PAPER – 20: FINANCIAL ANALYSIS & BUSINESS VALUATION

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 C	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
	SYNTHESIS How you are expected to utilize the information gathered to reach an optimum conclusion by a process of reasoning	Discuss	Examine in detail by argument
		Interpret	Translate into intelligible or familiar terms
		Decide	To solve or conclude
	EVALUATION How you are expected to use your learning to evaluate, make decisions or recommendations	Advise	Counsel, inform or notify
		Evaluate	Appraise or asses the value of
		Recommend	Propose a course of action

Paper – 20: Financial Analysis & Business Valuation

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

This paper contains 4 questions, representing two separate sections as prescribed under syllabus 2012. All questions are compulsory, subject to the specific guidance/ instructions stated against every question. All workings, wherever necessary, must form a part of your answer. Assumptions, if any, should be clearly stated.

Question No. 1. (Answer **all** questions. Each question carries **10 marks**)

1(a). PQ Inc. currently exports 500 calculators per month to UAE @ $ 70 per piece. The variable cost per calculator is $40. There is a proposal to establish a manufacturing plant in UAE, for which the company decided to make an equity investment of $1 million, half of which would represent working capital and the balance is fixed assets. The company would sell the plant to a local entrepreneur for a sum of $1 million at the end of 5 years and the Govt. of UAE would repay the company $ 5,00,000 for working capital. PQ Inc. will sell its calculators at $50 per unit in the UAE. The total cost of local managers and materials would be $15 per calculator. Other materials would be purchased from the parent company at $10 per unit and the parent company would receive a direct contribution to overhead variable costs @ $5 per unit sold.

The company expects to sell 12,000 calculators per annum. The fixed assets are to be depreciated on a straight-line basis over a five-year period. The company will have to pay income-tax at 50 per cent on profits. The current exchange rate is 10 UAE dinars per dollar and is expected to stay the same for the next five years. There is no restriction on cash flow repatriation.

(i) Determine the NPV of the project at 10 per cent.

(ii) PQ Inc. has been informed that if it decides to reject the project, it would lose its entire export sales to the UAE. How does this affect decision of PQ? [5+5]

Answer to 1(a):

Subsequent annual cash flows of the project are:

(Figures in $)

	1	2	3	4	5
Sales Revenue (50 × 12,000)	6,00,000	6,00,000	6,00,000	6,00,000	6,00,000
Less : Variable Cost [(15 + 10 - 5] × 12,000]	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000
Depreciation	1,00,000	1,00,000	1,00,000	1,00,000	1,00,000
Profit before tax	2,60,000	2,60,000	2,60,000	2,60,000	2,60,000
Taxes @ 50%	1,30,000	1,30,000	1,30,000	1,30,000	1,30,000
Profit after tax	1,30,000	1,30,000	1,30,000	1,30,000	1,30,000
Depreciation	1,00,000	1,00,000	1,00,000	1,00,000	1,00,000
Cash flow	2,30,000	2,30,000	2,30,000	2,30,000	2,30,000

Terminal Inflows: $ 10,00,000 + $ 5,00,000 = $ 15,00,000

(i) Calculation of Net Present Value at 10%:

The present value factor @ 10% for a 5 year annuity is 3.7908.
Present Value of Future Cash flows = $ 2,30,000 × 3.791 = $ 8,71,930

Terminal Inflows:

Sale Proceeds of Plant	$ 10,00,000
Less : Tax on profit @ 50%	$ 5,00,000
	$ 5,00,000
Add : Repayment of Working Capital	$ 5,00,000
	$ 10,00,000
$PVF_{(10,5)}$	0.621
Present Value of $ 10,00,000	$ 6,21,000

Total Present Value = $ 8,71,930 + $ 6,21,000 = $ 14,92,930
Net Present Value = $ 14,92,930 - $ 10,00,000 = $ 4,92,930
Therefore, the Net present value of the project at 10% = $ 4,92,930.

(ii) Rejection of Project
If PQ Inc. rejects the project, it will lose its entire export sales to the UAE.

Considering loss of Exports:

(Figures in $)

Sales Revenue [$ 70 × 500 × 12]	4,20,000
Less : Variable Cost [$ 40 × 500 × 12]	2,40,000
Profit before tax	1,80,000
Less: Taxes @ 50%	90,000
Profit after tax	90,000

Calculation of Net Present Value at 10%:
Present Value of an annuity of $ 90,000 for 5 years = $ 90,000 × 3.791 = $ 3,41,190.
Therefore, rejection of project would lead to loss of $ 3,41,190.

Acceptance of Project:
The NPV of the project, if accepted, is $ 4,92,930. So, the company is advised to 'Accept the project'. Net Gains, on acceptance of the project, will be ($ 4,92,930 - $ 3,41,190) = $ 1,51,740.

1(b). The following Financial informations are summarised from the books of Ritu Ltd. as at 31st March 2015:

	₹
Shareholders' Fund:	
Paid-up Capital	**15,00,000**
Reserves and Surplus	**6,00,000**
Non-current Liabilities:	
Debentures	**5,00,000**
Current Liabilities:	
Bank Overdraft	**2,00,000**

Sundry Creditors	**12,00,000**
Non-current Assets:	
Fixed Assets	**16,50,000**
Current Assets:	
Stock-in-trade	**9,10,000**
Book Debts	**12,40,000**
Bills Receivables	**1,60,000**
Cash	**40,000**

Annual Sales — ₹ 74,40,000. Gross Profit — ₹ 7,44,000.

You are required to calculate the following ratios for the year and comment on the financial position as revealed by these ratios:

A. Debt Equity Ratio,
B. Current Ratio,
C. Proprietary Ratio,
D. G. P. Ratio,
E. Debtors' Turnover Ratio,
Stock Turnover Ratio. Bank Overdraft is payable on demand. **[10]**

Answer to 1(b):

Before making any comment on the ratios, the ratios should be computed first along with their components which are:

1. Shareholders' or Proprietor's Fund

Particulars	₹
Share Capital	15,00,000
Reserves & Surplus	6,00,000
	21,00,000

2. Current Assets

Particulars	₹
Stock	9,10,000
Book Debts	12,40,000
Investment (ST)	1,60,000
Cash	40,000
	23,50,000

3. Current Liabilities

Particulars	₹
Sundry Creditors	12,00,000
Bank Overdraft	2,00,000
	14,00,000

4. Total Assets

Particulars	₹
Fixed Assets	16,50,000
Current Assets	23,50,000
	40,00,000

5. Cost of Goods Sold
   = Sales-G.P.
   = ₹ 74,40,000 - ₹ 7,44,000
   = ₹ 66,96,000

Computation of Ratios and Comments on them:

A. Debt-Equity Ratio:

$$\text{Debt-Equity Ratio} = \frac{\text{Long-term Debts}}{\text{Proprietor's Fund}} = \frac{₹5,00,000}{₹21,00,000} = 0.24:1$$

This ratio expresses the claims of Long-term Creditors and Debentureholders against the Assets of the company. Since it is very low it is favourable from the standpoint of Long-term Creditors which supplies maximum safety for them, i.e., they are highly secured.

