FINAL EXAMINATION

GROUP IV

(SYLLABUS 2012)

SUGGESTED ANSWERS TO QUESTIONS

DECEMBER 2015

Paper- 20 : FINANCIAL ANALYSIS AND BUSINESS VALUATION

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

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

SECTION A

In this section, Answer Question No. 1(a) *and* 1(b) *which is compulsory and* any two *part out of* Question No. 2(a), 2(b) *and* 2(c)

1. (a) As credit manager of the bank, you have been approached by two companies for a loan of ₹ 1,00,000 for six months, with no collateral offered. Since the bank has almost exhausted its quota for loans of this type, only one of these requests can be granted. The relevant information supplied to you by the two companies is presented below:

Particulars	Company X (₹)	Company Y (₹)
Assets		
Cash	1,70,000	3,00,000
Sundry Debtors	2,74,000	4,24,000
Stock	9,00,000	13,50,000
Total Current Assets	13,44,000	20,74,000
Other Assets	10,00,000	10,20,000
	23,44,000	30,94,000
Liabilities & Capital		
Current Liabilities	5,00,000	6,40,000
Long-term Loans	8,00,000	10,00,000
Equity Share Capital	8,00,000	12,00,000
Retained Earnings	2,44,000	2,54,000
	23,44,000	30,94,000

Additional Information		
Sales	24,00,000	17,00,000
Rate of gross profit on sales	30%	40%

Considering the above data specify the company which should be granted the credit. Explain your answer with reasons. **10**

(b) Vipul Construction Corporation a proprietorship company has a contract to build a structure for ₹ 1,00,00,000 and a reliable estimate of the contract's total cost is ₹ 80,00,000. Project cost incurred by Vipul Construction Corporation is as follows:

Vipul Construction Corporation Cost of Project:

Year	Cost to be incurred
2012-13	₹ 40,00,000
2013-14	₹ 30,00,000
2014-15	₹ 10,00,000
Total	₹ 80,00,000

You are required to determine Vipul Construction Corporation's net income from this project for each year using the (i) percentage-of-completion and (ii) completed contract method, (iii) Which method will you recommend to the entity considering matching concept, ROI and taxation? 4+4+2=10

Answer:

1. (a) Liquidity ratios are relevant to assess the loan applications received by the bank:

Current Ratio = 13,44,000/5,00,000 = 2.69 : 1 (Company X)

= 20,74,000/6,40,000 = 3.24 : 1 (Company Y)

Quick Ratio or Acid Test Ratio = 444000/500000 = 0.89 : 1 (Company X)

= 724000/640000 = 1.13 : 1 (Company Y)

Company Y is therefore recommended for being granted the loan as its liquidity ratios are better than those of Company X. This is relevant as the loan is for a short period of six months without any collateral hence the acid test ratio assumes greater significance with acid test ratio of 0.89:1 i.e. less than 1 Company X will not be able to meet its short term liabilities in the six months period which position may further decline due to further borrowings, hence Company Y should be selected for grant of loan.

The gross profit rate of Company Y is 40%, which is more than the gross profit rate of Company X which is 30%. Hence the additional sales arising due to the bank finance is also likely to yield higher profit for Company Y.

1. (b) (i) Since one half of the total contract cost (40,00,000/80,00,000) was incurred during 2012-13, the project was 50% complete at year end. Under the percentage of completion method 2012-13 revenue is ₹ 50,00,000(50% of 100,00,000). Expenses were 40,00,000 thus net income for 2012-13 was 10,00,000 (50,00,000 - 40,00,000).

At the end of 2013-14 the project is 87.5% complete 70,00,000/80,00,000. Revenue to date should total 87,50,000 (87.5% of 100,00,000). Since Vipul Construction already recognized 5000000 of revenue in 2012-13, then 2013-14 revenue is 37,50,000 (87,50,000-50,00,000). 2013-14 expenses were 30,00,000. Therefore 2013-14 net income was 7,50,000 (37,50,000-30,00,000).

