FINAL EXAMINATION

December 2016

P–20(FABV)
Syllabus 2012

Financial Analysis & Business Valuation

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

The figures in the margin on the right side indicate full marks.

Please: (1) Answer all bits of a question at one place.
(2) Open a new page for answer to a new question.

Section - A

In this section Answer **Question No.** 1(a) *and* 1(b) *which is compulsory.*

1. (a) Answer the following: 2×6=12

(i) Star Ltd. is presently operating at 40% margin of safety (MOS). Compute its Degree of Operating Leverage (DOL).

(ii) Compute DSCR from the following annual data: [₹ Lakhs] PAT 240, Depreciation 80, Interest expense 80 and principal repayment installment 120.

(iii) Can Net Working Capital of a firm be negative? Support your answer with necessary reason(s).

(iv) If a company has ROE (Return on Equity) of 24%, and its Market to Book Value Ratio is 3·6 : 1, then you are required to determine P/E ratio.

(v) The current ratio of X Ltd. is 2 : 1, while quick ratio is 1·80 : 1. If the current liabilities are ₹ 40,000, calculate the value of stock.

(vi) The projected cash operating expenditure of a company for the next year is ₹ 1,82,500. It has quick current assets amounting to ₹ 40,000. Determine the defensive-interval ratio and comment.

(b) State whether the following statements are true or false: 1×8=8

(i) If EPS (Earnings Per Share) of a firm is negative, then one should take the absolute value of it (that is positive value of EPS) while calculating P/E Ratio.

(ii) If a bond is trading at a discount and assume that its maturity has been increased from 8 years to 10 years, then its price will increase in the bond market.

(iii) Tobin's Q compares the market value of a company with the book value of its assets.

(iv) Beta (β) represents systematic risk.

(v) Higher risk firms will have lower Price Earnings ratio than lower risk firms.

(vi) The higher the Z-Score, there is a greater possibility of bankruptcy.

(vii) Realistic, error free and flexible are not the attributes of a good financial model.

(viii) According to basic valuation model the value of a financial asset is present value of its expected future cash flows.

Section - B

In this section Answer any five *questions from the following.*

2. (a) Ms. Nisha is an avid investor in fixed income securities. Her portfolio of Bond does not have bonds from AAA rated companies. She is considering purchase of an AAA rated Bond. Two such bonds of AAA rated companies, Bond-A and Bond-B are available in the market that have following features:

	Bond-A	Bond-B
Face Value (₹)	100	100
Coupon rate per annum	15%	12%
Periodicity of coupon	Semi-annual	Semi-annual
Time remaining for maturity	3 years	4 years
Current Market Price (₹)	110	120

Her expectation of return from the investment in AAA rated bonds is 10% p.a. which is slightly above the yields in the government securities.

Ms. Nisha is indifferent to the investment horizon of 3 or 4 years.

Required:

Which of the Bonds should she (Ms. Nisha) buy and why?

[Given: PVIFA (5%, 6 periods) = present value of annuity of ₹ 1 received for 6 periods discounted at the rate of 5% per period = 5·0757, PVF (5%, 6 periods) = present value of ₹ 1 received at the end of 6 periods discounted at the rate of 5% per period = 0·7462.

PVIFA (5%, 8 periods) = present value of annuity of ₹ 1 received for 8 periods discounted at the rate of 5% per period = 6·4632, PVF (5%, 8 periods) = present value of ₹ 1 received at the end of 8 periods discounted at the rate of 5% per period = 0·6768.] 6

(b) The Balance Sheets of MARAS LTD. for the years ended on 31.03.2015 and 31.03.2016 are as follows:

(Amount in ₹ Lakh)

	As at 31.03.15	As at 31.03.16
Equity & Liabilities		
Shareholder's Fund:		
Share capital	696·60	726·70
Equity Share suspense	30·07	--
Equity Share warrants	--	841·20
Reserve & Surplus	31,256·89	39,156·40
Non-Current Liabilities:		
Secured Loans	4,784·56	3,300·09
Unsecured Loans	9,128·31	14,939·75
Deferred Tax liabilities	3,491·00	3,936·27
Current Liabilities:		
Other current liabilities	8,432·77	10,522·73
Provisions	856·44	1,496·31
	58,676·64	**74,919·45**
Assets		
Non-current assets	--	--
Fixed Assets (Net)	31,830·23	30,941·81
Capital work in progress	3,764·07	11,502·92
Non-Current Investment:		
Investment	8,125·67	11,031·80
Current Assets:		
Inventories	6,068·25	7,123·77
Trade receivables	1,866·21	3,113·79
Cash and bank balance	917·68	2,140·03
Other current assets	1·53	36·27
Loans and advances	6,103·00	9,029·06
	58,676·64	**74,919·45**

Required:

(i) Prepare the Common-Size Balance Sheet of Maras Ltd.