B. Current Ratio:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{₹23,50,000}{₹14,00,000} = 1.68:1$$

Since this ratio is less than the normal Current Ratio of 2 :1, it reveals that the liquidity position is not at all satisfactory, i.e., the company is able to pay its maturing obligations as soon as it becomes due as only ₹ 1.68 paise of Current Assets are available against each rupee of Current Liability.

C. Proprietary Ratio:

$$\text{Proprietary Ratio} = \frac{\text{Proprietor's Funds}}{\text{Total Assets}} = \frac{₹21,00,000}{₹40,00,000} = 0.53:1$$

This ratio indicates that the company is not so dependent on outsiders' fund or external equities as more than 50% is being contributed by the shareholders.

D. G. P. Ratio:

$$\text{G. P. Ratio} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100 = \frac{₹7,44,000}{₹74,40,000} \times 100 = 10\%$$

This ratio is very low and, as such, not at all satisfactory since it is less than the normal ratio of 25%. This low ratio indicates that there are unfavourable conditions like increase in cost of production or sales and decrease in management efficiency and so on.

E. Debtors Turnover Ratio

$$\text{Debtors Turnover Ratio} = \frac{\text{Debtors}}{\text{Sales}} \times 365 = \frac{₹12,40,000}{₹74,40,000} \times 365 = 61 \text{ days}$$

This ratio indicates that the collection policy of the company is faulty since it exceeds its normal level.

F. Stock-Turnover Ratio

$$\text{Stock-Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{(Average) Stock}} = \frac{₹66,96,000}{₹9,10,000} = 7.36 \text{ times}$$

Since this ratio satisfies the normal ratio of 5 times on an average and, hence, the efficiency of the management is found to be good.

Question No. 2. (Answer **any two** questions. Each question carries **15 marks**)

2(a)(i). The following figures relate to two companies:

(₹ lakhs)

Particulars	T Ltd.	V Ltd.
Sales	**500**	**1,000**
Variable costs	**200**	**275**
Contribution	**300**	**725**
Fixed cost	**150**	**425**
Profit before Interest & Taxes (PBIT)	**150**	**300**
Interest	**50**	**100**
Profit before tax (PBT)	**100**	**200**

You are required to calculate - (A) operating, financial and combined leverages of the two companies, and (B) comment on the relative position of the companies in respect of the risk.

[3+2]

Answer to 2(a)(i):

(₹ lakhs)

Particulars		T Ltd.	V Ltd.
Operating Leverage	$\frac{\text{Contribution}}{\text{EBIT}}$	$\frac{300}{150} = 2$	$\frac{725}{300} = 2.42$
Financial Leverage	$\frac{\text{EBIT}}{\text{EBT}}$	$\frac{150}{100} = 1.5$	$\frac{300}{200} = 1.5$
Combined Leverage	$\frac{\text{Contribution}}{\text{EBT}}$	$\frac{300}{100} = 3$	$\frac{725}{200} = 3.63$

Comment:

1. The operating leverage is higher for V Ltd. and therefore it is subject to greater degree of business risk than T Ltd. The EBIT will tend to vary more with sales in V Ltd.
2. The financial leverage of both the companies stand at 1.5 times. It conveys that interest burden is proportionately same, and also financial risk is similar for both the companies.
3. The combined leverage of V Ltd. is higher and its overall risk is more as compared to T Ltd.

2(a)(ii). Calculate Altman's Z score using multivariate analysis and assign the firm as failed or non-failed firm.

	₹
Sales	**10,00,000**
Operating expenses	**8,00,000**
Interest	**6,000**
Depreciation	**50,000**
Tax	**15,000**
Share Capital at ₹ 10 each	**1,00,000**
Reserve and surplus from retained earnings	**50,000**
6% long term loan	**1,00,000**
Sundry creditors	**1,00,000**
Provision for Tax	**2,00,000**
Fixed Assets	**1,50,000**

Inventory	**2,00,000**
Sundry debtors	**1,10,000**
Loans and Advances	**50,000**
Cash at Bank	**40,000**

Market value per share is ₹ 8. **[4+1]**

Answer to 2(a)(ii):

The equation of Z score as developed by Altman is,

$Z = 0.012X_1 + 0.014X_2 + 0.033X_3 + 0.006X_4 + 0.999X_5$

$X_1 = \frac{\text{Working Capital}}{\text{Total Assets}}$

Working Capital = Current Assets — Current Liabilities

Current Assets	₹
Inventory	2,00,000
Sundry Debtors	1,10,000
Loans & Advances	50,000
Cash at Bank	40,000
	4,00,000

Current Liabilities	₹
Sundry creditors	1,00,000
Provision for Tax	2,00,000
	3,00,000

Hence, Working Capital = ₹ (4,00,000 - 3,00,000)
= ₹ 1,00,000

Total Assets = Fixed Assets + Current Assets
= ₹ (1,50,000 + 4,00 000)
= ₹ 5,50,000

$X_1 = \frac{₹1,00,000}{₹5,50,000} = 0.18 \times 100 = 18\%$

$X_2 = \frac{\text{Retained Earnings}}{\text{Total Assets}} = \frac{₹50,000}{₹5,50,000} = 0.09 \times 100 = 9\%$

$X_3 = \frac{\text{Earnings before Interest and Tax}}{\text{Total Assets}}$

$= \frac{\text{Sales - Operating Expenses}}{\text{Total Assets}}$

$= \frac{₹(10,00,000 - 8,00,000)}{₹5,50,000} = \frac{₹2,00,000}{₹5,50,000} = 0.36 = 36\%$

$$X_4 = \frac{\text{Market Value of Equity}}{\text{Book Value of Total Debts}}$$

$$= \frac{10{,}000 \text{ Shares} \times ₹8}{₹1{,}00{,}000 + 1{,}00{,}000 + 2{,}00{,}000} = \frac{₹80{,}000}{₹4{,}00{,}000} = 0.20 = 20\%$$

$$X_5 = \frac{\text{Sales}}{\text{Total Assets}} = \frac{₹10{,}00{,}000}{₹5{,}50{,}000} = 1.82 \text{ times}$$

$$Z = (0.012 \times 18) + (0.014 \times 9) + (0.033 \times 36) + (0.006 \times 20) + (0.999 \times 1.82)$$

$$= 0.216 + 0.126 + 1.188 + 0.12 + 1.82$$

$$= 3.47$$

Note: It is assumed that depreciation remains included in operating expenses. Altman observed in his study that all sample firms considered by him with Z score above 2.99 were non-bankrupt. Accordingly, the firm in question with Z score 3.47 may be predicted as non-sick.