At the end of 2014-15 the project is 100% complete (80,00,000/80,00,000). Revenue to date should total of 100,00,000. Since Vipul construction already recognized 8750000 of revenue in 2012-13 and 2013-14 revenue for 2014-15 is 12,50,000(100,00,000-87,50,000). 2014-15 expenses were 10,00,000 so 2014-15 net income was 2,50,000(12,50,000-10,00,000).

(ii) Under the completed contract method, revenue, expenses and profit are not recognized until the contract is complete. Therefore, at the end of 2014-15, Vipul Construction reports revenue of 100,00,000 expenses of 80,00,000 and net income of 20,00,000. No income is reported for 2012-13 & 2013-14.

(iii) The percentage completion method gives net revenues (profit) matching with the expenses incurred on the project and its progress year wise and gives a return on the investment every year. Further, as the total income of the project of ₹ 20,00,000 is spread over three years this method is beneficial from taxation perspective for sole proprietorship as average tax rates will be lower given the benefit of lower slabs. Hence percentage completion method is recommended.

2. (a) (i) 'Trailing P/E Ratio is for evaluation while Forward P/E Ratio is for Valuation'. Comment on the statement and discuss the role of trailing P/E Ratio and Forward P/E Ratio. 5

(ii) What kind of conditions of a company are represented by the following pattern of cash flows? You are requested to provide your analysis of each case separately: 2×5=10

I. Net cash flows from Operating Activities are *positive*, net cash flows used in Investing Activities are *negative* and net cash flows from Financing Activities are *positive*.

II. Net cash flows from Operating Activities are *negative*, net cash flows used in Investing Activities are *positive* and net cash flows from Financing Activities are *negative*.

III. Net cash flows from Operating Activities are *negative*, net cash flows used in Investing Activities are *negative* and net cash flows from Financing Activities are *positive*.

IV. Net cash flows from Operating Activities are *positive*, net cash flows used in Investing Activities are *negative* and net cash flows from Financing Activities are *negative*.

V. Net cash flows from Operating Activities are *negative*, net cash flows used in Investing Activities are *positive* and net cash flows from Financing Activities are *positive*.

Answer:

2. (a) (i) Trailing P/E Ratio uses the current share price and divides by the latest available audited total EPS. It relies on what is already done and that is why it is used for evaluating how the market is pricing a company's share. It is the most popular P/E metric because it is the most objective. Since it uses what has already happened, there is little room for debate, assuming the company reported earnings accurately.

Forward P/E uses the future earnings guidance instead of trailing figures. Sometimes called "estimated price to earnings," this forward-looking indicator is useful for comparing current earnings to future earnings, as well as gaining a clearer picture of what earnings will look like without charges and other accounting adjustments. Given an estimate of future earnings and using the current P/E Ratio future share price can also be estimated. This can be used for deciding whether investment in a share should be made or not. That is why it is used for valuation purpose.

(ii)

I. A firm with **positive** net cash flows from Operating Activities, **negative** net cash flows used in Investing Activities and **positive** net cash flows from Financing Activities is a growing firm as it is raising funds through various financing activities and also using funds generated through operating activities and using them for investment so that it can grow at a higher rate.

II. A firm with **negative** net cash flows from Operation Activities, **positive** net cash flows used in Investing Activities and **negative** net cash flows from Financing Activities is in bad financial position as it is not able to generate funds through operating activities; instead selling its investments to generate funds to meet their financial obligations (that is why it has negative cash flows from financing activities).

III. A firm with **negative** net cash flows from Operating Activities, **negative** net cash flows used in Investing Activities and **positive** net cash flows from Financing Activities is a start-up firm or in its initial stages. It is using funds raised through financing activities and is using these for operations and investment purposes.

IV. A firm with **positive** net cash flows from Operating Activities, **negative** net cash flows used in Investing Activities and **negative** net cash flows from Financing Activities is a cash-cow firm as it is generating huge amount of funds through operation and not only using them to meet its investment requirement, but also using them to pay-off its financial liabilities as cash flows from financing activities are negative.

