Paper-18: BUSINESS VALUATION MANAGEMENT

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

Working Notes should form part of the answer.

"Whenever necessary, suitable assumptions should be made and indicated in answer by the candidates."

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: [1x5=5]

(i) The book value of an asset is the historical cost less depreciation.

(ii) Possession of complimentary resources is one of the reasons for Merger negotiations.

(iii) Divestitures represent the sale of a part of the total undertaking.

(iv) Valuing a firm using discounted cash flow method is conceptually different from valuing a capital project using present value method.

(v) Market value per share is expected to be lower than the book value per share in case of profitable and growing firms.

(b) Fill in the blanks by using the words/phrases given in the brackets: [1x10=10]

(i) DCF analysis requires the revenue and expenses of …….. [past/future].

(ii) Estimated fair value of an asset is based on the …….. [current / discount / future] value of operating cash flows.

(iii) The …….. Assets Monitor is a management tool for organizations that wish to track and value their …….. Assets. [tangible / intangible].

(iv) A theory that explains why the total value from the combination resulted from a merger is greater than the sum of the values of the component companies operating independently is known as …….. Theory. [Synergy/Hubris/Agency].

(v) Key to income based approach of valuation is …….. [Capitalisation rate / Internal rate of return].

(vi) An investment is risk-free when actual returns are always …….. the expected returns. [less than / equal to / more than].

(vii) Shares of listed companies which are traded on the stock exchange are …….. [quoted/ unquoted].

(viii) Organizational Capital is a …….. component of Intellectual Capital. [primary/secondary].

(ix) In balance sheet, equity and fixed assets are expressed in terms of their …….. [market value/book value/replacement value].

(x) Post merger control and the …….. are two of the most important issues in agreeing on the terms of merger. [calculated price/ negotiated price].

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

(i) An anti takeover defense that creates securities that provide their holders with special rights in the event of a takeover is called
(a) White Knight
(b) Poison Put
(c) Poison Pill
(d) Bear Hug

(ii) The following approach states that value of a firm is unaffected by its dividend policy
(a) CAPM approach
(b) Modigliani-Miller approach
(c) Walter's Valuation model
(d) None of the above

(iii) If the company has a P/E Ratio of 12 and a ROE of 13% then its Market to Book Value Ratio will be
(a) 1.56
(b) 9.34
(c) 1.09
(d) None of the above

(iv) Which one of the following is not a valid assumption of the Modigliani and Miller Model of Dividend policy?
(a) There are no stock floatation or transaction cost
(b) Stocks are divisible
(c) There are no arbitrage opportunities in the market
(d) There is asymmetric information between the managers and investors

(v) If the current yield of a bond is more than its yield to maturity, then a bond is trading at ……..
(a) Par
(b) At discount
(c) At premium
(d) Nothing can be said about the prices of bond as information is not complete

Answer:

1. (a) State whether the following statements are true or false:

(i) True

(ii) True

(iii) True

(iv) False

(v) False

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

(i) Future

(ii) Discounted

(iii) Intangible

(iv) Synergy

(v) Capitalisation rate

(vi) Equal to

(vii) Quoted

(viii) Primary

(ix) Book value

(x) Negotiated price

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

(i) (c) Poison Pill

(ii) (b) Modigliani-Miller Approach

(iii) (a) 1.56

(iv) (d) there is asymmetric between the managers and investors

(v) (c) At premium

Q. 2. The following is the Balance Sheet as at 31st December 2013 of Techno group Ltd.

Liabilities	Amount (₹)	Assets	Amount (₹)
Share Capital:		Fixed Assets:	
8000 Equity shares of ₹10 each fully paid up	80,000	Goodwill	10,000
5000 Equity shares of ₹10 each ₹8 paid up	40,000	Plant & Machinery	80,000
3600 Equity shares of ₹5 each fully paid up	18,000	Land and Building	1,00,000
3000 Equity shares of ₹5 each ₹4 paid up	12,000	Furniture and Fixtures	10,000
300, 10% Preference shares of ₹100 each fully paid up	30,000	Vehicles	20,000
		Investments	30,000
Reserve and Surplus:			
General reserve	14,000	Current Assets:	
Profit & Loss account	21,000	Stock	21,000
Secured loan; 12% Debenture	20,000	Debtors	19,500
Unsecured loan : 15% term loan	15,000	Prepaid Expenses	4,000
Deposits	10,000	Advances	4,500
Current Liabilities:		Cash and Bank balance	20,000
Bank Loan	5,000	Preliminary expenses	1,000
Creditors	15,000		
Outstanding expenses	2,000		
Provision for tax	20,000		
Proposed Dividend:			
Equity	15,000		
Preference	3,000		
	3,20,000		3,20,000

Additional Information:

(a) In 2011 a new machinery costing ₹ 5,000 was purchased, but wrongly charged to revenue (no rectification has yet been made for the same)

(b) Stock is overvalued by ₹ 1,000 in 2012. Debtors are to be reduced by ₹ 500 in 2013, some old furniture (Book value ₹1000) was disposed of for ₹ 600.

(c) Fixed assets are worth 5 per cent more than their actual book value. Depreciation on appreciated value of fixed assets except machinery is not be considered for valuation of goodwill.

(d) Of the investment 20 per cent is trading and the balance is non-trading. All trade investment are to be valued at 20 per cent below cost. Trade investment was purchased on 1st January, 2013. So per cent of the non-trade investments were acquired on 1st January, 2012 and the rest on 1st January, 2011. As uniform rate of dividend of 10 per cent is earned on all investments.

