INTERMEDIATE EXAMINATION **GROUP IV (SYLLABUS 2008)** SUGGESTED ANSWERS TO QUESTIONS **DECEMBER 2013**

Paper-18 : BUSINESS VALUATION MANAGEMENT

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.

- 1x5=5 1. (a) State whether the following statements are true or false:
 - (i) Whenever the yield on a bond is more than coupon rate, the bond will be trading at a discount.
 - (ii) Price to Book Value (P/B) Ratio is a positive function of Price/Earning (P/E) Ratio but a negative function of Return on Equity.
 - (iii) Increasing the company's future Economic Value Added is key to creating shareholder value.
 - (iv) Hedging protects against the price risk but not against gains or losses.
 - (v) Systematic risk of a portfolio is diversifiable.
 - (b) Fill in the blanks by using the words/phrases given in the brackets: 1x10=10
 - Premium paid by target company to buy-back its shares from a potential (i) acquirer is called ____ _____ (Green Shoe Option/Green Bid/Greenmail)
 - (ii) _ represents the sale of a segment of a company to another entity. (Curve-Out/Spin-Off/Divestitures)
 - (iii) The Test requires that the expected profit stream of an acquired business provide an attractive return on the total acquisition cost and on any new capital investment needed to sustain or expand its operations. (Cost-of-Entry/Cost-of-Exit/Cost of Making Conglomerate)
 - (iv) The CAPM model assumes _____ market competition, (perfect) imperfect)
 - (v) In case of Deep Discount Bonds, the issue price is always the face value. (less than/more than)

Full Marks: 100

- (vi) Under constant growth model, the required return (k) is ______ the constant rate of growth (g). (greater than/less than)
- (vii) The ______ the market price and the book value is an indication of intellectual capital if the shares are widely held and traded for a non-cyclical firm. (sum of/difference between)
- (viii) A theory that explains why the total value from the combinations resulted from a merger is a greater that the sum of the values of the component companies operating independently is known as _____theory, (synergy/hubris/agency)
- (ix) Shares of listed companies which are traded on the stock exchange are _____. (quoted/unquoted)
- (x) _____ makes the calculation of share value difficult (stable dividend/variable dividend)
- (c) In each of the questions given below one out of the four options is correct. Indicate the correct answer: 2×5=10
 - (i) If the risk free rate at present in the economy is 7.50%, the cost of equity of XYZ Ltd. is 16% and the expected return on the market portfolio is 12.50% then the Beta of the company will be
 - (A) 1.35
 - (B) 1.50
 - (C) 1.60
 - (D) 1.70
 - (ii) A company is having Profit after tax of ₹ 500 crores, and Return on Equity 25%. If it has a Reserves and Surpluses of ₹ 1,000 crores, and equity share with a face value of ₹ 2 per share, then its Book Value per share will be
 - (A) 2.00
 - (B) 4.00
 - (C) 5.00
 - (D) 8.00
 - (iii) Which one is the advantage of DCF valuation
 - (A) It is not based upon an asset's fundamentals
 - (B) It is not the right way to think about what an investor would get when buying an asset
 - (C) It forces an investor to think about the underlying features of the firm and understand its business
 - (D) All of these
 - (iv) Which Accounting Standard is issued by the Institute of Chartered Accountants of India on Accounting for Amalgamation
 - (A) AS—9

- (B) AS—12
- (C) AS-14
- (D) AS—18
- (v) In defending against a hostile takeover, the strategy that involves the target firm creating securities that give their holders certain right that become effective when a takeover is attempted is called ______ strategy.
 - (A) Shark repellent
 - (B) Green mail
 - (C) Poison pill
 - (D) Golden parachute

Answer:

- (a) (i) True If an investor buys a bond at a price below its par value (at a discount), then its Yield to Maturity will be greater than its stated interest rate (also known as its coupon rate).
 - (ii) False Price to Book Value ratio is used to compare a stock's market value to its book value. Price- earnings ratio is a valuation ratio of a company's current share price compared to its per-share earnings. There is a direct relationship between the return on equity of a stock and its price to book value. P/B ratio is positively related to Return on Equity.
 - (iii) True looking at the results of a single period, a calculation based on accounting profit less a charge to reflect the cost of equity capital is generally considered to be a less volatile indicator of the creation of value than a calculation based on cash flows. This is the justification for use of 'economic profit' measures of shareholder value, including Economic Value Added (EVA).
 - (iv) True Hedging is the practice of taking a position in one market to offset and balance against the risk adopted by assuming a position in a contrary or opposing market or investment. Hedging allows to offset price risk.
 - (v) False The risk of a portfolio comprises systematic risk, also known as undiversifiable risk and unsystematic risk which is also known as diversifiable risk. Systematic risk refers to the risk common to all securities — i.e. market risk. This type of risk is both unpredictable and impossible to completely avoid. It cannot be mitigated through diversification.
- 1. (b) (i) Greenmail
 - (ii) Divestitures
 - (iii) Cost-of-Entry
 - (iv) perfect
 - (v) less than
 - (vi) greater than
 - (vii) Difference between

- (viii) Synergy
- (ix) Quoted
- (x) Variable dividend
- **1. (c)** (i) (d) 1.70
 - (ii) (b) 4.00
 - (iii) (c) It forces an investor to think about the underlying features of the firm and understand its business,
 - (iv) (c) AS-14
 - (v) (c) Poison pill
- 2. (a) The following financial statements have been extracted from the Annual Report 2012-13 of Fine Cable Ltd.

BALANCE SHEET of Fine Cable Limited as at March, 31 (₹ in Crores)

Particulars	2012	2013
		2010
Shareholders' Funds:		
Share Capital		
Equity Capital	250.00	250.00
Preference Share	60.00	60.00
Reserves and Surplus	7,694.30	8,933.20
Non—Current Liabilities	8,004.30	9,243.20
Long—Term Borrowings	1,162,20	1.451.50
Other Long—Term Liabilities	1.80	13.60
Long—Term Provisions	342.10	528.30
Deferred Tax Liabilities (Net)	326.10	344.70
	1,832.20	2,338.10
Current Liabilities Short—Term Borrowings Trade Payables Other Current Liabilities Short—Term Provision	383.20 563.80 1,189.90 187.10	171.10 632.90 1,391.20 264.90
	2,324.00	2,460.10
ASSETS	12,100.50	14,041.40
Non—Current Assets		
Fixed Assets:		
Tangible Assets	4,291.90	4,120.70
Intangible Assets	0.40	0.40
Capital Work-in-Progress	120.20	357.30
Non—Current Investments	4,412.50 2,188.80	4,478.40 2,173.90
Long—Term Loans and Advances	40.20	166.50
Other Non—Current Assets	121.00	190.80

	6,762.50	7,009.60
Current Assets:		
Current Investments	183.30	1,067.00
Inventories	2,811.40	3,296.30
Trade Receivables	1,140.90	1,496.50
Cash and Bank Balances	490.00	398.10
Short—Term Loans and Advances	772.40	771.80
Other Current Assets	—	2.10
	5,398.00	7,031.80
TOTAL ASSETS	12,160.50	14,041.40

Statement of Profit and Loss of Fine Cable Limited for the Year ending on March, 31

Particulars	2012	2013
Income		
Revenue From Operations (Gross)	21,826.40	24,235.30
Less : Excise Duty	1,184.80	1,528.50
Revenue From Operations (Net)	20,641.60	22,706.80
Other Income	319.90	241.70
Total Revenue	20,961.50	22,948.50
Expenses		
Cost of Materials Consumed	15,769.50	17,129.20
Purchase of Stock-in-Trade	24.00	60.40
(Increase)/Decrease in Inventories of Finished		
Goods, Work-in-Progress and Stock-in-Trade	126.90	(296.80)
Employee Benefit Expenses	260.70	133.80
Depreciation, Amortization and Impairment	394.70	466.30
Other Expenses	2,234.60	2,671.50
Total Expenses	18,810.40	20,164.40
Profit Before Interest and Tax	2,151.10	2,784.10
Less : Interest	663.37	583.04
Profit Before Tax	1,487.73	2,201.06
Less : Tax @ 34%	505.83	748.36
PROFIT AFTER TAX	981.90	1,452.70

(₹ in Crores)

Miscellaneous Information about the Company:

1.	Face Value of the Equity Share of the Company	₹2 per share
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- 2. Face Value of the Preference Share of the Company ₹ 10 per share
- 3. The Company is paying regular Dividend on Preference Shares at the rate of 10%.
- 4. The Company has declared an Equity Dividend of 60% for the Year 2012-13.