(ii) Present and interpret your observations on the common-size Balance Sheet 7+3=10

3. (a) Balance Sheet of AKANSHA LTD. as on 31.03.2015 and 31.03.2016 are as follows:

(Amount in ₹ Lakh)

	As at 31.03.15	As at 31.03.16
Equity & Liabilities		
Shareholder's Fund		
Share capital	600·00	600·00
Reserves & Surplus	450·00	480·00
Non-Current Liabilities:		
Long-term Borrowings:		
6% debentures (Unsecured)	150·00	150·00
Mortgage on freehold property	54·00	28·50
Current Liabilities:		
Trade Payables	90·00	90·00
Proposed dividend (Subject to TDS)	45·00	46·50
Provision for taxation	42·00	75·00
Secured overdraft (by a floating charge on assets)	30·00	165·00
	1,461·00	**1,635·00**
Assets		
Non-Current Assets:		
Freehold property	450·00	480·00
Plant & Machinery (Net)	270·00	330·00
Non-Current Investments:		
Unquoted shares-investment	300·00	300·00
Quoted shares-investment	225·00	225·00
(Market value ₹ 240 lakh in 2015 and ₹ 300 lakh in 2016)		
Current Assets:		
Inventories	105·00	150·00
Trade receivables	90·00	150·00
Cash at bank	21·00	--
	1,461·00	**1,635·00**

The following additional information for the year 2015-2016 is relevant:

Credit Sales	₹ 1,350 lakh
Credit Purchase	₹ 1,040 lakh
Overheads	₹ 171·50 lakh
Depreciation on Plant & Machinery	₹ 35 lakh
Dividend for 2014-15 was paid in full.	
Amount paid towards taxation for the year 2014-15	₹ 43 lakh

Note: The interest on Mortgage Loan is to be ignored.

You are required to prepare a statement of cash flows for the year ended 31st March, 2016 under Indirect method. 10

(b) What are the internal factors responsible for corporate distress? 4

(c) A firm's current assets and current liabilities are ₹ 16,000 and ₹ 10,000 respectively. How much can it borrow on a short term basis to purchase inventories without reducing the Current Ratio below 1·25? 2

4. The following are the summarized Balance Sheet and Profit & Loss statement of MEGLOW Ltd.

Balance sheet as at 31st March, 2016 (Amount in ₹ Lakh)

	As at 31.03.16
Equity & Liabilities	
Shareholder's Fund:	
Share Capital:	
Paid up capital (10000000 equity shares of ₹ 10 each fully paid)	1,000
Reserves & Surplus	
Retained Earnings	300
Non-Current Liabilities:	
Long-term borrowings:	
Debentures	1,750
Current Liabilities:	
Trade payables	450
Other current liabilities	250
Total	**3,750**
Assets	
Non-Current Assets:	
Fixed assets (Net)	2,000
Current Assets:	
Inventory	1,000
Trade Receivables	437
Cash and cash equivalents	125
Other current assets	188
Total	**3,750**

Profit & Loss statement for the year ended 31st March, 2016 (Amount in ₹ Lakh)

Net Sales		4,000·00
Less: Cost of goods sold		3,275·00
Gross margin		725·00
Less: Administrative and selling expenses	100·00	
Less: Finance Costs (interest expenses)	112·50	
Total	212·50	212·50
Earnings before tax		512·50
Less: Tax paid		179·38
Earnings after tax		333·12

The following Additional Information is available:

Market price per share (₹)	30
Earning per share (EPS) (₹)	3·3312
Industry's average Ratios are:	
Quick ratio	1·80 : 1
Current ratio	2·40 : 1
Sales to Inventory	8 times
Average collection period	38 days
Interest coverage ratio	7
Profit margin	7%
Debt to Assets Ratio	40%
Price to earning ratio	16
Return on Total Assets	10%

MEGLOW Ltd. would like to borrow ₹ 125·40 lakh from HDFD Bank for less than a year.

