P20 – Financial Analysis and Business Valuation

Test Paper—IV/20/FABV/2012/T-1

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

Section A – Financial Analysis [50 marks]
(Answer all the questions)

Question 1

(a) What is Financial Statement?

(b) "Financial statement is essentially interim report." — Analyze it form the viewpoint of limitations of Financial Statement Analysis. **[2+3]**

Question 2

	Firm P (₹)	Firm Q (₹)	Firm R (₹)
Debt Capital	5,00,000	1,00,000	3,00,000
Equity Share Capital	1,00,000	5,00,000	3,00,000
Total Capital	6,00,000	6,00,000	6,00,000

Find out the Gear Ratio and also make a suitable analysis based on this ratio. **[7]**

Question 3

(a) The information is available from Zed Co.'s Balance Sheet at the year ended on 31.03.2013 as follows:

	₹
Deferred taxes	86,000
Investment in Ayva Co., at fair value	1,40,000
Retained earnings	5,75,000
Preference share capital, ₹10 par value	2,00,000
Equity share capital, ₹10 par value	6,50,000
Accumulated other comprehensive income	85,000

The investment in Ayva Co. had an original cost of ₹1,60,000. Assuming the investment in Ayva is classified as available-for-sale, Zed's total owners equity at the year-end is closet to:

(i) ₹15,10,000
(ii) ₹15,30,000
(iii) ₹14,90,000
(iv) ₹14,24,000.

(b) Write about 'structures notes' with emphasis may be given on 'reverse inquiry'.

[4+4]

Question 4

(a) How to calculate Free Cash Flow?

(b) A company finds on 18th April, 2013 that it is short of funds with which to implement its programme of expansion. On 1st April, 2012 it had a credit balance of ₹1,80,000. From the following information, prepare a statement for the Board of Directors to show how the overdraft of ₹68,750 as on 31st March, 2013 has arisen:

Figures as per Balance sheet
(As on 31st March)

Particulars	2011-12	2012-13

	₹	₹
Fixed assets	7,50,000	11,20,000
Stock and stores	1,90,000	3,30,000
Debtors	3,80,000	3,35,000
Bank Balance	1,80,000 (cr.)	68,750(O/D)
Trade creditors	2,70,000	3,50,000
Share capital (₹100 each)	2,50,000	3,00,000
Bills receivable	87,500	95,000

The profit for the year ended 31st March, 2013 before charging depreciation and taxation amount to ₹2,40,000. 5,000 shares were issued on 1st April, 2013 at a premium of ₹5 per share ₹1,37,500 were paid in June, 2012 by way of income tax. Dividend was paid as follows:

2011-12 (final) on the capital on 31.03.2012 at 10 per cent less tax.

2012-13 (interim) 5 per cent free of tax.

[2+8]

Question 5

(a) Describe Equity Multiplier in regards to Du Pont Analysis.

(b) Given the following information for ABC Company at the end of 2012. Determine balances for the income statements and the balance sheet and also prepare Du Pont Control Chart.

Particulars	₹
Net sales	1,00,000
Debt- assets ratio	0.6
Debtor's turnover ratio based on net sales	2
Net profit margin	5%
Gross profit margin	25%
Inventory turnover ratio	1.25
Return on Total resources	2%
Fixed assets turnover ratio (on sales)	0.8

Particulars of Income statement for the year ending on 31st march 2012.

Sales	₹1,00,000	Earnings before tax	₹………..
Cost of goods sold	________	Taxes @ 50%	…………..
Gross profit	________		________
Other expenses		Earnings after tax	________

Balance sheet as on 31st March 2012.

Liabilities	₹	Assets	₹
Equity	…………..	Net fixed assets	…………..
Long-term debt	……….	Inventory	…………..
Short- term debt	50,000	Debtors	…………..
		Cash	……………
Total	________	Total	________

[2+8]

Question 6

(a) How pension liability is calculated in Balance Sheet?

(b) Analyze the price-earnings ratio for a high growth firm with the help of Dividend Discount Model.

[4+6]

Section B – Business Valuation [50 marks]

Question 7

(a) Explain the term 'fair market value'. State the assumptions on which it is based.