(e) Expected increase in expenditure without commensurate in selling price is ₹ 2,000.

(f) Research and Development expenses anticipated in future ₹ 3,000 per annum.

(g) In a similar business a normal return on capital employed is 10%.

(h) Profit (after tax) are as follows:
In 2011 – ₹ 21,000, in 2012 – ₹ 19,000 and in 2013 ₹ 20,000.

(i) Current income tax rate is 50%, expected income tax rate will be 45%.

From the above, ascertain the ex-dividend and cum-dividend intrinsic value for different categories of equity shares. For this purpose goodwill may be taken as 3 years purchase of super profit. Depreciation is charged on machinery @ 10% on reducing system. [15]

Answer: 2

Calculation of future maintainable profits:-

	2011 (₹)	2012 (₹)	2013 (₹)
Profits after tax	21000	19000	20000
Add: tax @ 50%	21000	19000	20000
Profit before tax	42000	38000	40000
Less: Income from non-trade investments			
For 2011 = (30000 × 0.08 × 0.50 × 0.10)	(1200)		
For 2012 = [12000 + 12000] × 0.10		(2400)	
For 2013 = [12000 + 12000] × 0.10			(2400)
Add: Machinery wrongly charged to revenue	5000		
Less: Depreciation on above Machinery			
In 2011 = [5000 × 0.10]	(500)		
In 2012 = [5000 – 500] × 0.10		(450)	
In 2013 = [4500 – 450] × 0.10			(405)
Less: Debtors decreased	----	----	(500)
Add/Less: Over valuation of closing stock in 2012		(1000)	1000
Add: Loss on sale of furniture (non-recurring) [1000 – 666]			400
Adjusted profit before tax	45300	34150	38095

	₹
Average adjusted Profits = $\left[\frac{45300 + 35150 + 38095}{3}\right]$ =	39182
Less: Expected increase in expenses	(2000)
Less: Research & Development Expenses	(3000)
Less: Depreciation on Revalued portion of plant & Machinery :	
=[Book value of existing Plant & Machinery + Book value of machine wrongly charged	
to revenue] × 0.05 × 0.10	(418)
= {80000 + [(1 – 0.10)^3 × 5000]} 0.05 × 0.10	
	33764
Less: Provision for tax @ 45%	(15194)
Future maintainable profits	18570

Calculation of Capital Employed: -

	Amount (₹)	Amount (₹)
Plant and Machinery = [80000+{(1 – 0.10)^3 × 5000}] × 1.05	87827	
Land and Building (100000 × 1.05)	105000	
Furniture and fixture (10000 – 400) × 1.05	10080	
Vehicles (20000 × 1.05)	21000	
Trade investments (30000 × 0.20 × 0.80)	4800	
Stock	21000	
Debtors [19500 – 500]	19000	
Prepaid Expenses	4000	
Advances	4500	
Cash and bank	20000	297207
Less: External Liabilities		
12% Debenture	20000	
15% Term loan	15000	
Deposits	10000	
Bank loan	5000	
Creditors	15000	
Outstanding expenses	2000	
Provision for tax [20000 + 1823]	21823	(88823)
Net assets as on 31.12.2013		208384

Notes:

1) Provision for tax

Tax liability for machine wrongly charged to revenue = (5000 × 50%) =	2500
Less: Tax savings for depreciation = (500 + 450 + 405) 50%	(678)
Net Tax Liability	1823

2) Sale of furniture for ₹600 should have already been credited to the furniture and fixture A/c. so now loss of ₹1000 – 600 = ₹400 is eliminated bringing the asset to correct W.D.V.

Valuation of Goodwill

	₹
Capital Employed	208384
Normal profit = (208384 × 10%)	20838
Future maintainable profits	18570
Raymonds Profit	NIL
Therefore Goodwill	NIL

Statement showing valuation of shares

Particulars	**Amount (₹)**
Net trading assets as on 31.12.2013	208384
Add: Non-trading assets [30000 × 80%]	24000
Goodwill	NIL
National Calls in arrear [₹2 × 5000] + [₹1 × 3000]	13000
	245384
Less: Preference share capital	(30000)
Proposed preference dividend	(3000)
Net asset available to Equity shareholders (cum dividend)	212384

Equivalent No. of shares = $(8000 + 5000 + 3600 \times \frac{5}{10} + 3000 \times \frac{5}{10})$ = 16300

Cum dividend intrinsic value of share

For ₹10 fully paid up share = $\frac{212384}{16300}$ = 13.03

For ₹8 fully paid up share = ₹ (13.02 – 2) = 11.03

For ₹5 fully paid up share = $(13.03 \times \frac{5}{10})$ = 6.52

For ₹4 paid up share = ₹ (6.52 – 1) = 5.52

For ex-dividend intrinsic value

	Amount (₹)
Net asset available to Equity share	212384
Less: Proposed Equity dividend	(15000)
Net asset for calculating ex-dividend value	197384

Ex-dividend intrinsic value of share

	Amount (₹)
For ₹10 fully paid up equity share = $\frac{197384}{16300}$	12.11
For ₹8 paid up = ₹[12.11 – 2]	10.11
For ₹5 fully paid up = 12.11 × $\frac{5}{10}$	6.055
For ₹4 paid up equity share (6.055 – 1)	5.055

