FINAL EXAMINATION

December 2014

F–P18(BVM)

Syllabus 2008

Business Valuation Management

Time Allowed: 3 Hours

Full Marks: 100

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

Answer Question No. 1 *which is compulsory carrying 25 marks and* any five *from the rest.*

1. (a) State whether the following statements are true or false. 1×5=5

(i) As per Capital Asset Pricing Model (CAPM), the only relevant risk to price a security is Systematic Risk and not both Systematic as well as Unsystematic Risk.

(ii) One of the consequences of Efficient Market Hypothesis (EMH) is that the market will always have equilibrium price of a company's share as determined by its fundamentals.

(iii) The method of capitalization of earnings for valuation of a business assumes constant earnings for infinite time.

(iv) Relative valuation is much more likely to reflect market perceptions and moods than DCF valuation.

(v) A firm with high return on equity is likely to command higher stock price for high payout ratio than for a low payout ratio.

(b) Fill in the blanks by using the words/phrases given in the brackets. 1×10=10

(i) A theory of Mergers and Acquisitions that explains the result of the winner's curse, causing a bidder to overpay is called _________. (Synergy/Hubris/Agency)

(ii) If a bond of a company is trading at a premium in the market then its yield-to-maturity will be _________ its current yield. (more than/less than/same as)

(iii) A ratio that presents willingness of the stock market to pay for one rupee of earning per share is called _________. (Price to Earnings Ratio/Earnings to Price Ratio/Price to Net Profit Ratio)

(iv) Net asset value relies on _________. (accounting value/economic value)

(v) The _________ can value the company's flexibility to alter its initial operating strategy in order to capitalize on favourable future growth opportunities or to react so as to mitigate losses. (Real option technique approach/DCF approach)

(vi) A business is supposed to have a value for its performances _________. (done in past/expected in future)

(vii) Relative valuation approach is also known as _________ approach. (market/income)

(viii) A firm having positive EAT but negative EVA is actually _________ Value. (creating/destroying)

(ix) CAPM helps in determining _________ of return. (actual rate/required rate)

(x) If capitalization rate is reduced by growth rate, the Cash Flows should also be reduced by ________ . (capital expenditure/dividend payment)

(c) In each of the questions given below one out of the four options is correct. Indicate the correct answer.
2×5=10

(i) Company A has a beta of 0.4 and the cost of equity is 10% while Company B has a beta of 1.2 and the cost of equity is 18%, the prevailing risk free rate and market return are

(A) 6%, 12%

(B) 6%, 16%

(C) 7%, 17%

(D) None of the above

(ii) Which one of the following is not a measure taken by a target firm to avoid acquisition?

(A) Poison Puts

(B) Poison Calls

(C) Golden Parachute

(D) Flip Over Pill

(iii) If higher the risk free interest rate, then value of the European Call Option will be

(A) lower

(B) higher

(C) remain unchanged

(D) nothing can be concluded

(iv) A Ltd. acquires B Ltd. by exchange of shares. EPS of A Ltd. and B Ltd. shares are ₹ 50 and ₹ 40 respectively. No. of shares of A Ltd. and B Ltd. are 80,000 and 50,000 respectively. What No. of shares A Ltd. requires to issue to B Ltd. in order to ensure that EPS of A Ltd. would remain same after merger? (Assume that earnings of the merged company would be equal to the aggregate of the earnings of the companies before merger)

(A) Cannot be computed

(B) 25,000

(C) 40,000

(D) 1,00,000

(v) If an all equity firm has Cash from Operating Activities amounting to ₹ 60 lakhs, Depreciation ₹ 30 lakhs, increase in non-cash working capital ₹ 25 lakhs and Capital expenditure ₹ 20 lakhs, its Free Cash Flows to Equity amounts to (in ₹ lakhs)

(A) 90 lakhs

(B) 45 lakhs

(C) 40 lakhs

(D) 65 lakhs

2. Kitkat Ltd. contemplating to make an investment of ₹ 65,000 in a new machine for which the annual cash flows under favourable and unfavourable environment and corresponding probabilities for year 1 and year 2 are given below:
   Cash flow for each year under favourable environment is ₹ 52,000 and under unfavourable environment is ₹ 20,000.

Environment in Year 1	Probability	Environment in Year 2	Probability
Favourable	0.6	When year 1 was favourable	
		Favourable	0.6
		Unfavourable	0.4
Unfavourable	0.4	When year 1 was unfavourable	
		Favourable	0.5
		Unfavourable	0.5

   The company has the option to dispose of the machine at ₹ 34,000 at the end of year 1.

   [Assume applicable rate of discounting to be 10%, PV of ₹ 1 for 1 year is ₹ 0.909]

   (a) Decide whether the project should be discontinued (i.e., whether the machine should be disposed of) (i) under favourable environment in year 1 and (ii) under unfavourable environment in year 1.