(b) Hindustan Lever Ltd. is run and managed by an efficient team that insists on reinvesting 60% of its earnings in projects that provide an ROE (Return of Equity) of 10%, despite the fact that the firm's capitalization rate (K) is 15%. The firm's current year's earnings is ₹ 10 per share.

i. At what price will the stock of HLL sell?
ii. What is the present value of growth opportunities?
iii. Why should such a firm be a takeover target?

(c) The Balance Sheet of DST Ltd. as on 31st March, 2013 is as under:

(All figures are in lacs)

Liabilities	₹	Assets	₹
Equity Shares ₹ 10 each	3,000	Goodwill	744
Reserves (including provision for taxation of ₹ 300 lacs)	1,000	Premises and Land at cost	400
		Plant and Machinery	3,000
5% Debentures	2,000	Motor Vehicles (purchased on 1.10.12)	40
Secured Loans	200		
Sundry Creditors	300	Raw materials at cost	920
Profit & Loss A/c		Work-in-progress at cost	130
Balance from previous B/S 32		Finished Goods at cost	180
Profit for the year (After taxation) 1,100		Book Debts	400
	1,132	Investment (meant for replacement of Plant Machinery)	1,600
		Cash at Bank and Cash in hand	192
		Discount on Debentures	10
		Underwriting Commission	16
	7,632		7,632

The resale value of Premises and Land is ₹ 1,200 lacs and that of Plant and Machinery is ₹ 2,400 lacs. Depreciation @ 20% is applicable to Motor Vehicles. Applicable depreciation on Premises and Land is 2%, and that on Plant and Machinery is 10%. Market value of the Investments is ₹ 1,500 lacs. 10% of book debts are bad. In a similar company the market value of equity shares of the same denomination is ₹ 25 per share and in such company dividend is consistently paid during last 5 years @ 20%. Contrary to this, DST Ltd. is having a marked upward or downward trend in the case of dividend payment.

Past 5 years' profits of the company were as under:

2007-08	₹ 67 lacs
2008-09	(-) ₹ 1,305 lacs (loss)
2009-10	₹ 469 lacs

2010-11 ₹ 546 lacs

2011-12 ₹ 405 lacs

The unusual negative profitability of the company during 2008-09 was due to the lock out in the major manufacturing unit of the company which happened in the beginning of the second quarter of the year 2007-08 and continued till the last quarter of 2008-09.

Value the Goodwill of the Company on the basis of 4 years' purchase of the Super Profit. (Necessary assumption for adjustment of the Company's inconsistency in regard to the dividend payment may be made by the examinee).

[3+(2+2+3)+10=20]

Question 8

(a) What drives M & A activity? What are its key facilitators in India? What are its benefits?

(b) What are the possible causes of Horizontal and Vertical Mergers? What factors are considered for selecting a target in a business acquisition strategy?

(c) The summarized Balance Sheet of R Co. Ltd as on December, 2012 is given below:

Liabilities	**₹**	**Assets**	**₹**
Equity Share capital (2,00,000 @₹10 each)	20,00,000	Fixed assets Investments	19,00,000 1,00,000
13% Pref. share capital	1,00,000	Current assets:	
Retained earnings	4,00,000	Inventories 500000	
12% Debentures	3,00,000	Debtors 400000	
Current Liabilities	2,00,000	Bank 100000	10,00,000
	30,00,000		30,00,000

Negotiations for takeover of R Ltd. result in its acquisition by A Ltd. The purchase consideration consists of (i) ₹ 330000, 13% debentures of A Ltd. for redeeming the 12% debentures of R Ltd., (ii) ₹ 1,00,000, 12% convertible preference shares in A Ltd. for the payment of preference share capital of R Ltd. (iii) 1,50,000 equity shares of A Ltd. to be issued at its current market price of ₹ 15 (iv) A Ltd. would meet dissolution expenses of ₹ 30,000.

The break-up figures of eventual disposition by A Ltd. of un-required assets and liabilities of R Ltd.are:

Investments	₹ 1,25,000
Debtors	₹ 3,50,000
Inventories	₹ 4,25,000
Payment of Current Liabilities	₹ 1,90,000.

The project is expected to generate yearly operating CFAT of ₹7,00,000 for 6years. It is estimated that fixed assets of R Ltd. would fetch ₹ 3,00,000 at the end of 6th year.