Q. 3. (a) Bikram Ltd has hired a Marketing Consultancy Firm for doing market research and provides data relating to Tyre industry for the next 10 years. The following were the observations and projections made by the consultancy firm -----

I. **The Tyre Industry in the target area i.e., whole of India, is expected to grow at 5% p.a. for the next 3 years, and thereafter at 7% p.a. over the subsequent seven years.**

II. **The market size in terms of unencumbered basic sales of tyres was estimated at ₹8,000 lakhs in the last year, dominated by medium and large players. This includes roughly 9.0% of fake brands and locally manufactured tyres. Market share of this segment is expected in increase by 0.5%.**

III. **Cheap Chinese imports accounts for 40% of the business (but 60% of the volume. This is expected to increase by 0.25% over the next decade.**

IV. **The other large players account for roughly 35% of the business value, which is expected to go down by 0.5% over the next ten years, due to expansion of Bikram Ltd's product portfolio.**

V. **The Company is in the process of business re-engineering, which will start yielding results in 2 years time, and increase its profitability by 3% from its existing 12%.**

If the appropriate discount rate is 16% what is the Brand Value of Bikram Ltd., under Market oriented Approach.

(b) From the following information taken from the books of Progressive Ltd. relating to staff and community benefits, prepare a statement showing value of benefits to staff and community at large, as required under Corporate Social Reporting.

	₹
Environment Improvements	20,10,000
Medical Facilities to staff and family	45,00,000
Training Programmes conducted in-house	10,25,000
Generation of Job Opportunities in the locality	60,75,000
Municipal Taxes paid	10,70,000
Increase in cost of living in the vicinity due to a thermal power station	16,55,000
Concessional transport, water supply to staff	11,25,000
Extra work put in by company staff and officers for drought relief	18,50,000
Leave encashment and leave travel benefits	52,00,000
Educational facilities for children of staff members	21,60,000
Subsidised canteen facilities on premises	14,40,000
Generation of business in the district	25,00,000

(c) Are Real options and Managerial options the same? [7+(3+3)+2]

Answer: 3. (a)

(i) **Current Market Share =** 100 – Fake Brands 9% - Chinese Imports 40% - Other Domestic Brands 35% = 16%.

(ii) **Increase or Decrease in Market Share:** Chinese Imports 0.25% + Local Brands 0.5% - Other Players 0.5% = 0.25% increase other product's market share. Hence, market share is expected to fall by 0.25% every year over the decade, from the current levels of 16%. Therefore, next year it will be 15.75%, the year after 15.50% etc.

Brand valuation under Market Approach

Year	Market Size (₹Lakhs)	Market Share of Bikram Ltd.	Market Share (₹Lakhs)	Expected Profit (₹Lakhs)	Discount Factor at 16%	Discounted Cash Flow
1	8,000.00 + 5% = 8,400.00	15.75%	1,323.00	@ 12% = 158.76	0.862	136.85
2	8,400.00 + 5% = 8,820.00	15.50%	1,367.10	@ 12% = 164.05	0.743	121.89
3	8,820.00 + 5% = 9,261.00	15.25%	1,412.30	@ 15% = 211.84	0.641	135.79
4	9,261.00 + 7% = 9,909.27	15.00%	1,486.39	@ 15% = 222.96	0.552	123.07
5	9,909.27 + 7% = 10,602.92	14.75%	1,563.93	@ 15% = 234.59	0.476	111.66
6	10,602.92 + 7% = 11,345.12	14.50%	1,645.04	@ 15% = 246.75	0.410	101.17
7	11,345.12 + 7% = 12,139.28	14.25%	1,729.85	@ 15% = 259.48	0.354	91.86
8	12,139.28 + 7% = 12,989.03	14.00%	1,818.46	@ 15% = 272.77	0.305	83.19
9	12,989.03 + 7% = 13,898.26	13.75%	1,911.01	@ 15% = 286.65	0.263	75.39
10	13,898.26 + 7% = 14,871.14	13.50%	2,007.60	@ 15% = 301.14	0.227	68.36
	Brand Value					**1049.23**

Brand Value of Bikram Ltd. under market oriented approach is ₹1049.23 lakhs.

Answer: 3. (b)

Progressive Ltd.
Statement relating to staff and community benefits

I. Social Benefits and Cost to Staff

	₹
A. Social Benefits to Staff	
(i) Medical facilities	45,00,000
(ii) Medical facilities	10,25,000
(iii) Concessional transport water supply	11,25,000
(iv) Leave encashment and leave travel benefits	52,00,000
(v) Educational facility for children of staff members	21,60,000
(vi) Subsidised canteen facilities	14,40,000
Total	**1,54,50,000**
B. Social Cost to Staff	
Extra work put in by staff and officers for drought relief	18,50,000
Net Social Benefits to Staff (A – B)	**1,36,00,000**

II. Social Benefits and Cost to community

	₹
A. Social Benefits to Community	
(i) Environmental improvements	20,10,000
(ii) Generation of job opportunities	60,75,000
(iii) Municipal taxes	10,70,000
(iv) Generation of business	25,00,000
Total	**1,16,55,000**
B. Social Cost to Community	
Increase in cost of living in the vicinity due to a thermal power station	16,55,000
Net Social Benefits to Community (A – B)	**1,00,00,000**

Answer 3. (c)

Real options occur when managers can influence the size and risk of a project's cash flows by taking different actions during the life of the project. They are referred to as real options as they deal with real and as opposed to the financial asset.