Note: It should be noted that the values of the variables i.e., X_1, X_2, X_3 and X_4 to be multiplied with their respective discriminant coefficients will be in absolute number and not in percent.

2(a)(iii). From the following informations, calculate the cash from operations after analysing each of the following items in relation to the cash flow analysis:

	Balances as on	
	31st March, 2014 (₹)	**31st March, 2015 (₹)**
1. Stocks	**12,000**	**14,000**
2. Debtors	**12,000**	**15,000**
3. Creditors	**5,000**	**9,000**
4. Bills Receivable	**5,000**	**8,000**
5. Outstanding Expenses	**4,000**	**7,500**
6. Bills Payable	**4,000**	**2,000**
7. Prepaid Expenses	**2,000**	**1,000**

Provided that operating profit before working capital changes are ₹ 3,000. **[5]**

Answer of 2(a)(iii):

The operating profit before working capital changes is amounted to ₹3,000 (provided). However, adjustments will have to be made in this amount for current assets and current liabilities in order to compute cash from operations. This has to be done by taking each item of current assets and current liabilities independently, as explained below:

1. The investment in stock has increased by ₹ 2,000 as compared to the previous year. This means cash must have gone out to the extent of ₹ 2,000. It will, therefore, decrease the cash balance.
2. Debtors have gone up from ₹ 12,000 on 31st March, 2014 to ₹ 15,000 on 31st March, 2015. There is an increase of ₹ 3,000. It shows that sales to the extent of ₹ 3,000 have not been realised in cash. Hence, cash from operations will be reduced by ₹ 3,000.
3. Creditors have gone up by ₹ 4,000. Thus, purchases to the extent of this amount have not been paid in cash. It is, therefore, a 'source' of cash.
4. Bills receivable have increased by ₹ 3,000. Thus, sales to the extent of ₹ 3,000 have not been realised in cash. Hence, cash on account of operations will be reduced by ₹ 3,000.
5. Outstanding expenses have increased by ₹ 3,500. Thus, expenses to this extent have not been paid resulting in increase of cash from operations by this amount.

6. Bills payable have come down by ₹ 2,000. It shows more payment of cash. The cash from operations will stand reduced by ₹ 2,000.

7. Prepaid expenses have come down by ₹ 1,000. This shows less of payment and hence cash from operations will increase by ₹ 1,000.

Cash from operations now can be computed as follows:

	Increase (+) (₹)	Decrease (-) (₹)	(₹)
Operating profit before working capital changes			3,000
Increase in stock		2,000	
Increase in debtors		3,000	
Increase in creditors	4,000		
Increase in bills receivable		3,000	
Decrease in bills payable		2,000	
Increase in outstanding expenses	3,500		
Decrease in prepaid expenses	1,000		
	8,500	10,000	(1,500)
Inflow of cash on account of operations			1,500

2(b)(i). Rimi Ltd. has the following operating results for 2013-14 and 2014-15:

	2013-14 (₹)	**2014-15 (₹)**
Sales	**8,00,000**	**9,03,000**
(-) Cost of goods sold	**6,40,000**	**6,70,000**
(-) Fixed cost	**1,60,000**	**2,33,000**
	1,80,000	**1,85,000**
Profit	**(-) 20,000**	**48,000**

During 2014-15, selling price was raised by 5%. Prepare a statement bringing out the factors leading to change in profits earned in 2014-15 over 2013-14. [8]

Answer to 2(b)(i):

1. Percentage of volume change in sales:

Sales in 2014-15 at the price level of 2013-14

$= \frac{100}{105} \times 9,03,000 =$ ₹ 8,60,000

But sales in 2013-14 was ₹ 8,00,000. So, increase in sales in 2014-15 due to volume increase = ₹ (8,60,000 - 8,00,000) = ₹ 60,000.

∴ Percentage increase in sales due to volume increase

$= \frac{\text{Increase in sales due to volume increase}}{\text{Base year sales}} \times 100 = \frac{60,000}{8,00,000} \times 100 = 7.5\%.$

2. Calculation of percentage change in cost price:

Cost of goods sold in 2014-15 at the volume of 2013-14 = $\frac{100}{107.5}$ × 6,70,000 = ₹ 6,23,256

But actual cost of goods sold in 2013-14 was 6,40,000. So decrease in cost of goods sold due to cost factor is ₹ (6,40,000 - 6,23,256) = ₹ 16,744

∴ Percentage decrease in cost of goods sold due to cost factor:

$= \frac{\text{Decrease in cost of goods sold}}{\text{Base year cost of goods sold}} \times 100 = \frac{16,744}{6,40,000} \times 100 = 2.616\%.$

Now we have following factors as below:

1. Increase in price factor	= 5%	[Given]
2. Increase in quantity factor	= 7.5%	[Calculated]
3. Decrease in cost factor	=(2.616%)	[Calculated]

Statement Showing Factor wise Changes in Profit in 2014-15

	Sales	Cost	Profit
	(₹)	(₹)	(₹)
Year 2014-15	9,03,000	8,55,000	48,000
Year 2013-14	8,00,000	8,20,000	(20,000)
Change	1,03,000	35,000	68,000
A. The change in sales attributable to :			
1. Price factor : Percentage increase in selling price × base year sales = 5% × ₹ 8,00,000	40,000		40,000
2. Quantity factor: Percentage increase in quantity × base year sales = 7.5% of ₹ 8,00,000	60,000		60,000
3. Quantity-price factor: Percentage change in price × percentage change in quantity × base year sales = 5% × 7.5% × ₹ 8,00,000	3,000		3,000
B. Change in cost of goods sold attributable to :			
1. Cost factor : Percentage change in cost price × base year cost of goods sold = (2.616%) × ₹ 6,40,000		(16,743)	16,743
2. Quantity factor : Percentage change in quantity × base year cost of goods sold = 7.5% × ₹ 6,40,000		48,000	(48,000)
3. Quantity-cost factor : Percentage change in quantity × percentage change in cost price x base year cost of goods sold = (2.616%) × 7.5% × ₹ 6,40,000		(1,257)	1,257
C. Change in Fixed cost due to price factor: ₹1,80,000 - ₹ 1,85,000		5,000	(5,000)
	1,03,000	35,000	68,000

