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). Use the following data to answer the following questions.

Name of the Company: AB Ltd.

Balance Sheet as at : 31.03.2015 (Amount in ₹)

Ref No.		Particulars	Note No.	As at 31.03.15	As at 31.03.14
I		**EQUITY AND LIABILITIES**			
	1	**Shareholders' fund**			
		(a) Share capital	(1)	430	400
		(b) Reserves and surplus-	(2)	350	300
	2	**Non-current liabilities**			
		(a) Long-term borrowings	(3)	635	585
	3	**Current Liabilities**			
		(a)Other current liabilities	(4)	485	460
		(b) Short-term provisions	(5)	10	5
		Total		**1,910**	**1,750**
II		**ASSETS**			
	1	**Non-current assets**			
		(a) Fixed assets			
		(i) Tangible assets	(6)	630	650
	2	**Current assets**			
		(a) Inventories		740	800
		(b) Trade receivables		250	200
		(c) Cash and cash equivalents		290	100
		Total		**1,910**	**1,750**

Workings:

(Amount in ₹)

1. Share Capital	**As at 31.03.15**	**As at 31.03.14**
Equity share capital	430	400
Total	**430**	**400**

2. Reserve & Surplus	**As at 31.03.15**	**As at 31.03.14**
Retained earnings	350	300
Total	**350**	**300**

3. Long term Borrowings	As at 31.03.15	As at 31.03.14
Mortgage	535	585
Bank note	100	0
Total	**635**	**585**

4. Other Current Liabilities	As at 31.03.15	As at 31.03.14
Accounts payable	470	450
Interest payable	15	10
Total	**485**	**460**

5. Short term Provisions	As at 31.03.15	As at 31.03.14
Dividends payable	10	5
Total	**10**	**5**

6. Tangible Assets	As at 31.03.15	As at 31.03.14
Property, plant & equipment	920	900
Less: Accumulated depreciation	(290)	(250)
Total	**630**	**650**

Name of the Company: AB Ltd.

Profit and Loss Statement for the year ended: 31.03.2015 **(Amount in ₹)**

Particulars	Note No.	As at 31.03.15	As at 31.03.14
I. Revenue from operations		1,425	—
II. Other income	(1)	10	—
III. Total Revenue (I+II)		1,435	—
IV. Expenses:			
Cost of materials consumed		1,200	—
Finance costs	(2)	30	—
Depreciation and amortization expense	(3)	100	—
Total expenses		1,330	—
V. Profit before tax (VII – VIII)		105	—
VI. Tax expense: - Current tax		45	—
VII. Profit (Loss) for the period (XI + XIV)		60	—

Workings: **(Amount in ₹)**

1. Other Income	As at 31.03.15	As at 31.03.14
Gain on sale of old machine	10	—
Total	**10**	**—**

2. Finance Costs	As at 31.03.15	As at 31.03.14
Interest	30	—
Total	**30**	**—**

3. Depreciation and Amortization	**As at 31.03.15**	**As at 31.03.14**
Depreciation	100	—
Total	**100**	**—**

Notes:

- Dividends declared to shareholders were ₹10.
- New equity shares were sold at par for ₹ 30.
- Fixed assets were sold for ₹30. Original costs of these assets was ₹80 and ₹60 of accumulated depreciation has been charged to their original costs.
- The company borrowed ₹100 on a 10-year bank note — the proceeds of the loan were used to pay for new fixed assets.
- Depreciation for the year was ₹100 (accumulated depreciation of ₹40 and depreciation on sold assets ₹60).

(A) Calculate cash flow from operations using indirect method.
(B) Calculate total cash collections, cash paid to suppliers and other cash expenses.
(C) Calculate cash flow from operations using direct method.
(D) Calculate cash flow from financing activity, cash flow from investing activity and total cash flow.
(E) Calculate free cash flow to equity owners.
(F) Determine the impact on investing cash flow and financing cash flow have been if the company leased the new fixed assets instead of borrowing the money and purchasing the equipment. **[1.5+1+2+3+1.5+1]**

1(b). Assume that XYZ Construction Corp. has a contract to build a ship for ₹1,000 and a reliable estimate of the contract's total cost is ₹800.Project costs incurred by XYZ are as follows:

XYZ Project Costs:

Year	2012-13	2013-14	2014-15	Total
Cost incurred	₹400	₹300	₹100	₹800

Determine XYZ's net income from this project for each year using the percentage-of-completion and completed contract methods. **[10]**

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

2(a)(i). From the following balance sheet prepare common size statement.