5.	Beta of the Company	1.25
6.	Promoters' Holding	62.59%
7.	The Market Rate of Return	15.60%
8.	Risk Free Interest Rate	7.75%

On the basis of the above and assuming that the Company will not change its debt structure in future, preference shares will be redeemed but will be replaced by 10% Preference Shares of the same amount, will not change its Dividend-Payout Ratio and there is no Dividend Distribution Tax; you are required to determine Intrinsic Value of the Share using Constant Growth Model. 9

(b) M. Ltd. agrees to acquire N. Ltd. based on the capitalization of last three years profits of N. Ltd. at an earning yield of 25%

Profits of N. Ltd.	₹ (in lakhs)
for the years	
2010	75
2011	89
2012	82

Calculate the value of business based on earning yield basis.

Answer:

2. (a) Calculation of The Cost of Equity:

Beta of the Company	1.25
The Market Rate of Return	15.60%
Risk Free Rate of Return	7.75%
Using CAPM, we get the cost of equity as	17.5625%

Note: $K = Beta (r_m - r_f)$

Calculation of Return on Equity:

(₹ in crores)

	2013
Calculation of Net Worth:	
Equity Capital	250.00
Reserves and Surplus	8,933.20
Deferred Tax Liabilities (Net)	344.70
Net Worth	9,527.90
PAT	1,452.70
Less: Dividend given to Preference Shares	6.00
Profit available to Equity	1,446.70
Therefore, Return on Equity	15.184%

Calculation of Retention Ratio (b)	(₹ in crores)
Profit Available to Equity	1,446.70
Less: Dividend Paid to Equity (@60%)	150.00
Retained Profit	1,296.70
Therefore, the Retention Ratio is -	89.63%

	Hence, the Growth I	13.61%		
	Using Constant Grov			
	Value of the Share is	₹ 34.54		
2. (b)	$= \frac{D_{o}(1+g)}{k-g} = \frac{1.20(1+g)}{(17.5625)}$ Calculation of 3 years	$\frac{1.1361}{-13.61\%} = \frac{1.20}{3.9}$ average profits	(1.1361) 9525% =₹34.50	
	Year	₹ in lakhs		
	2010 2011 2012	75 89 82		
	Total	246		
	Average profit = ₹2	<u>,46,00,000</u> = ₹ 8	32,00,000	

Earnings yield = $25\% = \frac{25}{100} = 0.25$

Business valuation

= Earnings yield = ₹82,00,000 0.25

=₹3,28,00,000.

3. (a) Consider the following information in respect of Blue Chip Limited.

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					(₹	t in Cro	res)
	2	2013	2014	2015	2016	2017	2018
Total Revenue	5	7.73	69.86	81.74	92.37	100.6	107.7
Cost of Goods Sold	2	3.93	29.93	35.24	39.72	42.28	45.76
Gross Profit	3	3.80	39.93	46.50	52.65	58.38	61.96
Administrative Expenses	;	3.56	4.38	5.11	5.72	6.07	6.55
Selling and Distribution Expenses	18	8.26	23.14	27.91	32.19	35.53	38.37
Depreciation	4	4.70	2.43	1.59	1.27	2.18	1.83
EBIT		7.28	9.98	11.89	13.47	14.60	15.21
Additional Information							
Marginal Tax Rate	33.90%	33.90%	6 33.9	0% 33.	90% 33	.90% 3	33.90%
Increase in Operating							
Working Capital	3.30	3.60) 4	.00	4.10	4.20	4.30
Capital Expenditure	0.61	0.66	5 0	.61	0.78	0.92	0.71

Assuming that the company is having 3.5 crores of equity shares, Debt of ₹ 0.75 crores, steady growth rate of 8% in free cash flows after 2018 and weighted Average Cost of Capital (WACC) of 12.5%, determine the value of its share using free cash flow valuation method.

Year	1	2	3	4	5	6	7
Discounting factor @	0.8889	0.7901	0.7023	0.6243	0.5549	0.4933	0.4385
12.5%							

(b) A company is expected to generate future profits of ₹ 54,00,000. What is its value of business if investment of this type of business are expected to give an annual return of 20%?