Alternative Method

Statement Showing Factor wise Change in Profit in 2014-15

	Particulars	₹	₹
(1)	Increase in profit due to increase in selling price		

	Actual Sales in 2014-15	9,03,000	
	Less : Sales of 2014-15 at 2013-14 price	8,60,000	
	$[\frac{100}{105} \times 9,03,000]$		43,000
(2)	Increase in profit due to increase in quantity:		
	Sales of 2014-15 at 2013-14 price	8,60,000	
	Less : sales of 2013-14	8,00,000	
	Increase in sales due to volume increase	60,000	
	Rate of Gross Profit in 2013-14 = $\frac{1,60,000}{8,00,000} \times 100 = 20\%$		
	Gross Profit at 20% of ₹ 60,000		12,000
(3)	Increase in profit due to efficiency:		
	Cost of goods sold in 2013-14	6,40,000	
	Add: Increase in cost of goods sold due to volume increase (7.5%)	48,000	
		6,88,000	
	Less : Actual cost of goods sold in 2014-15	6,70,000	18,000
(4)	Decrease in profit due to increase in fixed cost ₹ (1,85,000 - 1,80,000)		(5,000)
	Increase in net profit		68,000

2(b)(ii). Following are the data on a capital Project A being evaluated by the management of Mehta Ltd.

Project A	
Annual cost saving	**₹ 40,000**
Useful life	**4 years**
IRR	**14%**
Profitability Index (PI)	**1.0428**
NPV	**?**
Cost of capital	**?**
Cost of project	**?**
Pay-back	**?**
Salvage value	**0**

Find the missing values considering the following table of discount factor only:

Discount factor	**15%**	**14%**	**13%**	**12%**
1 year	**0.869**	**0.877**	**0.885**	**0.893**
2 years	**0.756**	**0.769**	**0.783**	**0.797**
3 years	**0.658**	**0.675**	**0.693**	**0.712**
4 years	**0.572**	**0.592**	**0.613**	**0.636**
	2.855	**2.913**	**2.974**	**3.038**

[7]

Answer of 2(b)(ii):

Computation of Cost of Project A

At 14% IRR, the sum total of cash inflows is equivalent of Cost of the Project or Initial Cost Outlay.

The following information is given:

Annual Cost saving	₹ 40,000
Useful Life	4 years

IRR 14%

On the basis of discount factor table @ 14%, cumulative present value of cash inflows for 4 years is 2.913.
Thus, total of cash inflows for 4 years for Project M: ₹ 40,000 x 2.913
= ₹ 1,16,520
Hence, Cost of the Project = ₹ 1,16,520

Computation of Pay-back Period of the Project A

$$\text{Payback Period} = \frac{\text{Cost of the Project}}{\text{Annual Cost Saving}}$$

$$= \frac{₹1,16,520}{40,000}$$

= 2.913 or 2 years 11 months.

Computation of Cost of Capital

At profitability Index (PI) of 1, cash inflows and outflows are equal. In the present case, (PI) is 1.0428.

$$\text{Profitability Index PI} = \frac{\text{Present Value of Cash Inflows}}{\text{Cost of Project}}$$

$$= \frac{\text{Present Value of Cash Inflows (x)}}{₹1,16,520}$$

Or, x = 1.0428 x ₹ 1,16,520 = ₹ 1,21,507

Hence, present value of Cash Inflows = ₹ 1,21,507

Since Annual Cost Saving is ₹ 40,000. Hence, Cumulative Discount Factor for 4 years

$$= \frac{1,21,507}{40,000}$$

= 3.038

At discount rate of 12%, the Cumulative Discount Factor for 4 years is 3.038.

Hence, the cost of capital is 12%.
Computation of Net Present Value of the Project
NPV = Total Present Values of Cash Inflows - Cost of the Project
= ₹ 1,21,507 - ₹ 1,16,520
= ₹ 4,987.

2(c)(i). The following are the Balance Sheet of Maharaj Ltd. as on 31.03.14 and 31.03.15:-

	31.03.14 (₹)	**31.03.15 (₹)**
Current Assets:		

Cash and Bank Balance	**23,600**	**2,000**
Debtors	**41,800**	**38,000**
Inventory	**32,000**	**26,000**
Other Current Assets	**6,400**	**2,600**
(A)	**1,03,800**	**68,600**
Non-current Assets:		
Fixed Assets:		
Land and Building	**54,000**	**34,000**
Plant and Machinery	**62,000**	**1,57,200**
Furniture	**5,800**	**9,600**
(B)	**1,21,800**	**2,00,800**
Non-current investment (C)	**9,200**	**11,800**
Total assets (A + B + C)	**2,34,800**	**2,81,200**
Current Liabilities (D)	**52,400**	**25,400**
Non-current Liabilities:		
Long-term debt (E)	**40,000**	**65,000**
Shareholders' Fund :		
Equity share capital	**80,000**	**1,20,000**
Reserve and surplus	**62,400**	**70,800**
(F)	**1,42,400**	**1,90,800**
Total equities & liabilities (D+E+ F)	**2,34,800**	**2,81,200**

Prepare Comparative Balance Sheet and study its financial position. **[3+5]**

Answer of 2(c)(i):

Comparative Balance Sheet of Maharaj Ltd. as on 31.03.2014 and 31.03.2015

	31.03.14 (₹)	31.03.15 (₹)	Amount of increase (+) or decrease (-) (₹)	Percentage increase (+) or decrease (-)
Current Assets :				
Cash and Bank Balance	23,600	2,000	(–) 21,600	(–) 91.5
Debtors	41,800	38,000	(–) 3,800	(–) 9.1
Inventory	32,000	26,000	(–) 6,000	(–) 18.8
Other Current Assets	6,400	2,600	(–) 3,800	(–) 59.4
(A)	1,03,800	68,600	(–) 35,200	(–) 33.9
Non-current Assets:				
Fixed Assets :				
Land and Building	54,000	34,000	(–) 20,000	(–) 37
Plant and Machinery	62,000	1,57,200	(+) 95,200	(+) 153.5
Furniture	5,800	9,600	(+) 3,800	(+) 65.5
(B)	1,21,800	2,00,800	(+) 79,000	64.9
Non-current investment (C)	9,200	11,800	(+) 2,600	(+) 28.3
Total assets (A + B + C)	2,34,800	2,81,200	(+) 46,400	(+) 19.8
Current Liabilities (D)	52,400	25,400	(–) 27,000	(–) 51.5