Required:

(i) Evaluate the company's current financial position by calculating ratios that you feel would be useful for the Bank's evaluation.

(ii) Do you think, the bank should grant the loan? 9+7=16

5. (a) The following information is provided in relation to the acquiring firm M Ltd. and the target firm P Ltd.:

Particulars	M Ltd.	P Ltd.
Earnings after tax (₹)	200 lakhs	40 lakhs
Number of shares outstanding	20 lakhs	10 lakhs
P/E ratio	10	5

Required:

(i) What is the swap ratio in terms of current market price?

(ii) What is the EPS of M Ltd. after acquisition?

(iii) What is the expected market price per share of M Ltd. after acquisition assuming that P/E ratio of M Ltd. remains unchanged?

(iv) Determine the market value of the merged firm. 12

(b) A Ltd. is planning to acquire T Ltd. and the following information is provided in relation to the acquisition about both the companies:

Particulars	A Ltd.	T Ltd.
Profit after tax (₹ in lakhs)	250	50
Number of shares outstanding (in lakhs)	20	10
P/E ratio	16	12

Required:

(i) What will be the swap ratio if it is to be determined on the basis of market prices?

(ii) Assuming that the swap ratio is on the basis of market price, what will be the market value of A Ltd. after acquisition if the merged entity is expected to have a P/E ratio of 20? 2+2=4

6. (a) Calculate the expected rate of return of the security from the following information:

(i) Beta of a security is 0·5; Expected rate of return on portfolio is 15% p.a.; Risk free rate of return is 6% p.a.

(ii) If another security has an expected rate of return of 18% p.a.; what would be its Beta? 3+3=6

(b) Determine which of the following two mutually exclusive projects should be selected if they are (i) one-off investments or (ii) if they can be repeated indefinitely: 10

Particulars	Project A	Project B
Investment (₹)	40,000	60,000
Life (years)	4	7
Annual net cash inflows (₹)	15,000	16,000
Scrap Value (₹)	5,000	3,000

Cost of capital is 15% p.a. Ignore taxation. The present value of annuity of ₹ 1 for four years and seven years at 15% p.a. are respectively 2·8550 and 4·1604. Discounting factor at 15% p.a. at four years and seven years are respectively 0·5718 and 0·3759.

7. (a) Kovith Ltd. is contemplating to sell a copyright of a book titled 'Valuation' to another publisher. You are required to estimate the value of the copyright from the following data:

The book is expected to generate ₹ 2,50,000 in after-tax cash flows each year for the next three years and ₹ 1,50,000 a year for subsequent two years. These are the net cash flows after meeting all expenses like royalties, promotional expenses and production costs. About 60% of these cash flows are from bulk orders of large firms stable and predictable, while the rest is from small orders unstable and unpredictable. The cost of capital to be applied to stable cash flows is 8% and to unstable cash flows is 12%. 6

Discounting Factor	Year 1	Year 2	Year 3	Year 4	Year 5
8%	0·9259	0·8573	0·7938	0·7350	0·6806
12%	0·8929	0·7972	0·7118	0·6355	0·5674

(b) Water Ltd. acquired 100% of Air Ltd. for ₹ 4,000 lakhs. As on the date of acquisition, the net assets of the companies were:

	(₹ lakhs)	
	Water Ltd.	Air Ltd.
Tangible Fixed Assets	2800	2400
Brand valued by Management	200	600
Net Current Assets	900	700

Compute goodwill on acquisition under the following situations:

(i) Ignore brand value

(ii) Consider brand value 2+2=4

(c) Calculate value per share from the following current year data: 6

Earnings per share : ₹ 50

Capital Expenditure per share : ₹ 40

Depreciation per share : ₹ 36

Increase in Non-cash working capital per share : ₹ 16

Debt financing ratio : 0·25

FCFF is expected to grow at 4% p.a. The Beta for stock is 1·1, Market return 14% p.a. and Treasury bond interest rate is 8% p.a..

8. Write short notes on *any four* of the following: 4×4=16

(a) Financial Modeling

(b) Shareholder Value Analysis

(c) Du Pont Analysis

(d) Valuing Synergy

(e) Distress Prediction