V. A firm with **negative** net cash flows from Operating Activities, **positive** net cash flows used in Investing Activities and **positive** net cash flows from Financing Activities is a firm which is not going to sustain in future. Its operations are in losses and to meet them the firm is selling its investments and also, raising funds from financing activities.

2. (b) (i) The following abridged financial information is given to you:

Balance Sheet of Mountain Ltd. (₹ Crores)

Liabilities	31.03.2014	31.03.2015
Equity Share Capital	24	24
Long Term Liabilities	110	110
Current Liabilities	70	86
Total	204	220

Assets		
Fixed Assets	120	108
Current Assets	61	57
Profit and Loss	20	55
Preliminary Expenses	3	—
Total	204	220
Additional Information		
Depreciation Written Off	14	12
Preliminary Expenditure Written off	2	3
Net profit/(Loss)	16	(35)

Ascertain from above the stages of sickness of Mountain Ltd. on 31.03.2014 and on 31.03.2015. 4+4=8

(ii) From the following particulars of Z Ltd. find its cash flow from operation: 4

Particulars	₹ lakhs
Net Income	**780**
Depreciation	**85**
Impairment Loss	**12**
Profit on Sale of Land	**12**
Increase in Inventory	**23**
Decrease in Wages Payable	**11**
Increase in Deferred Tax Liability	**8**
Increase in Accounts Receivables	**24**

(iii) Enumerate different types of financial modeling on the basis of its usage in modeling of economy, industry and company. 3

Answer:

2. (b) (i)

	31-03-2014	31-03-2015
Cash Profit =Net Profit/(Loss) + Depreciation Written Off + Preliminary Expenses Written Off 2014: [16+14+2] 2015: [(35)+12+3]	32	(20)
Net Working Capital = CA-CL 2014: [61-70] 2015: [57-86]	(9)	(29)
Net Worth = Equity Share Capital – Preliminary Expenditure - Profit and Loss (Dr.) 2014: [24-3 -20] 2015: [24-55]	1	(31)
	Tendency of becoming sick	Fully sick

According to NCAER, if any of the three elements, Cash Profits, Net Working Capital and Net Worth is negative, it may be considered that the firm has a tendency of becoming sick. If all the elements are negative the firm is fully sick.

On 31-03-2014 Mountain Ltd had a tendency of becoming sick as only one element, Net Working Capital, was negative. On 31-03-2015 the company has become fully sick as all the three elements have negative balance.

(ii)

Particulars	₹ in lakh	
Net Income		780
Add: Non-cash Charges:		
Depreciation	85	
Impairment Loss	12	
Add: Increase in Deferred Tax Liability	8	
		105
Less: Non-Operating Income/ Adj. for Outstandings :		
Profit on Sale of Land	12	
Less: Increase in Inventory	23	

Less: Increase in Accounts Receivables	24	
Less: Decrease in Wages Payable	11	
		70
Cash Flow from Operation		**815**

(iii) On the basis of its usage in modeling on economy, industry and company, financial modeling can be divided into three parts, namely:

(I) **Macroeconomic Financial Models:** Macroeconomic models are used to analyze the macro effects like effect of government policy decisions on variables such as foreign exchange rates, interest rates, disposable income and the gross national product {GNP} which affect the economy.

(II) **Industry Financial Models:** Industry models are often similar to macroeconomic models and typically used by industry associations or industry research analysts to forecast key performance indicators within the industry.

(III) **Corporate Financial Models:** Corporate financial models are built to model the total operations of a company and often perceived to be critical in the strategic planning of business operations in large corporations and startup companies alike.

2. (c) (i) Sunny Limited acquired 70% shares of Harry Limited on October 01, 2014 at a price of ₹ 5,00,000. The balance of Profit and Loss account of Harry Ltd. is as under:

As on	Balance
April 01, 2014	₹ 80,000 Debit balance
March 31, 2015	₹ 1,60,000 Credit balance

Compute net share of Sunny Limited in the capital profit of Harry Limited at the time of Consolidation. 3

(ii) Zoom Limited acquired 80% of shares of Dark Limited on March 31, 2015 for consideration of ₹ 5,20,000. The share capital of Dark Limited comprises of 4000 Equity Shares of ₹ 100 each. The capital profit and revenue profits of Dark Limited were ₹ 3 lakh and ₹ 1 lakh on the date of acquisition.