Non-current Liabilities:				
Long-term debt (E)	40,000	65,000	(+) 25,000	(+) 62.5
Shareholders' Fund:				
Equity share capital	80,000	1,20,000	(+) 40,000	(+) 50.0
Reserve and surplus	62,400	70,800	(+) 8,400	(+) 13.5
(F)	1,42,400	1,90,800	(+) 48,400	(+) 34
Total liabilities and capital (D + E + F)	2,34,800	2,81,200	(+) 46,400	(+) 19.8

Comparative balance sheet shows the balance of different assets and liabilities of two different periods of same company and shows absolute increase / decrease of each item in 31.03.2015 over 31.03.2014 and also shows the percentage change. Interpretations of these changes are as follows:-

(i) The current assets of Maharaj Ltd. have decreased by ₹35,200 in the year 2014-15 over 2013-14, whereas current liabilities have decrease by ₹27,000 only. But it has no adverse effect on short term liquidity or on current ratio because current assets have decreased by 33.9% and current liabilities have decreased by 51.5%.

(ii) Cash at Bank have decreased by 91.5%. It implies an adverse cash position of the company. The company may face problem in meeting its short-term obligations.

(iii) The long-term debt of the company has increased by 62.5%, whereas its owners' equity has improved by 34% only. It implies that the financial risk (in terms of dependency on outsiders and in terms of contractual obligation) associated with the company has increased significantly during the period under study.

There has been a substantial increase in the fixed assets by the company. The fixed assets have increased by ₹ 79,000 (64.9%). This is mainly due to significant increase in the plant and machinery of the company. The plant and machinery have increased by ₹ 95,200 (153.5%). It indicates a remarkable improvement in the production capacity of the company during the study period. Such cost of assets have financed by proprietors fund and long term loan raised. It indicates the long term stability of the business.

2(c)(ii). Gyan Co. Ltd.

The following informations are related to the Balance Sheets of the Company for the past two years are as under:

	(₹ in lakh)			
	As at 31.03.2015		**As at 31.03.2014**	
Share Capital		**75.00**		**50.00**
Cash Credit Loan from Bank @ 16.5% Int.		**80.00**		**100.00**
Working Capital Term Loan from Bank @ 16.5% Int.		**20.00**		**---**
Unsecured Inter-corporate Loan @ 18% Interest		**60.00**		**---**
Fixed Assets Less Depreciation		**35.00**		**37.00**
Inventories including WIP	**100.00**		**70.00**	
Debtors	**60.00**		**30.00**	
Cash/Bank	**10.00**		**10.00**	
Creditors	**120.00**		**140.00**	
Advances etc.	**60.00**		**60.00**	
Profit and Loss A/c		**210.00**		**203.00**

The following additional information is available:

(1) Sales and Profitability for the past two years are as under:

	(₹ in Lakh)	
	Sales	**Profit/(Loss)**
2013-14	**100**	**(150)**
2014-15	**350**	**(7)**

(2) By introducing some new products, for which no additional capital expenditure is involved, but Working Capital will be necessary. The company is expecting a 20% growth in sales volume every year and 10% profit (before interest) on sales.

You are required to write a comparative study of the financial statement on the basis of working capital, sales and loss. State the potentialities which the company has in making profits in future if only inter-corporate debt is considered. [3+4]

Answer of 2(c)(ii):
Comparative study of the financial statement:

- A sum of ₹ 20 lakh has been converted into a working capital term loan from cash credit loan. This shows that the company has already exhausted its limits from the bank and it can expect little assistance from bank by way of working capital.

- There has been a substantial increase in sales in 2014-15 as compared to 2013-14. The increase is 250%.

- The amount of loss has also come down considerably. The loss is only ₹ 7 lakh in 2014-15 as compared to a loss of ₹ 150 lakh in 2013-14. There is almost 100% decline in loss.

Analysis of the potentialities the company has in making profits in future:

The above analysis shows that the company has immense potentialities of making profits in future. As a matter of fact if interest of ₹ 10.80 lakh on inter-corporate loan is excluded, the company has made a profit of ₹ 3.80 lakh. The interest rate of 18% for inter-corporate loan seems to be very high as compared to 16.5% charged by the Bank.

The company has achieved a growth in sales of ₹ 250 lakh by arranging an inter-corporate loan of ₹ 60 lakh. The company expects a growth in sales of 20% every year. On this basis it can be estimated that the company will require an additional funds of ₹ 12 lakh (i.e., 20% of ₹ 60 lakh) every year.

The sister companies may be approached by the company to grant a further loan of ₹ 12 lakh. They may be requested to charge a concessional interest rate of 10% on the total loan outstanding. This loan together with the existing loan may be agreed to be paid by the company in convenient installments after the expiry of say 5 years when the company is expected to be out of woods.

In order to meet the additional working capital requirements for the year 2016-17 and 2017-18, it is presumed that the bank will grant cash credit limits of ₹ 5 lakh each year at the existing terms. Any further

additional requirements of working capital will be met by the company out of its internal resources. Necessary arrangement with the sister companies and the banks will have to be made for providing the necessary assistance and support during this period.

Question No. 3. (Answer **all** questions. Each question carries **10 marks**)

3(a). The following are the summarized Balance Sheets of two Companies, A Ltd and B Ltd as on 31.03.2015.

Equity and Liabilities	A Ltd	B Ltd	Assets	A Ltd	B Ltd
(1) Shareholders' Funds:			(1) Non-Current Assets		
(a) Sh. Cap.- Equity Shares (₹10)	15,00,000	10,00,000	Fixed Assets		
(b) Reserves & Surplus - Res.	3,00,000	2,00,000	Tangible Block	17,00,000	14,00,000
(2) Non-Current Liabilities:			Intangible-G/w	2,00,000	1,00,000
Long Term Borrowings-10% Deb	6,00,000	4,00,000	(2) Current Assets:	8,00,000	6,00,000
(3) Current Liabilities: Trade P'ble - S. Crs	3,00,000	5,00,000			
Total	27,00,000	21,00,000	Total	27,00,000	21,00,000

Additional Information -

(I) Assets are to be revalued as follows -

	A Ltd	B Ltd
Revaluation of Tangible Block	21,00,000	12,00,000
Revaluation of Current Assets	10,00,000	4,00,000

(II) Average Annual Profits for three years before charging Debenture Interest = A Ltd ₹ 4,50,000, B Ltd ₹ 3,10,000.