They are also called managerial options because they give opportunities to managers to respond to changing market conditions.

Q. 4. (a) State the various methods of payment in case of mergers and amalgamations.

(b) Explain the concept of Human Resource Accounting (HRA) and outline the basic models for HRA.

(c) Firm A acquires Firm B. As of date Firm B has accumulated losses of ₹ 1,000 Lakh. Firm A is well managed company with a good profit record. The projected profits before taxes, of Firm A, for the next three years are given in the table :

Year	Amount (₹)
1	350
2	500
3	700

Assuming corporate tax rate of 35 per cent and discount rate of 12 per cent,

Determine the present value of tax gains likely to accrue on account of merger to A.

[4+6+5]

Answer 4. (a)

Methods of payment in Mergers and Amalgamations:

(i) **Cash:** Where one company purchases the shares or assets of another for cash the shareholders of the latter company cease to have any interest in the combined business.

The disadvantage is that they may be liable to capital gains tax.

(ii) **Loan Stock:** In this case the shareholders of the selling company exchange their equity investment for a fixed interest investment in the other company. The advantage is that any liability to capital gains tax will be deferred until the disposal of the loan stock. In addition, interest on the loan stock is deductible in the hands of the company for tax purpose.

(iii) **Ordinary shares:** Here the shareholder merely exchanges his shares in one company for shares in another company. The advantage is that the shareholders of the selling company continue to have an interest in the combined business and will not be subject to capital gains tax on the exchange. From the point of view of the combined companies a share exchange does not affect their liquidity.

(iv) **Convertible loan stock:** The shareholders in one company exchange their shares for convertible loan stock in the other company. The selling shareholder exchanges an equity investment for a fixed interest security which is convertible into an equity investment at some time in the future if he so desires.

Answer 4. (b)

Human Resource Accounting (HRA) is a set of accounting methods that seek to settle and describe the management of a company's staff. It focuses on the employees' education, competence and the remuneration. HRA promotes the description of investments in staff, thus enabling the design of HR management systems to follow and evaluate the consequences of various HR management Principles. There are four basic HRA models:

(a) The anticipated financial value of the individual to the company. This value is dependent on two factors; the person's productivity and his / her satisfaction of being an employee in the company.

(b) The financial value of the group-describing the connection between motivation and organization on one hand and financial results on the other. This model does not measure value but concepts like motivation and welfare. Under this model, measurement of employee satisfaction is given great importance.

(c) Staff replacement costs describing the financial situation in connection with recruitment, reduction and redeployment of employees. This model focuses on replacement costs related the expenses connected with staff acquisition, training and separation. Acquisition covers expenses for recruitment, advertising etc. Training covers education, on-the job training etc. Separation costs covers lost production when a person leaves a job. This model can be used to describe the development of costs in connection with replacements. In many firms, such replacement costs are included in accounts as an expression of staff value to the company.

(d) HR accounting and balancing as complete accounts for HR area. This model concentrates on cost-control, capitalization of the historic expenses for HR. One effect of such a system is the visualization of inexpedient HR management routines.

The basic aims of HRA are very many.

First, HRA improves the management of HR from an organizational perspective through increasing the transparency of HR costs, investments and outcomes in traditional financial statements.

Second, HRA attempts to improve the bases for investors and company valuation.

Unfortunately, for several reasons, the accuracy of HRA is often called into suspicion.

Answer 4. (c)

Present Value (PV) of Tax Shield: **(₹ Lakh)**

Particulars	**Year-I**	**Year-II**	**Year-III**
PBT (a)	₹ 350	₹ 500	₹ 700
Less : Adjustment against loss of Firm B / Reduction in taxable income (b)	₹ 350	₹ 500	₹ 150*
Reduction in tax payments [(b) × 0.35]	₹ 122.5	₹ 175	₹ 52.5
Multiple by PV factor at 12%	0.893	0.797	0.712
Total PV of tax shield is ₹ 286.24 Lakh [(c) × PV Factor]	109.39	139.47	37.38

(₹ 1,000 Lakh accumulated loss of Firm B – ₹ 350 Lakh and ₹ 500 Lakh adjusted in years. 1 and 2 respectively).

Firm A gains ₹ 286.24 Lakh in terms of tax savings on acquisition of Firm B.

Q. 5. (a) As the finance manager of R Ltd., you are investigating the acquisition of S Ltd. company. The following facts are given:

Particulars	**R Ltd.**	**S Ltd.**
Earning per share	**₹67.50**	**₹25**
Dividend per share	**₹32.50**	**₹10**
Price per share	**₹480.00**	**₹150**
Number of shares	**600 lakhs**	**200 lakhs**

Investors currently expect the dividends and earnings of S Ltd. to grow a steady rate of 7% after acquisition this growth rate would increase to 8% without any additional investment.

Required:

(i) What is the benefit of this acquisition?

(ii) What is the cost of this acquisition to R Ltd. if it pays

I. ₹170 per share compensation (cash) to R Ltd. and

II. Offers 2 shares for every 6 shares of S Ltd? **[2+(1+2)]**

(b) S. Mondal has just completed his post qualification internship in a reputed medical hospital. He wants to buy the running practice of Dr. Mukherjee, a renowned child

specialist located at Lansdowne in Kolkata. The revenue and the costs of this practice in 2013 – 2014 were as under:

Particulars	₹
Revenue	1,00,000
Employee expenses	30,000
Annual rent for the facilities	10,000
Rental of medical equipments	8,000
Medical insurance	9,000
The tax rate on the income	
Including local taxes and subscription	40%
The cost of capital for this practice	10%

The above revenue and all the associated expenses are estimated to grow at 4% p.a. for the next 10 years if Dr. Mukherjee continues to run the practice.