Compute the amount of minority interest as shown in the Consolidated Balance Sheet as on March 31,2015. 3

(iii) X Limited acquired 70% of equity shares of Y Limited as on 31st March, 2015 at a cost of ₹ 70 lakhs.

The total assets and other liabilities of Y Limited amounted to ₹ 278.50 lakhs and ₹ 140 lakhs respectively. Y Limited declared and paid dividend @ 20% on its equity shares (face value ₹ 10) as on 31st March, 2015. X Limited purchased the shares of Y Limited @ ₹ 20 per share. Compute the amount of goodwill/capital reserve on acquisition of shares of Y Limited. 4

(iv) Your company had the following balance sheet and income statement information for 2014.

Balance sheet:	**₹**
Cash	**20**
Accounts Receivable	**1,000**
Inventories	**5,000**

Total Current Assets	**6,020**
Net Fixed Assets	**2,980**
Total Assets	**9,000**

	(₹)
Debt	**4,000**
Equity	**5,000**
Total Liabilities & Capital	**9,000**
Income Statement:	
Sales	**10,000**
Cost of Goods Sold	**9,200**
EBIT	**800**
Interest (10%)	**400**
EBT	**400**
Taxes (40%)	**160**
Net Income	**240**

This industry average inventory turnover is 5. You think you can change your inventory control system so as to cause your turnover to equal the industry average, and this change is expected to have no effect on either sales or cost of goods sold. The cash generated from reducing inventories will be used to buy tax—exempt securities which have a 7 percent rate of return. What will your profit margin be after the change in inventories is reflected in the income statement? 5

Answer:

2. (c)

(i) Pre-acquisition Profit upto October 1,2014 :

Share of Loss as on 31.03.2014 : 70% of ₹ 80,000 = ₹ 56,000

Profit from 1.4.2014 to September 30, 2014 (for 6 months)

Profit = (80,000 + 1,60,000) x 0.70 x 0.5 year = ₹ 84,000

Share of Capital Profit of Sunny Ltd. : 84,000-56,000 = ₹ 28,000

(ii) Minority Interest Shares = 20% of 4,000 = 800

Minority Interest computation:

Share Capital: 800 x 100	₹ 80,000
Share of Capital Profit = 20% of 3,00,000	₹ 60,000
Share of Revenue Profit - 20% of 1,00,000	₹ 20,000
	₹ 1,60,000

(iii) Number of Shares of Y Ltd. purchased by X = 70 lakhs / ₹ 20 = 3,50,000 nos.

Dividend received by X Ltd. on investment in shares of Y Ltd. = 20% of (3.50 lakhs × ₹10) face value = ₹ 7 Lakhs

Cost of Control:	₹
Cost of Investment	70,00,000
Less: Dividend received	7,00,000
Net Investment	63,00,000
Less: 70% share in Net Assets of Y Ltd. i.e. 70% of (278.50 lakhs -140 lakhs)	96,95,000
Capital Reserve on acquisition of shares	₹ 33,95,000

(iv) Current inventory turnover = 9,200 / 5,000 = 1.84

New inventory turnover = 5

Inventories = 9,200 / 5 = 1,840

Freed cash = ₹ 5,000 - ₹ 1,840 = ₹ 3,160

Increase in Net Income = 0.07(₹ 3,160) = ₹ 221.20

New Profit margin = (240 + 221.20)/10,000 = 4.61%

SECTION B

In this section, Answer Question No. 3(a) and 3(b) which is compulsory and any two parts out of Question No. 4(a), 4(b) and 4(c)

3. (a) Give below is the Balance sheet of Laxmi Ltd. as on 31-03-2014:

Liabilities	₹ (In lakh)	Assets	₹ (In lakh)
Share Capital (Share of ₹ 10)	100	Land & Buildings	40
Reserves & Surplus	40	Plant & Machinery	80
Creditors	30	Investments	10
		Stock	20
		Debtors	15
		Cash at Bank	05
	170		170

You are required to work out the value of the company's shares on the basis of Net Assets method and Profit—earning capacity (capitalization) method and arrive at the fair price of the shares, by considering the following information:

(i) Profit for the current year ₹ 64 lakhs includes ₹ 4 lakhs extraordinary income and ₹ 1 lakh income from investments of Surplus funds, such Surplus funds are unlikely to recur.