The firm's cost of capital is 15%. Comment on the financial prudence of merger decision of A Ltd. (PV at 15% rate of discount is 1st year 0.870; in 2nd year 0.756; in 3rd year 0.658; in 4th year, 0.572; in 5th year 0.496; and 6th year 0.432.) **[4+4+7=15]**

Question 9

(a) A firm had paid dividend at ₹ 2 per share last year. The estimated growth of the dividends from the company is estimated to be 5% p.a. Determine the estimated market price of the equity share if the estimated growth rate of dividends—

(i) rises to 8% and

(ii) falls to 3%.

Also, find out the present market price of the share given that the required rate of return of the equity investors is 15.5%.

(b) Simplex Ltd. is trying to estimate its debt ratio. It has 1 million equity shares outstanding, trading at ₹ 50 per share. Simplex has ₹ 250 million in straight debt outstanding (with a market interest rate of 9%). It has two other securities outstanding:

(i) 10,000 convertible bonds, with a coupon rate of 6% and 10 years to maturity.

(ii) 2,00,000 warrants outstanding, conferring on its holders the right to buy stock in the Simplex Ltd. At ₹ 65 per share

These warrants are trading at ₹ 12 each. You are required to calculate the debt ratio in market value terms.

(c) What are the risk factors in valuation of intellectual property fixed assets?

(d) Distinguish between Intrinsic Value and Time Value of an 'option' with suitable examples.

[3+3+5+4=15]

OR

Question 10

(a) A company with a turnover of ₹ 250 crores and an annual advertising budget of ₹ 2 crore had taken up the marketing of a new product. It was estimated that the company would have a turnover of ₹ 25 crores from the new product. The company had debited to its Profit and Loss account the total expenditure of ₹ 2 crore incurred on extensive special initial advertisement campaign for the new product. Is the procedure adopted by the company correct?

(b) A Pharma Company spent ₹ 33 lakhs during the accounting year ended 31st March, 2012 on a research project to develop a life saving drug. Experts are of the view that it may take four years to establish whether the drug will be effective or not and even if found effective it may take two to three more years to produce the medicine, which can be marketed. The company wants to treat the expenditure as deferred revenue expenditure.

(c) The following is the Balance Sheet of N Ltd. as on 31st March, 2011:

Balance Sheet

Liabilities	₹	Assets	₹
4,00,000 Equity shares of ₹10 each fully paid	40,00,000	Goodwill	4,00,000
13.5% Redeemable preference shares of ₹100 each fully paid	20,00,000	Building	24,00,000
General Reserve	16,00,000	Machinery	22,00,000

Profit and Loss Account	3,20,000	Furniture	10,00,000
Bank Loan (Secured against fixed assets)	12,00,000	Vehicles	18,00,000
Bills Payable	6,00,000	Investments	16,00,000
Creditors	31,00,000	Stock	11,00,000
		Debtors	18,00,000
		Bank Balance	3,20,000
		Preliminary Expenses	2.00,000
	1,28,20,000		1,28,20,000

Further information:

(i) Return on capital employed is 20% in similar businesses.

(ii) Fixed assets are worth 30% more than book value. Stock is overvalued by ₹ 1,00,000, Debtors are to be reduced by ₹20,000. Trade investments, which constitute 10% of the total investments, are to be valued at 10% below cost.

(iii) Trade investments were purchased on 1.4.2010. 50% of non-Trade Investments were purchased on 1.4.2009 and the rest on 1.4.2008. Non-Trade Investments yielded 15% return on cost.

(iv) In 2008-2009 new machinery costing ₹2,00,000 was purchased, but wrongly charged to revenue. This amount should be adjusted taking depreciation at 10% on reducing value method.

(v) In 2009-2010 furniture with a book value of ₹ 1,00,000 was sold for ₹60,000.

(vi) For calculating goodwill two years purchase of super profits based on simple average profits of last four years are to be considered. Profits of last four years are as under: 2007-2008 ₹16,00,000, -2008-2009 ₹18,00.000, 2009-2010 ₹ 21,00,000, 2010-2011 ₹22,00,000.

(vii) Additional depreciation provision at the rate of 10% on the additional value of Plant and Machinery alone may be considered for arriving at average profit.