Dr. S Mondal anticipates that upon the changeover there will be drop in revenue by 25% in the first year of his practice. The growth rate in revenue and expenses will remain at 4% p.a. thereafter i.e., for year 2 onwards.

Dr. S Mondal wants your advice for the price he should offer to Dr. Mukherjee to purchase the latter's practice at Lansdowne, Kolkata. [6]

(c) Describe the advantages and disadvantages associated with holding companies. [4]

Answer: 5. (a)

(i) Rate of return (K_e) required by the investors of S Ltd company.

$$K_e = \frac{D_1}{P_o} + g$$

$$K_e = \frac{10}{150} + 0.07$$

$$= 0.1367 \text{ or } 13.67\%$$

$$\text{If } g = 8\% \text{ then } P_o = \frac{D_1}{K_e - g} = \frac{10(1.08)}{0.1367 - 0.08}$$

$$\therefore P_o = ₹190.48$$

Benefit of acquisition

= (Pv of S Ltd. with merger – Pv of S Ltd. without merger) × No. of shares of S Ltd. outstanding.

= ₹ (190.48 – 150) x 200 lakhs

= ₹ 8096 lakhs.

(ii) Cost of acquisition to R Ltd.

I. If it pays ₹170 cash compensation

= Cash compensation – Pv_S
= (₹170 x 200 lakhs) – (₹150 x 200 lakhs)
= ₹4000 lakhs

II. If R Ltd. offers 2 shares for every 6 shares of S Ltd., then the share of S Ltd. ($\propto$) in the combined entity will be

$$\propto = \frac{200 \text{ lakhs } x \frac{2}{6}}{600 \text{ lakhs} + \left[200 \text{ lakhs } x \frac{2}{6}\right]}$$

$$= 0.10$$

Therefore, Pv_{RS} = Pv_R + Pv_S + Synergy
= (₹480 x 600 lakhs) + (₹150 x 200 lakhs) + ₹8096 lakhs
= 288000 + 30000 + 8096
= ₹326096 lakhs

Cost of acquisition to R Ltd.

= $\propto Pv_{RS} - Pv_S$
= (0.10 x 326096 lakhs) – 30000 lakhs
= ₹2609.60 lakhs

Answer: 5. (b)

We make two evolution of the practice –

Run by Dr. Mukherjee as if he is continuing as before, and

Run by Dr. S Mondal assuming that he has bought the practice from Dr. Mukherjee.

Cash flow in year 1 = (Revenue$_1$ – Operating expenses$_1$)(1 – Tax Rate)
= [1,00,000 (1.04) – (30,000 + 10,000 + 8,000 + 9,000) (1.04)] x (1 – 0.40)
= [1,04,000 – 59,280] x 0.60 = ₹26,832

With the growth rate of 4% p.a. and using the cost of capital as the discount rate and assuming that the practice will have no terminal value after 10 years, the value of the practice:

$$\text{Value of practice} = CF_1 \frac{1 - \frac{(1+g)^n}{(1+r)^n}}{(r-g)} = ₹\ 26{,}832 \frac{1 - \frac{(1.04)^{10}}{(1.10)^{10}}}{0.10 - 0.04} = ₹\ 26{,}832\ (7.155029) = ₹\ 1{,}91{,}984.$$

(1) Similarly, cash flow in year 1 under Dr. S Mondal.
= ₹ [75,000 (1.04) – 59,280] x 0.60 = ₹ 11,232

Value of practice for Dr. S Mondal for 10 years = ₹ 11,232 (7.155029) = ₹ 80,312

The difference of ₹ (1,91,984 – 80,312 or ₹ 1,11,672 is attributed as the value of Dr. Mukherjee agree to stay with the practice for a transition period after the transfer of the business, a higher price may be paid.

Dr. S Mondal should ensure by the agreement of transfer of practice that Dr. Mukherjee cannot start a competing practice and extract business from Dr. S Mondal for the foreseeable future.

Answer 5. (c)

The advantages of the holding company arrangement are :

- The leverage effect resulting from being able to control large amounts of assets with relatively small rupee investments,
- The risk protection resulting from the diversification of risk,
- Legal benefits resulting in reduced taxes and the autonomy of subsidiaries; and
- The lack of negotiation required to gain control of a subsidiary.

The disadvantages of the holding company arrangement are :

- Increased risk from the leverage obtained by a holding company (losses as well as gains are magnified),
- Double taxation, which results because a portion of the holding company's income from a subsidiary whose earnings have already been taxed before paying dividends that are taxed at the parent level,
- The difficulty in analyzing holding companies due to their complexity, which may depress price-earning multiples,
- High administrative costs from managing the diverse entities in a holding company.

Q 6. Write short notes on *any three*. [5×3=15]

(a) Net Realizable value of Inventories

(b) Features of a future contract

(c) Expansion and Diversification

(d) IRR & NPV

(e) Net realizable value of Inventories

Answer 5.

(a) Inventories are valued at a lower of the cost ad net realisable value. This principle is based on the view that assets should not be carried in excess of amounts expected to be realized from their sale.