(ii) In subsequent years, additional advertisement expenses of ₹ 5 lakh are expected to be incurred each year.

(iii) Market Value of Land and Buildings & Plant and Machinery has been ascertained at ₹ 96 lakhs and ₹ 100 lakhs respectively. This will entail additional depreciation of ₹ 6 lakh each year.

(iv) Effective income tax rate is 30% including all other charges.

(v) The Capitalization rate applicable to similar business is 16%. 10

(b) Consider two companies - Alpha Limited and Beta Limited. Both have announced their annual results for 2014-2015 on May 5, 2015 and as per the reported results both are having identical Profit After Tax (PAT) of ₹ 7,125 lakhs and 120 lakhs equity shares outstanding (face value of each share is ₹ 10). Both the companies having same net worth of ₹ 28,500 lakhs.

Alpha 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 17% a year.

Beta 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 15% 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=10

Answer:

3. (a) **Net Assets Method**

Assets	**₹ (in Lakh)**
Land and Building	96
Plant and Machinery	100
Investments	10
Stock	20
Debtors	15
Cash at Bank	5
Total Assets	246
Less : Creditors	30
Net Assets	216

Value per Share

Number of Shares = 100 lakhs/10 = 10 lakhs

Value per share = Net Assets/No. of shares = ₹ 216 lakhs/10 lakhs = ₹ 21.60

Profit Earning Capacity Method

Particulars	**₹ (in lakhs)**
Profit before tax	64
Less : extraordinary income	4
Less : Investment income not likely to recur	1
Less : additional expenses for forthcoming years- Advertisement	5
Less : depreciation on revaluation	6
Expected Earnings before taxes	48
Less : income taxes@ 30%	14.4
Future Maintainable Profit	33.6

$$\textbf{Value of business} = \frac{\textbf{Futire Maintainable profit}}{\textbf{Capitalization factor}} = \frac{33.6}{0.16} = ₹\ 210 \text{ lakhs}$$

Subtracting external liabilities we get Net value of business. Value of share would be Net value of Business divided by number of shares = (₹ 210 lakhs- ₹ 30 lakhs)/10 lakhs = ₹ 18.00

Computation of Fair Price of share:

Particulars	**₹**
Value as per net assets method	21.6
Value as per profit earning capacity(Capitalization) method	18.0
Fair price = Average of the above two = (21.60+18.0) ÷ 2	₹ 19.80 per share

3. (b) Figures in lakhs

Company	**Alpha Ltd.**	**Beta Ltd.**
Profit After Tax	₹ 7,125	₹ 7,125
No. of Shares Outstanding	120	120
Net Worth	₹ 28,500.00	₹ 28,500.00
Dividend Payout	40%	60%
Cost of Equity	17%	15%
ROE = (7,125/28,500) x 100 =	25.00%	25.00%
Growth Rate = (ROE x (1- Dividend Payout Ratio)	15%	10%
EPS = (PAT/No of Shares)	₹ 59.38	₹ 59.38
Price (Using Dividend Discount Model)	₹ 1365.50	783.80
P/E Ratio	23.00	13.20

Comments: Company Alpha Ltd has high P/E Ratio, mainly because of the fact it has higher growth rate and due to the fact that the company is ploughing back more profit to achieve higher growth rate, as dividend payout ratio is low.