   (b) Evaluate the project under NPV approach (i) ignoring the option of discontinuing the project; (ii) after due consideration of the option of its discontinuity. 4+4+4+3=15

3. For valuation of brand X you have been provided with the following relevant information:

Projection for years 1 to 4	Year 1	Year 2	Year 3	Year 4
Market size in units	75,000			
Market is growing at 4% in size annually				
Market share of brand X	0.15	0.15	0.16	0.16
Price per unit ₹	10			
Price growth (annual) = 3%				
Operating cost margin = 60% of sales				
Tax rate = 35%				
Capital Employed (growing by 20% of NOPAT of Preceding year) (₹)	1,40,000			
Capital Charge = 8%				
Role of Branding Index = 63%				
Brand Discount Rate = 12%				
Long term growth rate in Brand Earnings from year 5 onwards = 2%				

Find:

(a) For years 1 to 4
   (i) Branded revenue (of brand X)
   (ii) NOPAT
   (iii) Intangible earnings
   (iv) Brand earnings, and

(b) Value of the brand

Discounting Factor at 12% – year 1 – 0.8929, year 2 – 0.7972, year 3 – 0.7118, year 4 – 0.6355

4+2+2+2+5=15

4. Young Ltd. has decided to takeover Old Ltd. and merged it with itself. In this respect, you have been provided the following information:

Balance Sheet as on March 31, 2014 (*₹ in Crores*)

Equities and Liabilities	**Young Ltd.**	**Old Ltd.**
Equity Share Capital (₹10 par)	3,500.00	2,200.00
Reserves and Surplus	4,250.00	3,250.00
Shareholders' Funds	**7,750.00**	**5,450.00**
Non-Current Liabilities:		
Long Term Debt	2,780.00	1,375.00
Deferred Tax Liabilities (Net)	550.00	450.00
Current Liabilities	1,560.00	1,340.00
Total Liabilities	**12,640.00**	**8,615.00**
Assets		
Non-Current Assets:		
Net Fixed Assets	8,455.00	5,360.00
Investments	1,125.00	375.00
Current Assets	3,060.00	2,880.00
Total Assets	**12,640.00**	**8,615.00**

Profit and Loss Account for the year ending on March 31, 2014

Particular	**Young Ltd.**	**Old Ltd.**
Income:		
Net Revenue	22,150.00	12,305.00
Other Income	425.00	865.00
Total Income	**22,575.00**	**13,170.00**
Less Expenses:		
Total Operating Expenses	14,557.00	5,878.00
Operating Profit	**8,018.00**	**7,292.00**
Less: Interest	319.70	165.00
Profit Before Tax	**7,698.30**	**7,127.00**
Less: Tax	2,540.44	2,351.91
Profit After Tax	**5,157.86**	**4,775.09**
Price/Earning ratio	22.60	16.80

It is decided that to provide fair deal to the shareholders of both the companies, the exchange ratio (or swap ratio) will be calculated as weighted average of the exchange ratios determined by Book Value, EPS (Earning Per Share) and Market Price of both the companies. The decided weights are 30%, 50% and 20% of exchange ratios of Book Value, EPS (Earning Per Share) and Market Price of both the companies respectively.

On the basis of the above information, you are required to answer the following:

(i) Determine the exchange ratio or swap ratio for the said merger.

(ii) Assuming that there is no change in the Price/Earning Ratio of Young Ltd. and there are no synergy gains, determine the market price of the share of Young Ltd., post merger. 10+5=15

5. (a) An investor is holding 5,000 shares of X Ltd. which is having Current market price of ₹ 75. It is expected that in near future, the risk free rate is going to decrease from 7.75% to 7.50%; the return on an appropriate market index is going to increase from 14.50% to 15.00%; and the beta of X Ltd. is going to reduce from 1.35 to 1.25. In view of the expected changes, you are requested to advise the investor whether he should buy more shares of X Ltd. or sell the existing holding or hold the position. [*Assume that Capital Asset Pricing Model (CAPM) holds good in the stock market]* 5

(b) An Indian Bank has classified its total investment on 31.03.2014 into three categories: (a) Held To Maturity (HTM) (b) Available For Sale (AFS) and (c) Held For Trading (HFT). In the Bank's Balance Sheet, Held to Maturity investments are carried at acquisition cost less amortised amount. Available for sale are carried at market to market. Held for trading investments are valued at weekly intervals at market rates or as per the prices declared by FIMMDA (Fixed Income Money Market and Derivatives Association of India). Net depreciation, if any, is charged to revenue and net appreciation, if any, is ignored. You are required to comment on the policy of the bank with regard to accounting treatment of investments in accordance with AS-13. 5

(c) Following statements are not correct; rewrite them correctly: 1×5=5

(i) The increasing convergence between market value (MV) and book value (BV) is largely based on the intangibles of the business providing the foundation for future growth.

(ii) While calculating the WACC (Weighted Average Cost of Capital), one should preferably take the book value weights of debt and equity.

(iii) Presence of real options in investment projects may reduce the NPV of a project.

(iv) Stock Dividends may increase the Market Capitalization of a company.

(v) The more quantitative a model is, the better will be the valuation of a firm.

6. An infrastructure company is thinking of acquiring a cement company for taking benefits of the synergy gains. For that, a probable target company is identified. The following information has been obtained from an equity research firm about the target company.