Answer

3. (a)

	2013	2014	2015	2016	2017	2018
Total Revenue	57.73	69.86	81.74	92.37	100.66	107.72
Cost of Goods Sold	23.93	29.93	35.24	39.72	42.28	45.76
Gross Profit	33.80	39.93	46.50	52.65	58.38	61.96
Administrative Expenses	3.56	4.38	5.11	5.72	6.07	6.55
Selling and Distribution Expenses	18.26	23.14	27.91	32.19	35.53	38.37
Depreciation	4.7	2.43	1.59	1.27	2.18	1.83
EBIT	7.28	9.98	11.89	13.47	14.60	15.21
Marginal Tax	2.47	3.38	4.03	4.57	4.95	5.16
Net Operating Profit After Tax	4.81	6.60	7.86	8.90	9.65	10.05
Add: Depreciation	4.7	2.43	1.59	1.27	2.18	1.83
Less: Increase In Operating	3.30	3.60	4.00	4.10	4.20	4.30
Working Capital						
Less: Capital Expenditure	0.61	0.66	0.61	0.78	0.92	0.71
Free Cash Flows	5.60	4.77	4.84	5.29	6.71	6.87
Terminal Value (Calculated						
using constant growth model)						164.88
Total Free Cash Flows	5.60	4.77	4.84	5.29	6.71	171.75
Discounting Factor @ 12.50%	0.8889	0.7901	0.7023	0.6243	0.5549	0.4933

Note: Terminal Value =

 $\frac{6.87\!\times\!1.08}{0.125\!-\!0.08}$

= 164.88 say 164.9

Credit may be given if result is rounded off also.

(₹ in crores)

Present Value of Free Cash	4.98	3.77	3.40	3.30	3.72	84.72
Total Present Value of Free Cash	103.89					
Less: Cost of Debt	0.75					
Total Cost of Equity	103.14	crores				

No. of Equity Shares	3.50	crores		
Value of Equity Share (Per	₹ 29.47			
share)				

3. (b) Annual earnings = ₹ 54,00,000

Required earnings yield $20\% = \frac{20}{100} = 0.20$

Value of Business = ₹ 54,00,000 0.20 = ₹ 2,70,00,000

4. (a) A company has issued 14% convertible debentures of ₹ 100 each at par. Each debenture will be convertible into 8 equity shares of \mathfrak{T} 10 each at a premium of \mathfrak{T} 5 per share. The conversion will take place at the end of 4 years. The corporation tax rate is assumed to be 40% including education cess and surcharge, if any. The prevailing coupon rate of similar bonds in the market is 15%.

Assume that tax savings occur in the same year that the interest payments arise. The flotation cost is 5% of the issue amount. Calculate the cost of convertible debentures. (Discount factor @ 14%, 1-4 years is 2.914 and @ 15%, 1-4 years is 2.855; Discount factor for 4th year @ 14% is 0.592 and @ 15% is 0.572) 10 5

(b) Discuss the limitations of discounted cash flow valuation.

Answer

4. (a)

Year	Particulars	Cash Flows	Discount	P.V.	Discount	P.V.
		(₹)	@ 14%	(₹)	@ 15%	(₹)
0	Net Proceeds	(95.00)	1.000	(95.00)	1.000	(95.00)
1-4	Interest less tax [I (1-t)]	8.40	2.914	24.48	2.855	23.98
		per year				
4	Conversion Value (8 × ₹15)	120.00	0.592	71.04	0.572	68.64
	NPV			0.52		-2.38

Cost of Bond = K_d = Bond yield + Spread over bond yield

$$K_D = 14 + \frac{0.52}{0.52 + 2.38} \times 1$$

$$= 14 + \frac{0.52}{2.9}$$

= 14 + 0.18 = **14.18%**

4. (b) Limitations of DCF Valuation:

- a. Since DCF valuation is an attempt to estimate intrinsic value, it requires far more inputs and information than other valuation approaches.
- b. The inputs and information are difficult to estimate, and can also be manipulated by a smart analyst to provide the desired conclusion.
- c. It is possible in a DCF valuation model to find every stock in a market to be over valued.
- d. The DCF valuation has certain limitations when applied to firms in distress; firms in cyclical business; firms with unutilized assets, patents; firms in the process of reorganizing or involved in acquisition, and private firms.
- 5. (a) A company acquired for its internal use a software on 28.01.2012 from the USA for US \$ 1,00,000. The exchange rate on that date was ₹ 52 per US dollar.