(III) Goodwill is to be valued at four year's purchase of Average Super Profits for three years. Such average is to be calculated after adjustment of depreciation at 10% on the amount of increase/decrease on revaluation of fixed assets. In the case of B Ltd, a claim of ₹ 10,000 which was omitted, is to be adjusted against its average profit. Income tax is to be ignored.

(IV) Normal Profit on Capital Employed is to be taken at 15%, Capital Employed being considered on the basis of net revalued amount of Tangible Assets.

Ascertain the value of Goodwill of A Ltd and B Ltd. [10]

Answer to 3(a):

1. Computation of Capital Employed

Particulars	A Ltd	B Ltd
Revaluation of Tangible Block	21,00,000	12,00,000
Revaluation of Current Assets	10,00,000	4,00,000

Creditors	(3,00,000)	(5,00,000)
10% Debentures	(6,00,000)	(4,00,000)
Claim / Expenses not recorded	-	(10,000)
Equity Capital Employed	22,00,000	6,90,000
Normal Profits (15% × Capital Employed)	**3,30,000**	**1,03,500**

Note: Equity Capital Employed and Equity Earnings are considered for purpose of determining Goodwill, since Goodwill is monetary value of residual business advantage, which includes, among many things, advantages of gearing as well.

2. Computation of Future Maintainable Profits

Particulars	A Ltd	B Ltd
Average Profits As Given	4,50,000	3,10,000
Less: Interest on Debentures [6,00,000 × 10% ÷ 4,00,000 × 10%]	(60,000)	(40,000)
Less: Claim/Expenses not recorded	---	(10,000)
Less: Depreciation on Increase in Value of Fixed Assets [(21L - 17L)×10%]	(40,000)	---
Add: Depreciation on Decrease in Value of Fixed Assets [(14L -12L)×10%]		20,000
Equity Earnings = Future Maintainable Profits	**3,50,000**	**2,80,000**

3. Computation of Goodwill

Particulars	A Ltd	B Ltd
Future Maintainable Profits	3,50,000	2,80,000
Less: Normal Profits	(3,30,000)	(1,03,500)
Super Profits	20,000	1,76,500
Goodwill (Super Profits × 4 Years)	**80,000**	**7,06,000**

3(b). S Ltd is considering buying the business of R Ltd the final accounts of which for the last 3 years were as follows:

Profit and Loss Accounts for the 3 years ended 31st March

(Figures in ₹)

Particulars	2013	2014	2015
Sales	**2,00,000**	**1,90,000**	**2,24,000**
Material Consumed	**(1,00,000)**	**(95,000)**	**(1,12,000)**
Business Expenses	**(80,000)**	**(80,000)**	**(82,000)**
Depreciation	**(12,000)**	**(13,000)**	**(14,000)**
Net Profit	**8,000**	**2,000**	**16,000**

Balance Sheet as at 31st March

(Figures in ₹]

Particulars	2012	2013	2014	2015
Fixed Assets (at Cost)	**1,00,000**	**1,20,000**	**1,40,000**	**1,80,000**
Less: Depreciation	**70,000**	**82,000**	**95,000**	**1,09,000**
Net Fixed Assets	**30,000**	**38,000**	**45,000**	**71,000**
Stock in Trade	**16,000**	**17,000**	**18,500**	**21,000**

Sundry Debtors	**21,000**	**24,000**	**26,000**	**28,000**
Cash in hand and at Bank	**32,000**	**11,000**	**28,000**	**13,200**
Prepaid Expenses	**1,000**	**500**	**2,000**	**1,000**
Total Assets	**1,00,000**	**90,500**	**1,19,500**	**1,34,200**
Equity Capital	**50,000**	**50,000**	**70,000**	**70,000**
Share premium	**---**	**---**	**5,000**	**5,000**
General Reserve	**16,000**	**24,000**	**26,000**	**42,000**
Debentures	**20,000**	**---**	**---**	**---**
Sundry Creditors	**11,000**	**13,000**	**14,000**	**14,000**
Accrued Expenses	**3,000**	**3,500**	**4,500**	**3,200**
Total Liabilities	**1,00,000**	**90,500**	**1,19,500**	**1,34,200**

S Ltd wishes the offer to be based upon trading Cash Flows rather than Book Profits. Trading Cash Flow is the Cash received from Debtors less Cash Paid to Creditors and for Business Expenses (excluding Depreciation), together with an allowance for average annual expenditure on Fixed Assets of ₹ 15,000 per year.

The actual expenditure on Fixed Assets is to be ignored, and also any cash received or paid out on the issue or redemption of Shares or Debentures.

S Ltd wishes the Trading Cash Flow to be calculated for each of the years 2013, 2014 and 2015 and for these to be combined using weights of 20% for 2013, 30% for 2014 and 50% for 2015 to give an Average Annual Trading Cash Flow.

S Ltd considers that the Average Annual Trading Cash Flow should show a Return of 10% on its Investment.

You are required to calculate:
(I) Trading Cash Flow for each of the years 2013, 2014 & 2015,
(II) Weighted Average Annual Trading Cash Flow, and
(III) Price which S Ltd should offer for the business. [8+1+1]

Answer to 3(b):

Particulars	2013	2014	2015
Net Profits as per P&L	8,000	2,000	16,000
Add: Depreciation	12,000	13,000	14,000
Operating Cash Flows before Working Capital Changes	**20,000**	**15,000**	**30,000**
Adjustment for Working Capital Changes			
(a) Change in Stock	(1,000)	(1,500)	(2,500)
(b) Change in Debtors	(3,000)	(2,000)	(2,000)
(c) Prepaid Expenses	500	(1,500)	1,000
(d) Sundry Creditors	2,000	1,000	---

(e) Accrued Expenses	500	1,000	(1,300)
Cash Generated from Operations	**19,000**	**12,000**	**25,200**
Less: Allowance for Expenditure on Fixed Assets	(15,000)	(15,000)	(15,000)
Trading Cash Flow	**4,000**	**(3,000)**	**10,200**
Weights	20%	30%	50%
Weighted Trading Cash Flow	800	(900)	5,100
Weighted Average Cash Flow		5,000	
Capitalisation Rate		10%	
Value of Business		**50,000**	

Question No. 4 (Answer **any two** questions. Each question carries **15 marks**)

4(a). Amar Ltd and its Subsidiary Balu Ltd get their supply of some essential raw materials from Chand Ltd. To co-ordinate their production on a more profitable basis, Amar Ltd and Chand Ltd agree between themselves each to acquire a quarter of Shares in the other's Authorized Capital by means of exchange of Shares. The terms are as follows –

(I) Amar Ltd's share quoted at ₹ 14, but for the purpose of exchange the value is to be taken at the higher of the two values i.e. (a) Quoted and (b) on the basis of Balance Sheet valuation.