Working Note:

	Alpha Ltd.	**Beta Ltd.**
(i) Dividend payout @ 40% and 60%	₹ 2,850	₹ 4,275
(ii) Dividend / Share	23.75	35.63
(iii) Dividend of next period = Do (1 + g) = D_1	27.31	39.19
(iv) Difference between cost of equity & growth rate	2%	5%
(v) Price of Shares (iii) / (iv) = $D_1 \div k\text{-}g$)	₹ 1365.50	₹ 783.80

4. (a) M Limited wants to takeover N Limited and their Summarized Balance Sheet as on March 31, 2015 are give below:

		M Limited (₹ in Crores)	N Limited (₹ in Crores)
Equity and Liabilities:			
Equity Capital - ₹ 10 each		500	175
Reserves and Surplus		750	475
Non-Current Liabilities		250	85
Current Liabilities and Provisions		175	65
	Total	1,675	800
Assets:			
Non-Current Assets — Net fixed Assets		1,130	435
Current Assets		545	365
Total		1,675	800

Additional Information:

	M Limited	N Limited
(i) Profit After Tax (PAT)	₹ 78 crores	₹ 35 crores
(ii) Market Price Per Share	₹ 75.00	₹ 45.00

I. Using the above information, what should be the share exchange ratio to be offered to the shareholders of N Limited by M Limited based on:

(i) Net Worth

(ii) Earnings Per Share (EPS)

(iii) Market Price

II. Suggest which one out of the above basis should be preferred by N Limited?

III. Assuming that there are no synergy gains, then determine the EPS after merger if the exchange ratio is one as suggested in (II) above. 9+2+4=15

Answer:

4. (a) (I)

(₹ in crores)

	M Limited	N Limited
Calculation of Net Worth:		
Equity Capital - ₹ 10 each	₹ 500.00	₹ 175.00
Reserves and Surplus	₹ 750.00	₹ 475.00
Total Net Worth	₹ **1,250.00**	₹ **650.00**
No. of Shares (in crores)	50.00	17.50
Value per Share	₹ **25.00**	₹ **37.14**

Exchange Ratio is 37.14:25 or 1.486:1; that is 26 crores shares (1.486 x 17.50) of M Limited will be issued to the shareholders of N Limited.

(₹ in crores)

	M Limited	N Limited
Calculation of EPS:		
PAT	₹ 78.00	₹ 35.00
No. of Shares	50.00	17.50
EPS	₹ **1.56**	₹ **2.00**

Exchange Ratio is 2.00:1.56; or 2.00/1.56 = 1.282

It means is (17.50 × 1.282 = 22.435) crores shares of M Limited will be issued to the shareholders of N Limited.

	M Limited	N Limited
Market Price Per Share	₹ 75.00	₹ 45.00

Exchange Ratio is 45:75; or 45/75 = 0.60.

It means is (17.50 × 0.60 = 10.50) crores shares of M Limited will be issued to the shareholders of N Limited.

(II)

Since the shareholders of N Limited are getting maximum number of shares - 26 crores when the Exchange Ratio is fixed as per the Book Value or Net Worth, Shareholders of N Limited will prefer fixing of the Exchange Ratio as per Net Worth.

(III)

Total PAT after Merger (78+35)	₹ 113.00
Total No. of Shares assuming that Exchange Ratio is determined as per Book Value (50+26)	76
EPS after Merger will be	₹ **1.49**

4. (b) A firm is considering a project for introducing a new product line for which the acceptance in the market is uncertain. The relevant particulars are as follows:

(all amounts are in ₹ Lakhs)

	Probability	Estimated Cash Flows		
		Year 0	Year 1	Terminal Value at the end of Year 1
Investment		**(26)**		
Market Acceptance High	**0.75**		**8**	**26**
Market Acceptance Low	**0.25**		**2**	**6**

The project is not flexible to change according to the market acceptance of the product.

