

Time Allowed : 3 Hours

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:

- (i) One of the reasons of differences between Basic EPS and Diluted EPS is the presence of ESOPs in the Balance Sheet of a company.
- (ii) DCF Analysis requires the revenue and expenses of the past.
- (iii) Dividend yield is the dividend per share as a percentage of the market value of operating Cash Flows.
- (iv) Corporate brands and service brands are often perceived to be interchangeable.
- (v) Intrinsic value and market price of equity shares are always equal.

(b) Fill in the blanks by using the words/phrases given in the brackets:

- (i) For calculating the value of an equity share by yield method, it is _____ to know capital employed, (essential/not essential)
- (ii) One way to increase EVA is to maintain the same operating income with _____ capital, (more/less)
- (iii) Post merger control and the _____ are two of the most important issues in agreeing on the terms of a merger, (negotiated price/calculated price)
- (iv) In a company form of business, the wealth created is reflected in the _____ of its shares, (dividendgrowth/market value)
- (v) X Ltd. has its income of Rs. 135 lakhs by utilizing capital base of Rs. 1,000 lakhs. If the average cost of capital is 10%, then the EVA turns upto Rs. _____. (3.50 lakhs/35 lakhs)
- (vi) A _____ is essentially a container for a customer's complete experience with the offer and the company. (Goodwill/Brand)
- (vii) In recent past, the RBI has increased its benchmark rates to control inflation in India. One of the consequences of it on the valuation of companies in India will be that their valuations will _____. (increase/decrease)
- (viii) The calculation of Weighted Average Cost of Capital (WACC) is based on the assumption that the weights of equity and debt will be based on their respective market values and _____ capital structure, (ideal/ present as per current Balance Sheet/target)
- (ix) A valuation model used in Human Resource Accounting which is based on the present value of all benefits which an employee can get from a company till he/she remained employed with it is known as _____. (Flamholtz Stochastic Rewards Valuation Model/Lev and Schwartz Model/Hekimiari and Jones Model)
- (x) _____ is a research process whose purpose in mergers and acquisition is to support, valuation process, arm the negotiator, test the accuracy of representations and warranties contained in the merger agreement, fulfill disclosure requirements and inform the planners of post-merger integration. (Certification/ Authorization/Due Diligence)

(c) In each of the questions given below one out of the four options is correct. Indicate the correct answer:

- (i) XYZ Limited just paid a dividend of 20% on a Rs.10 face value share. It is expected that the dividend is to grow in future at a constant rate of 8%. If its current trading price is Rs.45, then cost of equity as per the Dividend Discount Model will be:
- (I) 12.44%
 - (II) 12.74%
 - (III) 12.80%
 - (IV) 12.90%
- (ii) Given 12 per cent expected rate of return on a suitable market index, with a standard deviation of 20 per cent, and a risk-free rate of 8 per cent, the required rate of return on a share whose beta is 0.8 using CAPM will be
- (I) 8.80%
 - (II) 9.60%
 - (III) 11.20%
 - (IV) 17.60%
- (iii) Company X has declared a dividend of Rs.2 per share. From its financial statements, it is estimated that Return on Equity is 20%. The shareholders are expecting 20% return from the company's share. If the Dividend Payout Ratio is 50%, then the Present Value of the Growth Opportunities will be
- (I) Rs.14.40
 - (II) Rs.14.50
 - (III) Rs.14.75
 - (IV) Rs.15.00
- (iv) Firm Specific Risk is also called as
- (I) Market Risk
 - (II) Non-Systematic Risk
 - (III) Macro Risk
 - (IV) Unavoidable Risk
- (v) A strategy of Anti-takeover under which the acquirer puts pressure on the management of the target company by threatening to make an open offer is known as
- (I) Street Sweep
 - (II) Bear Hug
 - (III) White Knight
 - (IV) Brand Power

2. (a) Why do companies want to measure Intellectual Capital?

(b) Discuss the 'Balanced Scorecard' as a measurement approach of Intellectual Capital.

3. (a) While evaluating a capital project, a company is considering an option to buy a business from a third party at the cost of Rs.50 crores. It is expected that in next one year, the value of such business will increase to Rs.60 crores with probably 70% or decline to Rs.45 crores with probability of 30%. The company may enter into an agreement with a party to sell the said business at Rs.48 crores after one year if the company so desires. Assuming that this real option is like a European Call, with the strike price of the underlying real asset is Rs.48 crores and the risk free interest rate is 9% p.a. Determine the value of this real option.