	ACTUAL	**PROJECTED**			*(₹ in Crores)*	
EQUITY AND LIABILITIES	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Share Capital	2,139	2,139	2,139	2,139	2,139	2,139
Reserves and Surplus	25,389	26,073	26,477	26,916	27,367	27,922
	27,528	**28,212**	**28,616**	**29,055**	**29,506**	**30,061**
Non-Current Liabilities						
Long-Term Borrowings	23,560	23,560	23,560	23,560	23,560	23,560
Other Long Term Liabilities	4,215	3,793	3,825	3,852	3,818	3,827
	27,775	**27,353**	**27,386**	**27,412**	**27,378**	**27,388**

	ACTUAL	PROJECTED				(₹ *in Crores*)
EQUITY AND LIABILITIES	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Current Liabilities						
Trade payable	7,582	3,586	3,031	6,361	6,855	6,105
Short term provisions & Other Current Liabilities	2,008	3,712	4,786	1,780	1,123	2,284
	9,590	**7,299**	**7,817**	**8,141**	**7,978**	**8,389**
Total Liabilities	**64,893**	**62,864**	**63,818**	**64,608**	**64,862**	**65,837**
Assets						
Non-Current Assets						
Gross Block	23,018	21,616	21,525	21,600	22,032	22,583
Less: Depreciation	3,169	3,459	3,724	3,758	3,922	4,065
Net Block	**19,849**	**18,157**	**17,801**	**17,842**	**18,110**	**18,518**
Capital Work-in-Progress	7,834	9,011	9,548	9,018	8,846	8,853
Total Non-Current Assets	**27,683**	**27,169**	**27,349**	**26,860**	**26,957**	**27,370**
Current Assets						
Inventories	17,646	14,999	13,287	11,700	11,475	11,291
Sundry Debtors	2,987	3,095	3,401	3,666	3,965	4,392
Cash and bank Balances	5,589	5,337	9,100	11,461	11,762	12,403
Loans and Advances	10,066	12,264	10,681	10,921	10,703	10,381
Deferred Tax Asset	922	–	–	–	–	–
Current Assets	**37,210**	**35,695**	**36,469**	**37,748**	**37,905**	**38,467**
Total Assets	**64,893**	**62,864**	**63,818**	**64,608**	**64,862**	**65,837**
Other Information:						
Operating Current Assets	29,210	27,696	28,469	29,748	29,906	30,466
Operating Current Liabilities	4,090	1,799	2,317	2,641	2,478	2,889
Face value of Share (in ₹)	10	10	10	10	10	10

	ACTUAL	PROJECTED				(₹ *in Crores*)
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
Total Revenue	9,095.74	8,822.87	8,858.16	8,999.89	9,179.89	9,409.38
Cost of Goods Sold	80.78	42.46	42.63	43.31	44.18	45.28
Gross Profit	9,014.96	8,780.41	8,815.53	8,956.58	9,135.71	9,364.10
Administrative Expenses	595.71	504.23	504.89	507.52	510.88	515.15
Selling and Distribution Expenses	678.49	617.33	615.88	610.07	602.69	593.28
Depreciation	796.24	289.60	265.32	34.47	163.29	143.21
EBIT	6,944.52	7,369.24	7,429.44	7,804.51	7,858.85	8,112.46
Marginal Tax Rate	33.90%	33.90%	33.90%	33.90%	33.90%	33.90%

Assuming that the target company is having steady growth rate of 8% in free cash flows after 2019 and relevant Weighted Average Cost of Capital (WACC) of 13.50%, determine the value of its share using free cash flow valuation method. Also, determine the book value of the target company share as on March 31, 2014 and give the reasons why both estimates of the value of share are different.

Year	1	2	3	4	5	6	7
Discounting Factor @ 13.50%	0.881	0.776	0.684	0.603	0.531	0.468	0.412

8+4+3=15

7. (a) Explain Relative Valuation and give the steps in Relative Valuation. 7

   (b) G. D. Pharma has taken up an expansion project of ₹ 240 lakhs, entirely to be funded by right issue at a price of ₹ 60 per share. The financial data of G. D. Pharma before the right issue are as follows:

No. of equity shares	12,00,000
EPS (₹)	12
PE Multiple	15

   You are required to calculate the value of right per share and the market price per share after the right issue. 8

8. (a) A Ltd. for acquiring B Ltd. intends to pay ₹ 12,00,000 (i) by cash (ii) by issue of shares. The relevant particulars about the companies are stated below:

Particulars	A Ltd.	B Ltd.
Market price per share (₹)	50	20
No. of shares	1,20,000	50,000

   Three alternative situations are assumed:

   (i) Share price is expected to reflect true value of the company. There is no gain for synergy in acquisition.

   (ii) B Ltd. share price includes a speculation premium of ₹ 2 per share.

   (iii) There is a gain for synergy amounting to ₹ 4,00,000.

   You are required to measure cost/gain to the bidder company for each of the methods of financing acquisition under each of the alternative situations. 11

   (b) What are the approaches to Human Resource Valuation? 4