A modified project is also under consideration where after having knowledge about the market acceptance of the product in the first year the firm would enjoy Real Options to expand or to terminate the project. Accordingly, cash flows are modified for inclusion of the Real Option embedded in the modified project as stated below:

The Initial Outlay would increase from 26 to 30 (₹ lakh) and the first year Cash Flow would remain same. However, there would be additional cost for expansion/termination at the

end of first year and Terminal Value at the end of the first year would also be different as stated below:

	Probability	Options Available at the end of first year	Additional Costs (₹ lakh)	Terminal Value at the end of first year (₹ lakh)
Market Acceptance High	**0.75**	**Continue as before**		**26**
		Real Option: Expand	**(3)**	**49**
Market Acceptance High	**0.25**	**Continue as before**		**6**
		Real Option: Terminate	**(1)**	**13**

The discounting rate to be applied in all cases is 10% per annum. You are required to:

I. Find Expected NPV of the original project and comment on its acceptability. 3

II. Draw a Decision Tree and Expected NPV of the modified project and comment on its acceptability. 3+6=9

III. Find Net Value of Real Options embedded in the modified project. 3

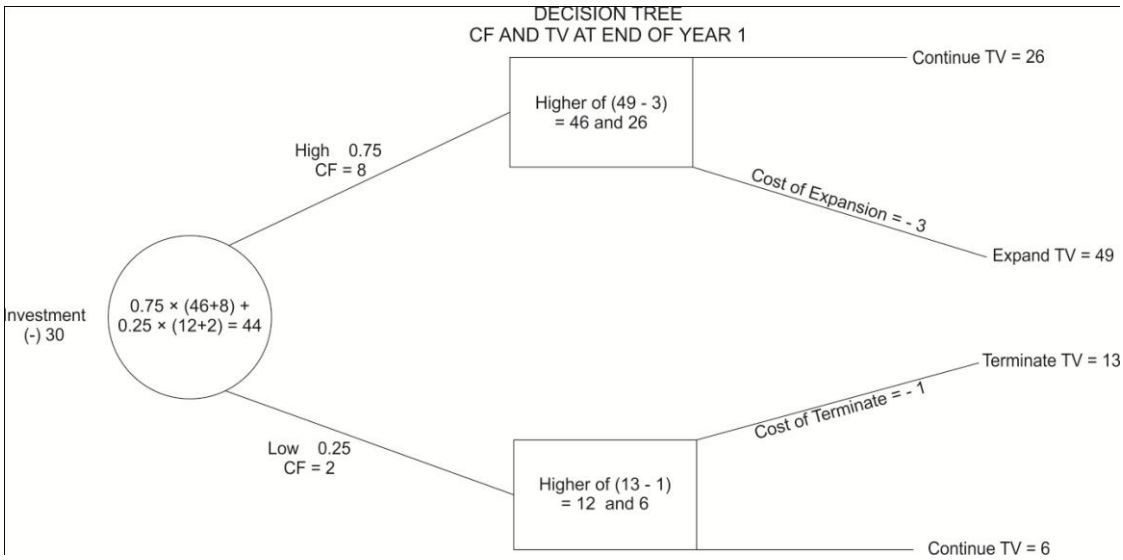
Answer:

4. (b)

(₹ in lakh)

I.	Market Acceptance	High	Low	Total	Comment
	Probability	0.75	0.25		
	First Year Cash Flows	8	2		
	Terminal Value (TV)	26	6		
	Total CF at first year end	34	8		
	Expected Value (Total CF × Probability)	25.5	2	27.5	
	Expected PV at discounted value @ 10%			25	(27.5-1.1)
	Initial Outlay			26	
	Expected NPV			-1	Not Acceptable

II.



(₹ in lakh)

	Market Acceptance	High	Low	Total	Comments
	Probability	0.75	0.25		
	First Year Cash Flows	8	2		
	TV for Continuing without expansion/Termination	26	6		
	TV for Expansion/Termination	49	13		
	Additional Costs for Expansion	3	1		
	Net TV for Expansion/Termination #	46	12		
	Total CF at first year end	54	14		
	Expected Value = (CF X Probability)	40.5	3.5	44	
	Expected PV = (Expected value discounted @10%)			40	(44+1.1)
	Initial Outlay			30	
	Expected NPV			10	Acceptable

#: Since Net TVs for Real Options of Expansion/Termination are greater than TVs for continuation without Real Options, Real Options are exercised to compute Expected NPV of Modified Project.