The seller allowed trade discount @ 5%. The other expenditure were

	(i) Import Duty	: 20%
	(ii) Purchase Tax	: 10%
	(iii) Entry Tax 5%	: (Recoverable later from tax
		department)
	(iv) Installation expenses	:₹25,000
	(v) Profession fees for clearance from custom	s : ₹ 20,000
	Compute the cost of software to be capitalized	d.
(b)	What are the bases for valuation?	

10 5

Answer

5. (a) Calculation of cost of software (intangible assets) acquired for internal use

Purchase cost of the software	\$ 1,00,000
Less: Trade discount @ 5%	(\$ 5,000)
	\$ 95,000
Cost in ₹ (US \$ 95,000 x ₹ 52)	49,40,000
Add: import duty on cost @ 20% (₹)	9,88,000
	59,28,000
Purchase tax @ 10% (₹)	5,92,800
Installation expenses (₹)	25,000
Profession fee for clearance from customs (₹)	20,000
Cost of the software to be capitalized (₹)	65,65,800

Note: Since entry tax has been mentioned as a recoverable / refundable tax, it is not included as part of the cost of the asset.

5. (b) Bases for valuations:

The different bases that can be used in valuation are:

- 1. Cash flows: the cash flow to equity shareholders (dividends) or to both equity shareholders and debtors (free cash flow)
- 2. Returns: The difference between the company's capital and the cost of capital.
- 3. Operational Variables: Production capacity, subscriber base (as in telecom), etc.

6. (a) The following information relates to the business of a firm

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(i) Average capital employed in the business ₹ 7,20,000.

(ii) Net trading profits of the firm for the past three years after taxation were ₹1,07,600, ₹ 90,700 and ₹ 1,12,500

- (iii) Reasonable return expected in the same type of business is 10%.
- (iv) Fair remuneration to the partners for their services is ₹ 12,000 per annum.

You are required to calculate the value of Goodwill-

(i) On the basis of five year's purchase of the annual average super profits.

(ii) On the basis of capitalization of the annual average super profits at the reasonable return of 10 percent, &

(iii) On the basis of annuity of super profits, taking the present value of annuity of one rupee for five years at 10% interest is ₹ 3.78.

(b) The Following are the operating results of a firm:

Sales (Units)	25,000
Interest per annum	₹ 30,000
Selling price per unit	₹24
Tax rate	35% including education cess etc.
Variable cost per unit	₹16
Fixed cost per annum	₹ 80,000
Compute operating leverage and fin	ancial leveraae

Answer

6.	(a)	`₹
	Total Profit ₹ (1,07,600 + 90,700 + 1,12,500)	3,10,800
	Average Profit ₹ 3,10,800/3	1,03,600
	Less: fair remuneration of Partners	12,000
	Actual average Profit	91,600
	Less: Normal Profit (₹ 7,20,000 × 10/100)	72,000
	Super Profit ₹ (91,600 - 72,000)	19,600
	(i) Goodwill on the basis of 5 year's purchase ₹ 19,600 × 5	98,000
	(ii) Goodwill on the basis of Capitalisation ₹ 19,600 × 100/10	1,96,000

- (iii) Goodwill on the basis of annuity of super profit ₹ 19,600 × 3.78 74,088
- 6. (b) Operating Leverage

= <u>Contribution</u> = ₹2,00,000 EBIT = ₹1,20,000 = 1.67

Financial Leverage

=
$$\frac{\text{EBIT}}{\text{EBT}}$$
 = $\frac{₹1,20,000}{₹90,000}$ = 1.33

Note: Contribution = 25,000 × (₹ 24 - ₹ 16) = ₹ 2,00,000.

EBIT = Contribution – Fixed Cost = ₹ 2,00,000 – ₹ 80,000 = ₹ 1,20,000.

EBIT = EBIT - Interest = ₹ 1,20,000 - ₹ 30,000 = ₹ 90,000.

7. (a) Negotiation is going on for transfer of A. Ltd. on the basis of Balance Sheet and the additional information as given below:

Balance Sheet of A. Ltd.