Cost of inventories may not be recoverable for various reasons like :

(i) inventories being damaged,

(ii) inventories becoming obsolete,

(iii) market price having declined,

(iv) production cost has increased, etc.,

Thus, Net Realizable Value of Inventories is defined as the estimated selling price in the ordinary course of business less the estimated cost of completion and the estimated cost necessary to make the sale. It is estimated on the basis of the most reliable evidence at the time of valuation.

If would be preferable to collect market price of various items of inventories as on the balance sheet date from different markets in which the goods are sold.

A weighted average price should then be determined. However, here, it is necessary to keep in view the volatility in price in general and the future prices of inventories.

An estimate of the marketing expenses should also be made while valuing the inventories.

(b)Features of a future contract:

A future contract is a firm's legal commitment between a buyer and a seller in which they agree to exchange something at a specified price at the end of a designated period of time. The buyer agrees to take delivery of something and the seller agrees to make delivery through open outcry on the floor of an organized future exchange.

The important features of a futures contract are :

(i) Standard volume,

(ii) Liquidity,

(iii) Conterpart Guarantee by Exchange,

(iv) Intermediate cash flows.

(c)Expansion and Diversification:

Before a company diversifies, the possibility of expanding in the existing product line should be considered as it may help in gaining a bigger market share for the present business of the company. In terms of implementation, expanding the existing activities of the company is generally much easier than starting a new activity as the managers are familier with the existing business.

Both the alternatives should be carefully weighed against their returns—tangible as well as intangible. The return on investment should be compared for the two alternatives keeping in view the prevailing fiscal policies, taxation, depreciation, incentives for new investments etc.

If the existing product is likely to have a steady and significant growth in its market size, and there is larger, unfulfilled gap between supply and demand, the company should consider further capacity expansion for its existing product(s), unless there are other strategic reasons against sole dependence on the product. Expansion may be more desirable because of advantages of familiarity with the technology and equipment required, higher

marginal productivity of labour and capital, and the availability of the existing infrastructure. Often, there are possibilities of gaining additional production capacities by debottlenecking the manufacturing processes and adding balancing equipments.

However, before implementing an expansion, the company should consider the operational details of marketing the enlarged volume. It should review the existing marketing capabilities to take on the additional load. Otherwise, it must plan for augmenting and training its market force in advance i.e. before the product comes off the production line. If this is not feasible, company should diversity into other product lines which can provide synergy and also have an existing/ready unfulfilled market demand.

While considering expansion a company must also consider the image that customers carry with regard to its product lines. If the brand image is low, the company should be careful in expanding further and must check whether enough customers exist for its products. Diversification into product lines that will improve the brand image would be a option in such case. The possibility of the customers using the product more frequently or in higher quantities should also be explored.

(d) IRR and NPV:

IRR stands for Internal Rate of Return and NPV represents Net Present Value of a project. IRR and NPV are two forms of Discounted Cash Flow (DCF) technique of capital budgeting.

These techniques take into consideration the time value of money evaluating the costs and benefits of a project. They discount the cash flows at a certain rate, k, the cost of capital.

The cost of capital is the minimum discount rate earned on a project that leaves the market value unchanged.

IRR is the maximum rate of interest that could be paid for the capital employed over the life of an investment without loss on the project. NPV is the total of the present value of cash flows (discounted cash flows) discounted at a given rate.

The IRR method would support projects in whose case the IRR (r) > k. Under the NPV method a project qualifies for acceptance when the NPV > 0 (i.e, the discounted cash inflow exceeds the discounted cash outflow).

When the IRR = k or the NPV = zero, the project may be accepted or rejected.

Both methods, generally, give consistent/concurrent results in the selection/rejection of capital projects. However, in situations like size-disparity, time-disparity and unequal lives of projects, they may lead to conflicting results. The IRR criterion implicity assumes that the cash flow generated by the projects will be reinvested at the internal rate of return, i.e, the same rate as the proposal itself offers. With the NPV method, the assumption is that the funds released can be reinvested at a rate equal to the cost of capital, i.e, the required rate of return. With the IRR, the reinvestment rate may vary with different investment proposals, but with the NPV method the same cost of capital can consistently be applied to all investment proposals. Theoretically, therefore, the assumption of the NPV method is considered to be superior.

(e) Inventories are valued at a lower of the cost and net realizable value. This principle is based on the view that assets should not be carried in excess of amounts expected to be realized from their sale. Cost of inventories may not be recoverable for various reasons like:

(i) Inventor/ being damaged

(ii) Inventories becoming obsolete

(iii) Market price having declined

(iv) Production cost has increased

Thus, net realizable value of inventories is defined as the estimated selling price in the ordinary course of business less the estimated cost of completion and the estimated cost necessary to make the sale. It is estimated on the basis of the most reliable evidence at the time of valuation. It would be preferable to collect market price of various items of inventories as on the balance sheet date from different markets in which the goods are sold. A weighted average price should then be determined. However, here it is necessary to keep in view the volatility in price in general and the future prices of inventories. An estimate of the marketing expenses should also be, made while valuing the inventories.