	Amount (₹) 31.03.2014	Amount (₹) 31.03.2015
Shareholders' Fund		
Equity share capital (of ₹10 each)	7,20,000	7,20,000
Reserve & Surplus	2,88,000	5,46,000
Non-current Liabilities		
Long term debt	5,46,000	5,08,000

Current Liabilities		
Current Liabilities & Provisions	2,40,000	1,75,500
Total	**18,00,000**	**19,50,000**
Non-current Assets		
Fixed Assets	12,06,000	11,70,000
Current Assets		
Inventory	2,52,000	3,51,000
Debtors	1,80,000	1,95,000
Bank	1,62,000	2,34,000
Total	**18,00,000**	**19,50,000**

[10]

2(a)(ii). On 1st January 2014, EFG issued 10,000 5% convertible bonds at their par value of ₹ 50 each. The bonds will be redeemed on 1st January 2019. Each bond is convertible at the option of the holder at any time during the five year period. Interest on the bond will be paid annually in arrears.

The prevailing market interest rate for similar debt without conversion options at the date of issue was 6%.

At what value should the equity element of the hybrid financial instrument be recognised in the financial statements of EFG at the date of issue? **[5]**

2(b)(i). Using Altman's Model, compute the value of Z from the provided data (Balance Sheet extract):

Liabilities	₹	Assets	₹
Share Capital (@ ₹10 each)	2,00,000	Fixed Assets	4,20,000
Reserves & Surplus	60,000	Inventory	1,80,000
10% Debentures	3,00,000	Book Debts	70,000
Sundry Creditors	80,000	Loans & Advances	20,000
Outstanding Expenses	60,000	Cash at Bank	10,000
	7,00,000		7,00,000

Additional Information

(i) Market value per share ₹ 12.50.

(ii) Operating Profit (20% on sales) ₹ 1,40,000. **[10]**

2(b)(ii). How fixed assets are analysed in financial modeling? **[5]**

2(c). Krishna Toys Ltd. is manufacturing and selling three standard products (toys). The company has a standard cost system and analyses the variances between the budget and the actual periodically.

The summarized result for 2014-15 were as follows:

Product	Budget			Actual		
	Selling price per unit (₹)	Cost per unit (₹)	No. of units sold	Selling price per unit (₹)	Cost per unit (₹)	No. of units sold
Toys X	80	55	10,000	75	50	13,000
Toys Y	50	28	15,000	54	30	13,000
Toys Z	70	43	16,000	72	48	15,000

(a) Analyse the variance in profit into:
(i) Sales price variance;
(ii) Sales volume variance;
(iii) Cost variance;
(iv) Sales margin quantity variance;
(v) Sales margin mix variance. **[5×3=15]**

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

3(a). Consider two companies - X Company Limited and Y Company Limited. Both have announced their annual results for 2014-2015 on May 10, 2015 and as per the reported results both are having Profit After Tax (PAT) of ₹ 5,700 Lakhs and 120 Lakhs equity shares outstanding (face value of each share is ₹10). Both the companies having same networth of ₹ 28,500 Lakhs.

X Company Limited has growth plans in future and accordingly, it has decided to have a low payout of 40% as dividend. It is believed that its earnings will increase by present rate of growth every year in perpetuity. Assume that the company is having the required rate of return on equity of 15% a year.

Y Company Limited has growth plans in future but not very ambitious and due to that, it is going to have a dividend payout of 60%. It is believed that its earnings will increase by the present rate of growth every year in perpetuity. Assume that the company is having the required rate of return on equity of 13% a year.

Assume that both the companies are identical in all other aspects. Calculate P/E Ratio assuming that Constant Growth Model works. Also explain why a particular company is having higher P/E Ratio. **[8+2]**

3 (b). Y is interested in purchasing the business of X for which he is welling to pay a goodwill amount equal to four years purchase of maintainable profits for the years ending 31.3.2016 to 31.3.2019 The Revenues Statement for the year ending on 31.3.2012 to 31.3.2015 were under:

Revenue Statements

Particulars	2011-12	2012-13	2013-14	2014-15
Sales	5,00,000	7,00,000	9,00,000	11,00,000
Less: Cost of Goods Gold	(3,50,000)	(4,90,000)	(6,30,000)	(7,70,000)
Gross Profits	1,50,000	2,10,000	2,70,000	3,30,000

Less: Overheads	(1,00,000)	(1,40,000)	(1,80,000)	(2,20,000)
Net Profits	50,000	70,000	90,000	1,10,000

The following further information is given:
- Sales will increase by 25% each year over the increased figure of the earlier years.
- Cost of Goods sold will decline by 10% each year as compared to the earlier years.
- Overheads each year will increase by 2% as compared to the earlier years.

Calculate the value of goodwill. Income-tax may be ignored. **[10]**

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

4(a)(i). SHOAIB LTD. gives the following information:

Year	Company's Profitability Ratio	Cumulative Market's Size in next ten years (₹ In lakhs)	Cumulative Total market share enjoyed by other branded and non-branded products in next 10 years (₹ In lakhs)	PVF @15%
1	20%	1000	900	0.870
2	20%	1200	800	0.756
3	20%	1500	700	0.658
4	25%	2000	600	0.572
5	25%	2500	500	0.497
6	25%	3000	400	0.432
7	30%	3500	300	0.376
8	30%	4000	300	0.327
9	30%	5000	300	0.284
10	30%	5000	300	0.247

Weighted Average Capital Cost =15%
Determine the Value of Brand under the Market Oriented Approach. **[8]**

4(a)(ii). State the reasons and implication for restructuring of a firm. **[7]**

4(b)(i). An Aircraft Company has outstanding an issue of 8 percent convertible bonds that mature in 2023. Suppose the bonds were dated Oct. 1, 2013, and pay interest each April 1 and Oct1.