Liabilities	Amount (₹)	Assets	Amount (₹)
Share Capital (₹10 fully paid up share)	10,00,000	Goodwill	1,00,000
Reserves & Surplus	4,00.000	Land & Building	3,00,000
Sundry Creditors	3,00,000	Plant & Machinery	8,00,000
		Investment	1,00,000
		Stock	2,00,000
		Debtors	1,50,000
		Cash & Bank	50,000
Total	17,00,000	Total	17,00,000

As on 31st March, 2012

Profit before tax for 2011-12 amounted to ₹6,00,000 including ₹ 10,000 as interest on investment. However, an additional amount of ₹ 50,000 per annum shall be required to be spent for smooth running of the business. Market value of the land & building and plant & machinery are estimated at ₹ 9,00,000 and ₹ 10,00,000 respectively. In order to match the above figures further depreciation to the extent of ₹ 40,000 should be taken into consideration. Income tax rate may be taken at 30%. Return on capital @ 20% before tax may be considered as normal for this business for the present stage.

For the purpose of determining the rate of return profit for this year after the aforesaid adjustments may be taken as expected average profit. Similarly, average trading capital employed is also to be considered on the basis of position in this year.

It has been agreed that a three years purchase of super profit shall be taken as the value of goodwill for the purpose of the deal. You are requested to calculate the value of goodwill for the company. 10

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(b) Which are the forces driving mergers and acquisitions activities?

Answer

7.

(a) Valuation of goodwill	(Amount in ₹)
Capital employed on 31st March, 2012:	
Land and Building	9,00,000
Plant and Machinery	10,00,000
Stock	2,00,000
Debtors	1,50,000
Cash & Bank	50,000
Less: Sundry Creditors	(3,00,000)
	20,00,000

Average maintainable trading profit for the year ended 31st March, 2012

	Amount	Amount
	(₹)	(₹)
Net Profit before tax		6,00,000
Less: Additional depreciation	40,000	
Less: Additional recurring expenses	50,000	
Less: Non operating earnings (Interest on Investment)	10,000	
		1,00,000
		5,00,000
Provision for Taxation @ 30% of ₹ 5,40,000		1,62,000
(Further depreciation provided not tax deductible)		
Average maintainable profit		3,38,000
Closing capital employed 31.03.2012		20,00,000
Less: 50% of average maintainable profit		1,69,000
Average Capital employed		18,31,000
Average maintainable profit		3,38,000
Less: Normal profit 14% on capital employed (₹ 18,31,000)		2,56,340
Valuation of Goodwill		81,660
Goodwill at 3 years purchase of super profit (₹ 81,660 × 3 years)		2,44,980

7. (b) Forces Driving M & A Activities:

The major forces which drive M & A activities since the early 1990's have been identified as the following:

1. Rapid pace of technological change

- 2. Low costs of communication and transportation
- 3. Globalization and global markets
- 4. Nature of competition in terms of forms, sources and intensity
- 5. Emergence of new types of industries
- 6. Regulation in some industries and sectors
- 7. Liberalization in some industries and sectors
- 8. Growing inequalities in incomes and wealth

Merger activity generally comes in waves, and is most common when shares are overvalued. The late 1990's saw fevered activity. Then the pace slowed in most industries, particularly after September 11, 2001. It picked up again in mid-2003 as companies that weathered the global recession sought bargains among their battered brethren. By the start of 2006, a mergers and acquisitions boom was in full swing, provoking a nationalist backlash in some European countries. The future of the merger wave now depends on how deep the downturn in private equity proves to be.

 ABC Garments Ltd. is a company which produces and sells to retailers a certain range of fashion clothing. They have made the following estimates of prudential cash flows for the next 10 years.

Yr.	1	2	3	4	5	6	7	8	9	10
Cash flow	1500	1700	2000	2500	3000	3400	3800	4500	5000	6000

DCF Ltd. is a company which owns a series of boutiques in a certain locality. The boutiques buy clothes from various suppliers and retail them. Each boutique has a manager and an assistant but all purchasing and policy decisions are taken centrally. An independent cash flow estimate of DCF Ltd. was as follows;

Yr.	1	2	3	4	5	6	7	8	9	10
Cash flow (₹ in lakhs)	120	160	200	280	340	460	520	600	660	800

ABC Garments Ltd. is interested in acquiring DCF Ltd. in order to get some additional retail outlets. They make the following cost-benefit calculation;

(i) Net value of assets of DCF Ltd.