Q. 7. (a) TUB Ltd. and VAM Ltd. propose to amalgamate. Their balance sheets as at 31st March, 2014 were as follows:

Liabilities	TUB Ltd. ₹	VAM Ltd. ₹	Assets	TUB Ltd. ₹	VAM Ltd. ₹
Share capital:			**Fixed assets**		
Equity shares of ₹10 each	**15,00,000**	**6,00,000**	**Less: Depreciation**	**12,00,000**	**3,00,000**
General reserve	**6,00,000**	**60,000**	**Investments (face value of ₹ 3 lacs, 6% tax free G.P. notes)**	**3,00,000**	**-**
Profit & Loss A/c	**3,00,000**	**90,000**	**Stock**	**6,00,000**	**3,90,000**
Creditors	**3,00,000**	**1,50,000**	**Debtors**	**5,10,000**	**1,80,000**
			Cash and bank balances	**90,000**	**30,000**
	27,00,000	**9,00,000**		**27,00,000**	**9,00,000**

Their net profits (after taxation) were as follows:

Year	TUB Ltd.	VAM Ltd.
2011-12	**3,90,000**	**1,35,000**
2012-13	**3,75,000**	**1,20,000**
2013-14	**4,50,000**	**1,68,000**

Normal trading profit may be considered as 15% on closing capital invested. Goodwill may be taken as 4 years' purchase of average super profits. The stock of TUB Ltd. and

VAM Ltd. are to be taken at ₹ 6,12,000 and ₹ 4,26,000 respectively for the purpose of amalgamation. WWF Ltd. is formed for the purpose of amalgamation of two companies. Assume tax rate 40%

(i) Suggest a scheme of capitalization of WWF Ltd. and ratio of exchange of shares; and

(ii) Draft the opening balance sheet of WWF Ltd.

(b) The 6-months forward price of a security is ₹ 208.18. The borrowing rate is 8% per annum payable with monthly rests. What should be the spot price? [(6+6)+3]

Answer 7. (a)

(i) Scheme of capitalization of WWF Ltd. and ratio of exchange of shares

Computation of Net Assets of amalgamating companies

	TUB Ltd. ₹	VAM Ltd. ₹
Goodwill (W.N.2)	3,19,200	1,21,200
Fixed Assets	12,00,000	3,00,000
6% investments (Non-trade)	3,00,000	-
Stock	6,12,000	4,26,000
Debtors	5,10,000	1,80,000
Cash and Bank Balances	90,000	30,000
	30,31,200	10,57,200
Less: Creditors	3,00,000	1,50,000
Net Assets	27,31,200	9,07,200
No. of Equity shares	1,50,000	60,000
Intrinsic value of a share	₹ 18.208	₹ 15.12

No of shares to be issued by WWF Ltd to

TUB Ltd 1,50,000 x 18.208/10 2,73,120 shares

VAM Ltd 60,000 x 15.12/10 90,720 shares

In total 2,73,120 + 90,720 i.e. 3,63,840 shares will be issued by WWF Ltd.

Ratio of exchange of shares will be as follows:

1. Holders of 1,50,000 equity shares of TUB Ltd. will get 2,73,120 shares in WWF Ltd.
2. Similarly, holders of 60,000 equity shares of VAM Ltd. will get 90,720 shares in WWF Ltd.

(ii) Opening Balance Sheet of WWF. Ltd.

Balance Sheet of W. Ltd as at 31st March 2013 (After Amalgamation)

	Particulars as at 31st March	Note	This Year	Prev. Yr.
I	**EQUITY AND LIABILITIES**			
(1)	**Shareholders' Funds:**			
	Share capital	1	36,38,400	
(2)	**Current Liabilities**			
	Trade Payables - Creditors (3,00,000 + 1,50,000)		4,50,000	
	Total		40,88,400	
II	**ASSETS**			
(1)	**Non-Current Assets**			
	(a) Fixed Assets:(i) Tangible Assets (12,00,000 + 3,00,000)		15,00,000	
	(ii) Intangible Assets - Goodwill (3,19,200 + 1,21,200)		4,40,400	
	(b) Non-Current Investments		3,00,000	
(2)	**Current Assets**			
	(a) Inventories (6,12,000 + 4,26,000)		10,38,000	
	(b) Trade Receivables - Debtors (5,10,000 + 1,80,000)		6,90,000	
	(c) Cash & Cash Equivalents (90,000 + 30,000)		1,20,000	
	Total		40,88,400	

Notes to the Balance Sheet:

Note 1: Share Capital

Particulars	This Year	Prev. Year
Authorised: …….. Equity Shares of ₹ 10 each		
Issued, Subscribed & Paid up: 3,63,840 Equity Shares of ₹ 10 each (All the above Shares issued for Non-Cash Consideration pursuant to a scheme of amalgamation, dated …../……./)	36,38,400	

Working Notes:

1. Calculation of closing trading capital employed on the basis of net assets

	TUB Ltd. ₹	*VAM Ltd.* ₹
Fixed Assets	12,00,000	3,00,000
Stock	6,12,000	4,26,000
Debtors	5,10,000	1,80,000
Cash and Bank Balances	90,000	30,000
	24,12,000	9,36,000
Less: Creditors	3,00,000	1,50,000
Net Assets	21,12,000	7,86,000