(b) Mr. S. K. Sinha had purchased 500 shares of the Company X at the rate of Rs.60 per share. He held the shares for 2 years and got a dividend of 15% and 20% in the first year, and second year respectively on the face value of Rs.10 each share. At the end of the second year, the shares are sold at the rate of Rs.75 per share. Determine the effective rate of return per year which Mr. Sinha has earned on this share.

(c) The following information along with other necessary information has been extracted from the Annual Report-2010 of Strongman Limited:

Profit and Loss Account of Strongman Limited for the year ending on March 31, 2010

	Amount (Rs. in millions)
Particulars	
INCOME:	
Domestic Sales	13156.183
Export Sales	2283.370
Total Sales	<u>15439.553</u>
Other Incomes	82.637
Total	<u>15522.190</u>
EXPENDITURE:	
Materials Consumed and Purchase of goods	6922.881
Manufacturing and Other Expenses	5198.698
Interest	265.289
Depreciation	793.258
Other Expenses	461.366
Impairment Loss on Fixed Assets	123.192
Adjustment due to (increase)/decrease in stock of finished goods and work-in-progress	175.843
	<u>13940.527</u>
PROFIT/(LOSS) BEFORE TAXATION	1581.663
Provision for Tax	597.000
PROFIT/(LOSS) AFTER TAXATION	<u>984.663</u>
Balance brought forward	499.218
PROFIT/(LOSS) AVAILABLE FOR APPROPRIATION	<u>1483.881</u>
APPROPRIATION	
Dividends:	
Interim	
Final Proposed	337.468
Corporate Dividend Tax	433.871
Total Dividend	86.776
General Reserve	<u>858.115</u>
Balance Carried to the Balance Sheet	98.466
Total	527.300
	<u>1483.881</u>

Other Information:

- (i) The company had declared total dividend (interim plus final) of 80% for the year 2009–10 on a share with face value of Rs.10.
- (ii) Net Worth of the company – Rs. 2887.355 million.
- (iii) Interest on Risk Free Debt–7.50%.
- (iv) Company's Beta–1.15.
- (v) Rate of Return on Equity Benchmark Index–15.50%.

Assuming that the Constant Dividend Growth Model is an appropriate model for determining the value of the company's share, you are required to use the above information and determine the value of the company's share.

4. Mr. Sudershan Bose is given the task of estimating the weighted average cost of capital (WACC) of the company in which he is working. For that, it is decided that debt/equity ratio is to be estimated on the basis of market values of equity and debt. For that, he has collected necessary information from the Annual Report–2009–10 of

the company along with other information that are given below:

Balance Sheet as on March 31,2010	
Particulars	Amount (Rs. in lakhs)
SOURCES OF FUNDS:	
Shareholder's Funds:	
Share Capital (100 lakhs equity shares @ Rs.10 each)	1,000.00
Share Warrants (2 lakhs warrants outstanding)	16.00
Reserves and Surplus	5,923.20
	6,939.20
Loan Funds:	
Unsecured Loans	500.00
Convertible Debentures (1 lakh, Coupon Rate-6%, Face Value-Rs.1,000)	1,000.00
Total	8,439.20

Other Information:

- (i) Equity Shares of the company are trading in the market at Rs.60 per share.
- (ii) 2 lakhs Share Warrants outstanding confer on its holders the right to buy the shares of the company at Rs.75 per share. Currently, these share warrants are trading in the market at Rs.18 per share warrant.
- (iii) Unsecured Loans of Rs.500 lakhs are issued at the current market coupon rate of 9% p.a. and hence, its book value is equal to its market price.
- (iv) 1 lakh Convertible Debentures are with a coupon of 6%, face value of Rs.1,000 and remaining time to maturity of 10 years. The straight and plain vanilla valuation of such convertible debentures can be done at a yield of 10% p.a.

You are required to determine the Debt/Equity Ratio of the company based on the above information and by taking the market values of debt and equity.

5. Company-Aggressive has decided to takeover.Company-Soft Target and merge it with itself. In this respect, you have been provided the following information:

Particulars	Company-Soft Target	Company-Aggressive
Profit After Tax (PAT)	Rs. 77,00,000	Rs. 1,00,00,000
Equity Shares Outstanding (No. of Shares)	Rs. 22,00,000	Rs. 40,00,000
Face Value per share	Rs. 10	Rs. 10
Market Price	Rs. 40	Rs. 40
Net Worth	Rs. 4,73,00,000	Rs. 78,00,00,000

It is decided that the exchange ratio would be based on the market prices of these two companies and there would not be any cash payment, all settlement would be by issuing equity shares of Company-Aggressive to the shareholders of Company-Soft Target.