	₹ in lakh
Sundry fixed assets	800
Investments	200
Stock	<u>400</u>
Total	1400
Less: Sundry Creditors	<u>400</u>
Net Assets	1000

(ii)	Sundry realisal	fixed ble val	assets ue is₹4	amou 15,00,00	unting 00	to ₹	50,00,0	00 ca	nnot	be u	used	and	their	net
(iii)	ii) Stock can be realised immediately at ₹ 470 lakh.													
(iv)	Investn	nents c	an be o	dispose	ed off f	or₹21	2 lakh	5.						
(v)	(v) Some workers of DCF Ltd. are to be retrenched for which estimated compensation is ₹130 lakh.													
(vi)	(vi) Sundry creditors are to be discharged immediately.													
(vii)	(vii) Liabilities on account of retirement benefits not accounted for in the balance sheet by DCF Ltd. is ₹ 48 lakhs.													
(viii)) Expect	ed cas	h flows	of the	combi	ined b	usines	s will be	e as fo	ollows	:			
Yr.		1	2	3	4	5		5	7	8	9		10	
Cas (₹ in	h flow 1 lakhs)	1800	1900	2300	2950) 35(00 40	00 4	500	5300	580	00	6900	
Find out the maximum value of DCF Ltd. which ABC Garments Ltd. can quote. Also show the difference in valuation had there been no merger. Use 20% as discount factor.														
Yea	r	1	2	2	3	4	5	6	7		8	9	1	0
Disc fact	ounting or @ 20%	0.833	33 0.69	244 0.5	787 0.	4823	0.4019	0.3349	0.27	' 91 0.	2326	0.193	88 0.1	615

Answer

8.

(1) Calculation of operational synergy expected to arise out of merger(₹ in lakhs)Year12345678910

Year	1	2	3	4	5	6	7	8	9	10
Projected cash flows	1800	1900	2300	2950	3500	4000	4500	5300	5800	6900
of ABC Garments Ltd.										
after merger with DCF										
Ltd.										
Less: Projected Cash	1500	1700	2000	2500	3000	3400	3800	4500	5000	6000
flows of ABC Garments										
Ltd. without merger										
Projected Cash flows	300	200	300	450	500	600	700	800	800	900
of DCF Ltd individually										
post merger										

(2) Valuation of DCF Ltd. ignoring merger

Year	Cash flows (₹ in lakhs)	Discount factor	Discounted cash flow (₹ in lakhs)
1	120	0.8333	99.996
2	160	0.6944	111.104
3	200	0.5787	115.740
4	280	0.4823	135.044
5	340	0.4019	136.646

6	460	0.3349	154.054
7	520	0.2791	145.132
8	600	0.2326	139.560
9	660	0.1938	127.908
10	800	0.1615	129.200
			1294.384

(3) Valuation of DCF Ltd. individually in case of merger

Year	Cash flows (₹ in lakhs)	Discount Factor	Discounted Cash Flow
			(₹ in lakhs)
1	300	0.8333	249.990
2	200	0.6944	138.880
3	300	0.5787	173.610
4	450	0.4823	217.035
5	500	0.4019	200.950
6	600	0.3349	200.94
7	700	0.2791	195.370
8	800	0.2326	186.080
9	800	0.1938	155.040
10	900	0.1615	145.350
			1863.245

(4) Maximum value to be quoted

	₹ in Lakhs	₹ in Lakhs
Value as per discounted cash flows from operation		1,863.245
Add: Cash to be collected immediately by disposal of assets:		
Sundry Fixed Assets	45.000	
Investments	212.000	
Stock	470.000	
		727.000
		2,590.245
Less: Sundry Creditors	400.000	
Provision for retirement benefits	48.000	
Retrenchment compensation	130.000	
		578.000
		2,012.245

So, ABC Garments Ltd. can quote as high as ₹ 20,12,24,500 for taking over the business of DCF Ltd. In this case value arrived at in isolation ₹ 12,94,38,400 is not providing reasonable value estimate.