2. Calculation of value of goodwill

		TUB Ltd. ₹	*VAM Ltd.* ₹
(i)	Average Trading Profit		
	2011-12	3,90,000	1,35,000
	2012-13	3,75,000	1,20,000
	2013-14	4,50,000	1,68,000
	Profit after tax	12,15,000	4,23,000
	Profit before tax (40%)	20,25,000	7,05,000
	Add : Under valuation of closing stock	12,000	36,000
		20,37,000	7,41,000
	Average of 3 years' profit before tax	6,79,000	2,47,000
	Less: Income from non-trade investments (3,00,000 x 6%)	18,000	-
	Average profit before tax	6,61,000	2,47,000
	Less: 40% tax	2,64,400	98,800
	Average profit after tax	3,96,600	1,48,200
(ii)	Super Profits		
	Average trading profit	3,96,600	1,48,200
	Less: Normal Profit		
	TUB Ltd. ₹ 21,12,000 x 15%	3,16,800	
	VAM. Ltd ₹ 7,86,000 x 15%		1,17,900
		79,800	30,300
(iii)	Value of goodwill at 4 years' purchase of super profits	3,19,200	1,21,200

Answer 7. (b)

Calculation of spot price

The formula for calculating forward price is:

$F_0 = S_0 \times e^{rt}$ Where F_0 = Forward price

S_0 = Spot Price

r = rate of interest

n = no. of compounding

t = time

For Compounding = $F_0 = S_0 \times e^{\frac{r}{n} \times t}$

Using the above formula, or, $208.18 = S_0 \times e^{\frac{0.08}{12} \times 6}$

or, $208.18 = S_0 \times e^{.040}$

or, $208.18 = S_0 \times 1.0408$

or, $S_0 = \frac{208.18}{1.0408} = 200$

Q. 8. RAYMONDS 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.

(₹ in lakhs)

Yr.	1	2	3	4	5	6	7	8	9	10
Cash flow	3750	4250	5000	6250	7500	8500	9500	11250	12500	15000

SONA 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 SONA Ltd. was as follows;

(₹ in lakhs)

Yr.	1	2	3	4	5	6	7	8	9	10
Cash flow	300	400	500	700	850	1150	1300	1500	1650	2000

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

(i) Net value of assets of SONA Ltd.

₹ in lakh

Sundry fixed assets	**2000**
Investments	**500**
Stock	**1000**
Total	**3500**
Less : Sundry Creditors	**1000**
Net Assets	**2500**

(ii) Sundry fixed assets amounting to ₹125,00,000 cannot be used and their net realisable value is ₹112,50,000

(iii) Stock can be realised immediately at ₹ 1,175 lakh.

(iv) Investments can be disposed off for ₹530 lakhs.

(v) Some workers of SONA Ltd. are to be retrenched for which estimated compensation is ₹ 325 lakh.

(vi) Sundry creditors are to be discharged immediately.

(vii) Liabilities on account of retirement benefits not accounted for in the balance sheet by SONA Ltd. is ₹120 lakhs.

(viii) Expected cash flows of the combined business will be as follows:

(₹ in lakhs)

Yr.	1	2	3	4	5	6	7	8	9	10
Cash flow	4500	4750	5750	7375	8750	10000	11250	13250	14500	17250

Find out the maximum value of SONA Ltd. which RAYMONDS Garments Ltd. can quote. Also show the difference in valuation had there been no merger. Use 20% as discount factor.

Year	1	2	3	4	5	6	7	8	9	10
Discounting factor @ 20%	0.8333	0.6944	0.5787	0.4823	0.4019	0.3349	0.2791	0.2326	0.1938	0.1615

[15]

Answer: 8

(1) Calculation of operational synergy expected to arise out of merger

(₹ in lacs)

Year	1	2	3	4	5	6	7	8	9	10
Projected cash flows of RAYMONDS Garments Ltd. after merger with SONA Ltd.	4500	4750	5750	7375	8750	10000	11250	13250	14500	17250
Less: Projected Cash flows of RAYMONDS Garments Ltd. without merger	3750	4250	5000	6250	7500	8500	9500	11250	12500	15000
Projected Cash flows of SONA Ltd individually post merger	750	500	750	1125	1250	1500	1750	2000	2000	2250

(2) Valuation of SONA Ltd. ignoring merger

Year	Cash flows (₹ in lacs)	Discount factor	Discounted cash flow (₹ in lacs)
1	300	0.8333	249.990
2	400	0.6944	277.760
3	500	0.5787	289.350
4	700	0.4823	337.610
5	850	0.4019	341.615
6	1150	0.3349	385.135
7	1300	0.2791	362.830
8	1500	0.2326	348.900
9	1650	0.1938	319.770
10	2000	0.1615	323.000
			3235.960

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

Year	Cash flows (₹ in lacs)	Discount Factor	Discounted Cash Flow (₹ in lacs)
1	750	0.8333	624.975
2	500	0.6944	347.200
3	750	0.5787	434.025
4	1125	0.4823	542.588
5	1250	0.4019	502.375
6	1500	0.3349	502.350
7	1750	0.2791	488.425
8	2000	0.2326	465.200
9	2000	0.1938	387.600
10	2250	0.1615	363.375
			4658.113

(4) Maximum value to be quoted

	₹ in Lacs	₹ in Lacs
Value as per discounted cash flows from operation		4,658.113
Add: Cash to be collected immediately by disposal of assets:		
Sundry Fixed Assets	112.500	
Investments	530.000	
Stock	1175.000	
		1817.500
		6,475.613
Less: Sundry Creditors	1000.000	
Provision for retirement benefits	120.000	
Retrenchment compensation	325.000	
		1445.000
		5,030.613

So, RAYMONDS Garments Ltd. can quote as high as ₹ 50,30,61,300 for taking over the business of SONA Ltd. In this case value arrived at in isolation ₹ 32,35,96,000 is not providing reasonable value estimate.