You are required to determine the following:

[33- () () 51488]

- (i) What will be the EPS of both the companies after the merger?
- (ii) What will be the change in the EPS of each company due to the merger?
- (iii) Assuming that Relative Valuation Method based on P/E Multiple is an appropriate method for determining the price of the equity share of Company-Aggressive and its P/E should be 15 after the merger, what will be the market price of the equity share of Company-Aggressive after the merger?

- (iv) What will be the market capitalization of Company–Aggressive after the merger?
- (v) What will be the gains accruing to the shareholders of both the companies after the merger?
- (vi) Will the decision of Company–Aggressive to acquire Company–Soft Target and merge it in itself be a value creating decision?

6. Soft–Tech International Limited has identified a target company, Sunshine India Ltd. and asked Value Search Consultant Pvt. Limited to provide necessary valuation of the business of the target company. The target company identified is from Karnataka and is located in Mysore. On the basis of the past financial records, Value Search Consultant Pvt. Limited has projected necessary financials for the company for the next five years which are given below:

**PROFIT AND LOSS ACCOUNT OF SUNSHINE INDIA LIMITED FOR THE YEAR ENDING
ON
31ST MARCH (Rs. crores)**

Particulars	2011	2012	2013	2014	2015
INCOME					
Sales	154.40	167.75	192.10	204.77	227.98
Less Excise Duty	0.83	1.07	1.62	2.79	2.78
Total	<u>153.57</u>	<u>166.68</u>	<u>190.48</u>	<u>201.98</u>	<u>225.20</u>
EXPENDITURE					
Materials Consumed	69.23	76.75	83.07	85.08	94.97
Manufacturing and Other Expenses	51.99	58.16	68.49	69.59	75.23
Interest	2.65	1.49	0.99	0.61	0.19
Depreciation	3.19	3.79	4.35	4.94	4.63
Other Non–Operating Expenses	12.35	8.72	11.05	15.45	15.83
Total	<u>139.41</u>	<u>148.91</u>	<u>167.95</u>	<u>175.67</u>	<u>190.85</u>
PROFIT/(LOSS) BEFORE TAXATION	14.16	17.77	22.53	26.31	34.35
Provision for Tax	5.97	8.05	8.46	11.73	13.61
PROFIT/(LOSS) AFTER TAXATION	8.19	9.72	14.07	14.58	20.74
Additional Information					
Capital Expenditure	5.50	2.25	1.50	3.20	1.75
Increase in Working Capital	1.10	1.30	1.40	1.50	1.00

The Cost of capital for the company is estimated to be 16%. Assuming that the free cash flows of the target company will grow at a constant rate of 12% forever after 2015, you are required to determine the value of the business based on the free cash flows.

7. (a) A Company–X is contemplating the purchase of another Company–Y. Company–X is having 6 lakhs shares outstanding having a current market price of Rs.50 per share, while Company–Y has 4 lakhs shares outstanding having a current market price of Rs.25 per share. The Earning Per Share (EPS) of Company–X is Rs.4 while that of the Company–Y is Rs.2.25 per share. Company–X in consultation with Company–Y is considering the following two alternative ways to determining the exchange ratio:

- (i) In proportion of their relative EPS.
- (ii) In proportion of their current market prices.

Suggest which alternative way Company–X should use to determine the exchange ratio so that after the merger increase in the EPS of Company–X is higher.

- (b) Consider Company A and Company B. Both have recently announced their annual results and as per the reported results, both are having PAT of Rs.160 lakhs and 40 lakhs equity shares outstanding,

- (i) Company A has growth plans in future due to that it is believed that its earnings will increase by 8% every year in perpetuity. Assume that the company is having the required rate of return on equity of 15% a year.

(ii) Company B has growth plans in future due to that it is believed that its earnings will increase by 10% every year in perpetuity. Assume that the company is having the required rate of return on equity of 12% a year.

Assume that both the companies are having a retention ratio of 50% and identical in all other aspects. Calculate P/E Ratios and comment on their relative valuation.

8. (a) Discuss in brief the various perspectives of Financial Engineering.

(b) H Ltd. and Z Ltd. have the same levels of business risk and their market values and earnings are summarized below:

Particulars	H Ltd. Rs.	Z Ltd. Rs.
Market Values:		
Equity	6,00,000	3,00,000
Debt	–	2,50,000
Total	6,00,000	5,50,000
Earnings	90,000	90,000
(–) Interest	–	22,000
Total	90,000	68,000

You are required to calculate:

The post tax cost of equity, cost of debt and weighted average cost of capital of both the companies. Assume that the income tax rate on the company is 35% including Education Cess etc. and the additional tax on dividend distribution is 20%.