Find out the intrinsic value of the equity share. Income-tax and Dividend tax are not to be considered. **[3+3+9=15]**

Test Paper—IV/20/FABV/2012/T-2

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

Section A – Financial Analysis [50 marks]

(Answer all the questions)

Question 1

(a) Compute the trend ratios from the following data and comment.

Year	Sales (₹)	Inventories (₹)	Receivables (₹)
2008	3,25,000	1,25,000	75,000
2009	3,50,000	1,75,000	1,00,000
2010	3,75,000	2,25,000	1,25,000
2011	3,85,000	2,75,000	1,50,000
2012	4,00,000	3,15,000	1,75,000

(b) What types of attributes are necessary for a model to become good?

[4+3]

Question 2

(a) "Under dirty-surplus accounting the income in the income statement is not 'clean', it is not complete." — Describe Dirty-Surplus Accounting in this context.

(b) How to reformulate the statement of owners' equity?

[5+5]

Question 3

(a) From the following informations available, compute the value of Z using Altman's model:

Balance Sheet (Extracts)

Liabilities	₹	Assets	₹
Share Capital (@ ₹100 each)	1,50,000	Fixed Assets	5,20,000
Reserves & Surplus	1,10,000	Book Debts	70,000
10% Debentures	4,00,000	Inventory	1,80,000
Sundry Creditors	80,000	Loans & Advances	10,000
Outstanding Expenses	60,000	Cash at Bank	20,000
	8,00,000		8,00,000

Additional Information

i. Market value per share ₹ 16.50.
ii. Operating Profit (20% on sales) ₹ 1,40,000.

(b) Ananda purchased at par a bond with a face value of ₹1,000. The bond had five years to maturity and a 10 per cent coupon rate. The bond was called two years later for a price of ₹1,200, after making its second annual interest payment. Ananda then reinvested the proceeds in a bond selling at its face value of ₹1,000, with three years to maturity and a 7per cent coupon rate. What was Ananda's actual YTM over the five- year period?

(c) Following figures have been extracted from the records of a company:

Year	2011	2012
Sales (₹)	4,20,000	9,60,000
Units Sold	30,000	24,000

Account for changes in sales value due to changes in sales quantity, selling price and both.

[5+2+3]

Question 4

(a) "The closer the amount of net earnings is to the amount of cash flow in the short run, the higher the perception of the quality of earnings." — Analyze the line on Quality of Earnings in the context of Cash Flows.

(b) STB is preparing its consolidated cash flow for the year ended 31st October 2012. Its consolidated opening balance at net book value for property, plant and equipment was ₹1,96,000. during the year the STB group disposed of plant for proceeds of ₹8,500 that had cost ₹62,000 several years ago and which was fully written down at 1st November 2011. There were no other disposals. The depreciation charge for the year ended 31st October 2012 was ₹24,000. The consolidated closing book value for property, plant and equipment was ₹2,54,000.

What was the cash outflow in respect of purchases of property, plant and equipment for inclusion in the consolidated cash flow statement of STB group for the year ended 31 october 2012?

(i) ₹34,000
(ii) ₹44,500
(iii) ₹82,000
(iv) ₹1,15,000.

[4+3]

Question 5

(a) How does operating liabilities lever up the return on net operating assets?

(b) A firm has sales of ₹10,00,000, variable cost of ₹7,00,000 and the fixed cost of ₹2,00,000 and debt of ₹5,00,000 at 10% rate of interest. What are the operating and financial leverage leverages? If the firm wants to double its Earnings before interest and tax (EBIT), how much of a rise in sales would be needed on a percentage basis?

[3+5]

Question 6

(a) Write down the formula which calculates the change in residual earnings.

(b) From the following information of M/S Tista Ltd., prepare an analysis of growth. All the Balance Sheet figures are averaged for the year. The required rate of return is 9.5%.

	2012 (₹ in million)	2011 (₹ in million)
Net financial obligations	545	730
Net operating assets	8,030	9,258
Shareholders' Equity	7,485	8,528
Sales	10,040	12,474
Operating income	1,236	875

Return on equity (ROE)	16.51%	10.15%
Return on net operating assets (RNOA)	15.39%	9.45%
Profit margin (PM)	12.31%	7.01%
Asset turnover (ATO)	1.25	1.35
Financial leverage (FLFV)	0.02	0.07

[2+6]

Section B – Business Valuation [50 marks]

Question 7

(a)Under the Discounting Cash Flow Method, companies are valued by discounting free cash flows. What do you understand by free cash flows?

