03,200 × .15 × $\frac{25}{360}$	79,200
Cost of owned funds invested in receivables (90,00,000 – 76,03,200) × .14 × $\frac{25}{360}$	13,580
	4,52,780

Decision: PQR should not go for the factoring alternative as the cost of factoring is more.

Cost of In-house Decision	4,26,750
Cost of Factoring Firm	4,52,780
Net loss	(26,030)

Question 8

Answer any three of the following:

(i) Differentiate between Business risk and Financial risk.

(ii) Diagrammatically present the DU PONT CHART to calculate return on equity.

(iii) What are the main responsibilities of a Chief Financial Officer of an organisation?

(iv) Explain in brief the features of Commercial Paper. (3 × 3 = 9 Marks)

Answer

(i) Business Risk and Financial Risk

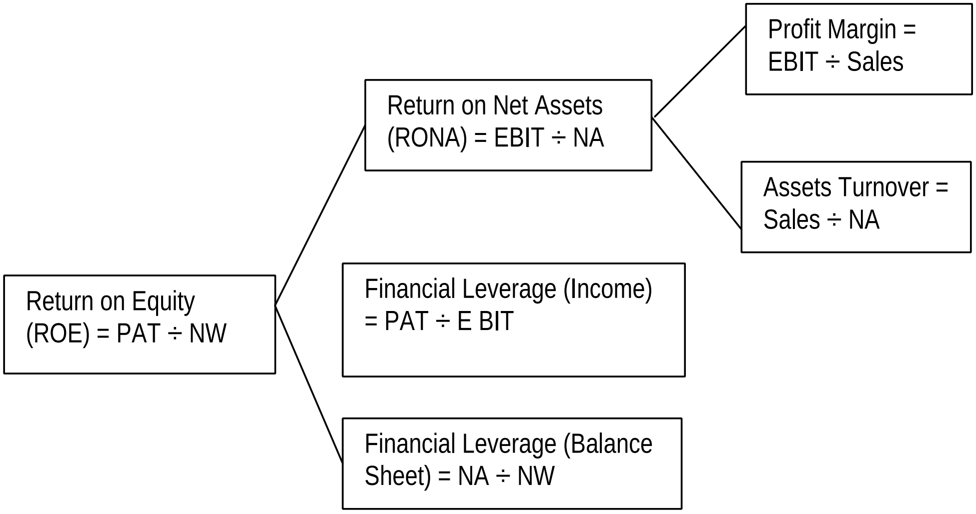
Business risk refers to the risk associated with the firm's operations. It is uncertainty about the future operating income, i.e. how well can the operating income be predicted? It can be measured by standard deviation of basic earning power ratio.

Whereas, Financial risk refers to the additional risk placed on firm's shareholders as a result of debt use in financing. Companies that issue more debt instruments would have higher financial risk than companies financed mostly by equity. Financial risk can be measured by ratios such as firm's financial leverage multiplier, total debt to assets ratio etc.

(ii) Du Pont Chart

There are three components in the calculation of return on equity using the traditional DuPont model- the net profit margin, asset turnover, and the equity multiplier. By examining each input individually, the sources of a company's return on equity can be discovered and compared to its competitors.

Return on Equity = (Net Profit Margin) (Asset Turnover) (Equity Multiplier)


Profit Margin =
EBIT ÷ Sales
Return on Net Assets
(RONA) = EBIT ÷ NA
Assets Turnover =
Sales ÷ NA
Return on Equity
(ROE) = PAT ÷ NW
Financial Leverage (Income)
= PAT ÷ E BIT
Financial Leverage (Balance
Sheet) = NA ÷ NW

Du Pont Chart

(iii) Responsibilities of Chief Financial Officer (CFO)

The chief financial officer of an organisation plays an important role in the company's goals, policies, and financial success. His main responsibilities include:

(a) Financial analysis and planning: Determining the proper amount of funds to be employed in the firm.

(b) Investment decisions: Efficient allocation of funds to specific assets.

(c) Financial and capital structure decisions: Raising funds on favourable terms as possible, i.e., determining the composition of liabilities.

(d) Management of financial resources (such as working capital).

(e) Risk Management: Protecting assets.

(iv) Features of Commercial Paper (CP)

A commercial paper is an unsecured money market instrument issued in the form of a promissory note. Since the CP represents an unsecured borrowing in the money market, the regulation of CP comes under the purview of the Reserve Bank of India which issued guidelines in 1990 on the basis of the recommendations of the Vaghul Working Group. These guidelines were aimed at:

(i) Enabling the highly rated corporate borrowers to diversify their sources of short term borrowings, and

(ii) To provide an additional instrument to the short term investors.

It can be issued for maturities between 7 days and a maximum upto one year from the date of issue. These can be issued in denominations of Rs. 5 lakh or multiples therefore. All eligible issuers are required to get the credit rating from credit rating agencies.