(II) Chand Ltd's Shares which are unquoted are to be taken at the higher of the value as on (a) Yield Basis, and (b) Balance Sheet basis. The future profits are estimated at ₹ 1,05,000 subject to one third to be retained for development purposes. Share of similar Companies yield 8%.

(III) Freehold properties of Chand Ltd are to be taken at ₹ 4,30,000.

(IV) No cash is to pass and the balance due on settlement is to be treated as loan between the two Companies.

The summarized Balance Sheets of the Companies at relevant date stood as follows –

(₹ in 000's)

Equity & Liabilities	Amar	Balu	Chand	Assets	Amar	Balu	Chand
(1) Shareholders' Funds:				**(1)Non-Current Assets:**			
(a) Share Capital				**(a)Fixed Assets:**			
(i) Authorized Share Capital	**1,200**	**500**	**1,000**	**- Tangible Assets**			
(ii) Equity Shares of ₹ 10	**800**	**500**	**750**	**(i) Freehold Properties**	**660**	**290**	**330**
(b) Reserves & Surplus				**(ii) Plant & Machineries**	**450**	**410**	**440**
(i) Securities Premium A/c	**80**	**--**	**--**	**(b)Non-Current Investment:**			
(ii) P & L A/c	**230**	**210**	**200**	**40,000 Shares in Balu**	**470**	**--**	**--**

				Ltd			
(2) Non-Current Liabilities:				**(2) Current Assets**	**210**	**240**	**390**
Long Term Borrowings							
- 7% Debentures	**300**	**--**	**--**				
(3) Current Liabilities:							
(a) Other Current Liabilities	**280**	**180**	**210**				
(b) Short Term Provisions							
- Proposed Dividend	**100**	**50**	**--**				
Total	**1,790**	**940**	**1,160**	**Total**	**1,790**	**940**	**1,160**

You are required to compute the value of the Shares according to the terms of the agreement and to present the final settlement showing all the necessary workings. [15]

Answer to 4 (a):

1. Valuation of Shares on Balance Sheet Basis

Particulars	**Amar**	**Balu**	**Chand**
Freehold Properties (Revalued amount for Chand Ltd)	6,60,000	2,90,000	4,30,000
Plant & Machineries	4,50,000	4,10,000	4,40,000
Current Assets	2,10,000	2,40,000	3,90,000
Dividend Receivable from Balu (₹ 50,000 × 80%) [Presuming that it has not been accounted for]	40,000	---	---
Less: 7% Debentures	(3,00,000)	---	---
Current Liabilities	(2,80,000)	(1,80,000)	(2,10,000)
Proposed Dividend (Presuming ex-dividend Valuation)	(1,00,000)	(50,000)	---
Net Assets before considering Amar's Share in Balu	6,80,000	7,10,000	10,50,000
Value of Investment in Balu (₹ 7,10,000 × 80%)	5,68,000	---	---
Net Assets	**12,48,000**	**7,10,000**	**10,50,000**
Number of Shares	80,000	50,000	75,000
Book Value Per Share = $\frac{\text{Net Assets}}{\text{Number of Shares}}$	**₹ 15.60**		**₹ 14.00**

2. Valuation of Shares of Chand Ltd on Yield Basis

Particulars => Yield Based on -	**Earnings**	**Dividend**
Future Maintainable Profits	1,05,000	1,05,000
Less: Amount retained for Development Process (1/3×1,05,000)	NIL	(35,000)
Amount considered for yield purposes	1,05,000	70,000
Capitalised Value of Yield at 8%	$\frac{1,05,000}{8\%}$	$\frac{70,000}{8\%}$

	= ₹ 13,12,500	= ₹ 8,75,000
Number of Equity Shares	75,000	75,000
Value per Share on Yield Basis	**₹ 17.50**	**₹ 11.67**

3. Value taken for exchange of Shares

Particulars	Amar Ltd	Chand Ltd	
		Earnings Yield	**Dividend Yield**
Quoted Price	₹ 14.00	Not Applicable	Not Applicable
Balance Sheet Value	₹ 15.60	₹ 14.00	₹ 14.00
Yield Basis	Not Applicable	₹ 17.50	₹ 11.67
Value Taken for Exchange (Higher of the Above)	₹ 15.60	₹ 17.50	₹ 14.00

4. Statement of Settlement: [If only Distributed Profits is considered as Yield]

Particulars	₹
Value of Shares issued by Amar Ltd to Chand Ltd [₹ 15.60 × ¼ × 1,20,000 Shares]	4,68,000
Less: Value of Shares issued by Chand Ltd to Amar Ltd [₹ 14.00 × ¼ × 1,00,000 Shares]	3,50,000
Amount Due from Chand Ltd to Amar Ltd [or Loan from Amar Ltd to Chand Ltd]	1,18,000

Note: Students may calculate the amount due between the parties, when entire earnings are taken as yield.

4(b)(i). How do you react to various uncertainties during the process of business valuation? [6]

Answer to 4(b)(i):

The advantage of breaking uncertainty down into estimation uncertainty, firm-specific and macroeconomic uncertainty is that it gives us a window on what we can manage, what we can control and what we should just let pass through into the valuation.

Building better models and accessing superior information will reduce estimation uncertainty but will do little to reduce exposure to firm-specific or macro-economic risk. Even the best-constructed model will be susceptible to these uncertainties.

In general, analysts should try to focus on making their best estimates of firm-specific information - how long will the firm are able to maintain high growth? How fast will earnings grow during that period? What type of excess returns will the firm earn? - and steer away from bringing in their views on macro economic variables. To see why, assume that you believe that interest rates today are too low and that they will go up by about 1.5% over the next year. If you build in the expected rise in interest rates into your discounted cash flow valuations, they will all yield low values for the companies that you are analyzing. A person using these valuations will be faced with a conundrum because she will have no way of knowing how much of this over valuation is attributable to your macroeconomic views and how much to your views of the company.