III.	Net Value of Real Option = Expected NPV of Modified Project - Expected NPV of the Original Project = 10 - (-1) = 11 (₹ in lakh)

4. (c) (i) Hajela Ltd. had earned a Profit after tax of ₹ 48 lakhs for the year just ended. It wants you to ascertain the value of its business, based on the following information:

(1) Tax rate for the year just ended was 36%. Future tax rate is estimated at 34%.

(2) The company's equity shares are quoted at ₹ 120 at the balance sheet date. The company had an equity capital of ₹ 100 lakhs, divided into shares of ₹ 50 each.

(3) Profit for the year has been calculated after considering the following in the Profit & Loss account—

— Subsidy ₹ 2,00,000 received from Government towards fulfillment of certain social obligation. The Government has now discontinued this subsidy and hence, this amount will not be received in future.

— Interest ₹ 8,00,000 on term loan. The final installment of this term loan was fully settled in the last year.

— Managerial remuneration ₹ 15,00,000. The shareholders have approved an increase of ₹ 6,00,000 in the overall managerial remuneration from the next year onwards.

— Loss on Sale of fixed assets and investments amounting to ₹ 8,00,000. (Ignore tax effect thereon) 10

(ii) Define EVA. Also state the means to enhance EVA of a company? 5

Answer:

4. (c) (i)

1. Computation of Future Maintainable Profit

Particulars		₹ (lakhs)
Profit after tax for the year just ended		48,00,000
Add: Tax Expense (Tax is 36% so PAT = 64%. Hence Tax = 48,00,000 × 36/64)		27,00,000
Profit before tax for the year just ended		**75,00,000**
Add/Less : Adjustments in respect of non recurring items		
Subsidy income not received in future	(-)	2,00,000
Interest on term loan not payable in future hence saved	(+)	8,00,000
Additional managerial remuneration	(-)	6,00,000
Loss on sale of fixed assets and Investments (non recurring)	(+)	8,00,000
Future maintainable profits before tax		**83,00,000**
Less: Tax Expense at 34%		28,22,000
Future maintainable profits after tax Equity Earnings		**54,78,000**

2. Computation of Capitalization rate and value of Business

Particulars	
(a) Profit after tax for the year just ended	₹ 48 Lakhs
(b) Number of equity shares (₹ 100 lakhs ÷ ₹ 50 per share)	2 lakhs
(c) Earnings per share (EPS) = PAT ÷ Number of equity shares = 48 ÷ 2	₹ 24
(d) Market Price per share on Balance Sheet date	₹ 120
(e) Price Earnings Ratio = MPS ÷ EPS = 120 ÷ 24	5
(f) Capitalization Rate = 1 ÷ PE Ratio = 1 ÷ 5	20%
(g) Value of Business = Future Maintainable profits ÷ Capitalization rate = ₹ 54.78 lakhs ÷ 20%	**₹ 273.90 Lakhs**

(ii)

EVA is the difference between Net operating profit after tax and the cost of capital of a company. If implemented along with responsibility accounting and activity based costing EVA can help find out the non-value creating activities and businesses of a company, which can then be improved or eliminated by hiving off/ out sourcing as the case may be.

How can a Company Enhance EVA?

There could be many individual actions that could create value. However, all those actions could be divided into four, viz.,

(I) **Status quo:** The company can maintain the status quo without any big change in strategy but trying to get more return on the existing capital. It could possibly increase price or margin, have more volume or lower the operating costs.

(II) **Growth with profit:** The company can invest in new avenues which offer return more than the marginal cost of capital. The increased investment may be to increase the existing market share, introduce new products etc.

(III) **Overhaul:** The company can go for overhauling the operations and merge units, sell off some and reduce the investments in some that do not generate adequate return. It can withdraw from non-profitable areas.

(IV) **Minimizing the financing cost:** The company can endeavor to reduce the cost of capital by prudent use of debt, risk management and taking the advantage of financial innovations

In this manner the company can enhance its EVA by improving the NOPAT and reducing the cost of capital.