Complete the following effective amortization table through Oct. 1, 2015.
Bond data:
Maturity Value - ₹1,00,000
Contract interest rate-8%
Interest paid-4% semiannually, ₹4,000 (₹1,00,000 x .04)
Market interest rate at time of issue-9% annually, 4.5% semiannually
Issue price-9%
Required Amortization Table **[6]**

4(b)(ii). Find out the average capital employed of Khan Ltd. From its Balance Sheet as at 31st March, 2015:

Equity and Liability	₹ in lakhs	Assets	₹ in lakhs
(1) Shareholders Fund:		**(1) Non-Current Assets:**	
(a) Share Capital		**(a) Fixed Assets**	
(i) Equity Share Capital of ₹ 10 each	50.00	**(i) Tangible Assets:**	
(ii) 9% Preference Shares fully paid up	10.00	— Land and Building	25.00
(b) Reserve & Surplus		— Plant and Machinery	80.25
(i) General Reserve	12.00	— Furniture and Fixtures	5.50
(ii) Profit and Loss A/c	20.00	— Vehicles	5.00
		(b) Non-Current Investments	**10.00**
(2) Non-Current Liabilities:		**(c) Other Non-Current Assets**	
Long Term Borrowings		— Preliminary Expenses	0.50
(i) 16% Debentures	5.00		
(ii) 16% Term Loan	18.00	**(2) Current Assets:**	
(iii) Cash Credit	13.30	**(a) Inventories**	**6.75**
		(b) Trade Receivables	
(3) Current Liabilities:		— Sundry Debtors	4.90
(a) Trade Payables – Sundry Creditors	**2.70**	**(c) Cash and Cash Equivalents**	**10.40**
(b) Short Term Provision			
— Provision for Taxation(Net)	6.40		
— Proposed Dividend			
Equity Shares	10.00		
Preference Shares	0.90		
Total	**148.30**	**Total**	**148.30**

Non-trade investments were 20% of the total investments.
Balances as on 1.4.2014 to the following accounts were:
Profit and Loss account ₹ 8.70 lakhs, General reserve ₹ 6.50 lakhs. **[9]**

4 (c). Following are the financial statements for A Ltd. and B Ltd. for the current financial year. Both the firms operate in the same industry:

Balance Sheets **[Amount in Rupees]**

Particulars	A Ltd.	B Ltd.
Total current assets	14,00,000	10,00,000
Total fixed assets (net)	10,00,000	5,00,000
	24,00,000	15,00,000
Equity capital (of ₹ 10 each)	10,00,000	8,00,000
Retained earnings	2,00,000	--
14% Long-term debt	5,00,000	3,00,000

Total current liabilities	7,00,000	4,00,000
	24,00,000	15,00,000

Income statements

Particulars	A Ltd.	B Ltd.
Net sales	34,50,000	17,00,000
Cost of goods sold	27,60,000	13,60,000
Gross profit	6,90,000	3,40,000
Operating expenses	2,00,000	1,00,000
Interest	70,000	42,000
Earnings before taxes	4,20,000	1,98,000
Taxes (50%)	2,10,000	99,000
Earnings after taxes (EAT)	2,10,000	99,000

Additional information:		
Number of equity shares	1,00,000	80,000
Dividend payment ratio (D/P)	40%	60%
Market price per share (MPS)	₹ 40	₹ 15

Assume that the two firms are in the process of negotiating a merger through an exchange of equity shares. You have been asked to assist in establishing equitable exchange terms, and are required to -

I. Decompose the share price of both the companies into EPS and P/E components, and also segregate their EPS figures into return on equity (ROE) and book value/ intrinsic value per share (BVPS) components.

II. Estimated future EPS growth rates for each firm.

III. Based on expected operating synergies, A Ltd. estimates that the intrinsic value of B's equity share would be ₹ 20, per share on its acquisition. You are required to develop a range of justifiable equity share exchange ratio that can be offered by A Ltd. to B Ltd's shareholders. Based on your analysis in parts I and II would you expect the negotiated terms to be closer to the upper, or the lower exchange ratio limits? Why?

IV. Calculate the post-merger EPS based on an exchange ratio of 0.4:1 being offered by A Ltd. Indicate the immediate EPS accretion or dilution, if any, that will occur for each group of shareholders.

V. Based on a 0.4:1 exchange ratio, and assuming that A's pre-merger P/E ratio will continue after the merger, estimate the post-merger market price. Show the resulting accretion or dilution in pre-merger market price. **[4+2+3+3+3]**