(b)Discuss the different methods of Brand Valuation. Explain cost-based approach of Brand Valuation. In valuing, a firm should you use the marginal or effective tax rate?

[2+8=10]

Question 8

(a) Why might discounted cash flow valuation be difficult to do for the following types of firms viz; (i) Private firms, (ii) Firms with patent or product options (iii) Cyclical firms during recession (iv) Firms in trouble (v) Firms in process of restructuring (vi) Firms with unutilized assets.

(b) Why do Companies want to measure Intellectual Capital? List the popular approaches to IC measurement.

(c) From the books of BCA Ltd. following information is available. Find the value of its equity shares based on ROCE (return on capital employed) method.

₹ in lacs

Year	Capital employed	Profit
2008	40	6
2009	52	10
2010	66	12
2011	70	16
2012	82	22

The expected rate of return in market is 15%.

[6+8+6 = 20]

Question 9

(a) Explain the various methods of payment in case of mergers and amalgamations.

(b) Who are the participants in the Merger and Acquisition Process?

(c)(i) Why do M & A take place? (ii) Why do they fail?

(d) XY Pvt. Ltd., a retail florist, is for sale at asking price of ₹31,00,000. You have been contacted by a potential buyer who has asked you to give him opinion as to whether the asking price is reasonable. The potential buyer has only limited information about XY Pvt. Ltd He does not know that annual gross sales of XY Pvt. Ltd is about ₹ 4100,000 and that last year's tax return reported an annual profit of ₹ 420,000 before tax.

You have collected the following information from financial details of several retail florists that were up for sale in the past:

TABLE I

	Price- to- sale(P/S) Ratio	Price-to-earnings(P/E)
Number of firms	38.00	33.00
Mean Ratio	0.55	3.29
Coefficient of Variation	0.65	1.52
Maximum Ratio	2.35	6.29

TABLE II Top 10 Players (in descending P/S order)

Firm	P/S Ratio	P/E Multiple
1	2.35	5.65
2	1.76	6.29
3	1.32	5.31
4	1.17	4.60
5	1.09	3.95
6	1.01	3.25
7	0.96	3.10
8	0.85	2.96
9	0.72	2.90
10	0.68	2.75

Offer your opinion on reasonableness of the asking price.

[4+4+5+7 = 20]

OR

Question 10

(a)) List defensive strategies available to a company in case of hostile takeover.

(b) From the following data calculate the cost of merger:

i) When the merger is financed by cash ii) when the merger is financed by stock

Particulars	Firm A	Firm B
Market price per share (₹) Number of shares Market value of firm (₹)	60 1,00,000	15 50,000

Firm A intends to pay ₹ 10,00,000 cash for B if B's market price reflects only its value as a separate entity.

(c) The directors of Hi Value Fund are keen on acquiring the business of G Ltd. They have approached you given your valuation expertise for mergers and acquisitions for help. G Ltd. has an invested capital of ₹ 50 million. Its return on invested capital (ROIC) is 12% and its weighted average cost of capital (WACC) is 11%. The expected growth rate in G Ltd.'s invested capital will

be 20% for the first three years, 12% for the following two years and 8% thereafter forever. The forecast of G Ltd's free cash flows is given below:

(₹ in Million)

Year	1	2	3	4	5	6	7
Invested Capital	50	60	72	86.40	96.77	108.38	117.05
Net operating profit less adjusted tax	6	7.20	8.64	10.37	11.61	13.00	14.05
Net investment	10	12.00	14.40	10.37	11.61	8.67	9.36
Free cash flow	(-)4.00	(-)4.80	(-)5.76	-	-	4.33	4.69
Cost of Capital (%)	11	11	11	11	11	11	11
Capital charge	5.50	6.60	7.92	9.50	10.64	11.92	12.88
Economic Profit	0.50	0.60	0.72	0.87	0.97	1.08	1.17
Growth rate (%)	20	20	20	12	12	8	8

Value G Ltd. under (i) Discounted cash flow method and (ii) present value of economic profit method. Can the consideration paid for the shares exceed the valuation, if so, under what circumstances? **[4+6+10 = 20]**