In summary, analysts should concentrate on building the best models they can with as much information as they can legally access, trying to make their best estimates of firm-specific components and being as neutral as they can on macro economic variables. As new information comes in, they should update

their valuations to reflect the new information. There is no place for false pride in this process. Valuations can change dramatically over time and they should if the information warrants such a change.

4(b)(ii). PQR Ltd is considering merger with XYZ Ltd. PQR Ltd's Shares are currently traded at ₹ 20. It has 5,00,000 Shares outstanding and its Earnings After Taxes (EAT) amount to ₹ 10,00,000. XYZ Ltd has 2,50,000 shares outstanding; its Current Market Price is ₹ 10 and its EAT are ₹ 2,50,000. The merger will be effected by means of a stock swap (exchange). XYZ Ltd has agreed to a 2,50,000 plan under which PQR Ltd will offer the current market value of XYZ Ltd's Share – (1) What is the Pre-Merger Earnings per Share (EPS) and P/E Ratios of both the Companies? (2) If XYZ Ltd's PE Ratio is 6.4, what is its Current Market Price? What is the Exchange Ratio? What will be PQR Ltd's post-merger EPS? (3) What should be the Exchange Ratio, if PQR Ltd's Pre-Merger and Post-Merger EPS are to be the same? [3+3+3]

Answer to 4(b)(ii):

1. Computation of Present EPS and PE Ratio

Particulars	PQR Ltd	XYZ Ltd
(A) Earning Per Shares = $\frac{\text{EAT}}{\text{No. of Equity Shares}} = \frac{₹10,00,000}{5,00,000}$	₹ 2	₹ 1
(B) Market Price per Share (given)	₹ 20	₹ 10
(C) PE Ratio = A ÷ B	10	10

2. Computations when XYZ Ltd has PE Ratio of 6.4

A. Market Price per Share [MPS] = EPS ₹ 1 × PE Ratio 6.4 = ₹ 6.40.

B. MPS based Exchange Ratio = $\frac{\text{MPS of Selling Co.}}{\text{MPS of Buying Co.}} = \frac{₹6.40}{₹20}$ = 0.32 Shares of PQR for 1 Share in XYZ.

C. No. of Shares issued in such case = 0.32 × 2,50,000 Shares in PQR Ltd = 80,000 Shares of PQR Ltd.

D. PQR's Post Merger EPS = $\frac{\text{Total EAT}}{\text{No. of Eqity Shares}} = \frac{₹10,00,000 + ₹2,50,000}{(5,00,000 + 80,000)}$ = ₹ 2.16

3. Exchange Ratio to retain PQR Ltd's Pre-Merger EPS

(A) EPS based Exchange Ratio = $\frac{\text{EPS of Selling Co.}}{\text{EPS of Buying Co.}}$ = ½= 1 Share in PQR for 2 Shares in XYZ

(B) No. of Shares issued in such case = 0.50 × 2,50,000 Shares = 1,25,000 Shares of PQR Ltd

(C) PQR's Post Merger EPS in such case = $\frac{₹10,00,000 + ₹2,50,000}{(5,00,000 + 1,25,000)}$ = ₹ 2 per Share

4(c)(i). Identify the Factors that favour external growth and diversification through Merger and Acquisition? [3]

Answer to 4(c)(i):

Following are the factors that favour external growth and diversification through Merger and Acquisition:

A. Some goals and objectives may be achieved more speedily through an external acquisition.

B. The cost of Building and organization internally may exceed cost of an acquisition.

C. There may be fewer risks, lower costs, or shorter time requirements involved in achieving an economically feasible market share by the external route.

D. The firm may not be utilizing their assets or arrangements as effectively as they could be utilized by the acquiring firm.

E. The firm may be able to use securities in obtaining other companies, where as it might not be able to finance the acquisition of equivalent assets and capabilities internally.

F. There may be tax advantages.

G. There may be opportunities to complement capabilities of other firms.

4(c)(ii). How a merger can revive a sick company? [4]

Answer to 4(c)(ii):

An important motive for merger is to turn around a financially sick company through the process of merger. Amalgamation taking place under the aegis of Board for Industrial and Financial Reconstruction (BIFR) fall under this category.

BIFR found revival of ailing companies through the means of their with healthy company as the most successful route for revival of their financial wealth. Firstly, the purpose is to revive a group of sick companies by merging it with groups of healthy companies by obtaining concessions from financial institution and government agencies and obtaining benefits of tax concessions u/s 72A of Income Tax Act, 1961. Secondly, it also helps to preserve group reputation. Some of the group companies which have amalgamated through the BIFR include Mahindra Missan Allwyn with Mahindra and Mahindra, Hyderabad, Allwyn with Voltas etc.

4(c)(iii). Harshavardhan Infrastructure Developers (HID) have raised ₹ 100 Crores through issue of 11.50% Bonds, with a Face Value of ₹ 1,000 and 10 Years to maturity. Each Bond is redeemable at a Premium of 15% in five equal installments commencing from the 6th year. Compute the Price of the Bond if the Yield to Maturity is 13%. [8]

Answer to 4(c)(iii):

Value of Bond = Present Value of Future Cash Flows

Year	Interest	Principal	Total	Disc Factor @ 13%	Disc Cash Flow
1-5	₹ 115 [1,000 × 11.50%]	—	₹ 115	3.517	₹ 404.46
6	₹ 115 [1,000 × 11.50%]	$\frac{1000+15\%}{5}$ = ₹ 230	₹ 345 [115 + 230]	0.480	₹ 165.60
7	₹ 92 [1,000 × 80% × 11.50%]	$\frac{1000+15\%}{5}$ = ₹ 230	₹ 322 [92 + 230]	0.425	₹ 136.85

8	₹ 69 [1,000 × 60% × 11.50%]	$\frac{1000+15\%}{5}$ = ₹ 230	₹ 299 [69 + 230]	0.376	₹ 112.42
9	₹ 46 [1,000 × 40% × 11.50%]	$\frac{1000+15\%}{5}$ = ₹ 230	₹ 276 [46 + 230]	0.333	₹ 91.91
10	₹ 23 [1,000 × 20% × 11.50%]	$\frac{1000+15\%}{5}$ = ₹ 230	₹ 253 [23 + 230]	0.295	₹ 74.64
	Total	**Intrinsic Value of Bond**			**₹ 985.88**