Paper-18: BUSINESS VALUATION MANAGEMENT

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

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

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

Working Notes should form part of the answer.

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

1. (a) State whether the following statements are true or false: [1x5=10]

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

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

(iii) It is important to cross-check the financial statement information by studying financial statement information with respect to the changes in financial ratio during the period of forecast.

(iv) The provinces of accounting standards do not impact mergers of companies.

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

(b) Fill in the blanks by using the words/phrases given in the brackets: [1x10=5]

(i) In ----------, a firm separates out assets or a division, creates shares with claims on these assets, and sells them to the public (spin-off, spilt-up, equity carve out).

(ii) ---------- companies have volatile earnings and high-growth potential choose low-debt ratios (telephones/software).

(iii) ---------- measures the variation of distribution for the expected returns (standard division/ regression).

(iv) Shares of listed companies which are traded on the stock exchange are ---------- (quoted/ unquoted).

(v) A negative economic value added indicates that the firm is ---------- value (creating/destroying).

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

(vii) In valuing a firm, the ---------- tax rate should be applied to earnings of every period (marginal/effective/average).

(viii) If a company's share is priced at ₹ 20 and EPS is ₹ 5, then P/E ratio will be---------- (0.25/ 4/400).

(ix) Dividend yield ratio is equal to dividend per share divided by ---------- and the quotient multiplied by 100. (EPS/market price per equity share).

(x) If EPS of a company is ₹ 15 and the P/E ratio of other similar company is ₹ 10, then market value of the share of this company will be ₹ ---------- (150/1.5/.67).

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

(i) Haskell Motors' common equity on the balance sheet totals ₹700 million, and the company has 35 million shares of common stock outstanding. Haskell has significant growth opportunities. Its assets book value is ₹800 million, but its market value is estimated to be ₹910 million. Over time, Haskell has issued outstanding debt that has a book value of ₹100 million and a market value of ₹75 million. Which of the following statements is most correct?
(a) Haskell's book value per share is ₹20.
(b) Haskell's market value per share is probably less than ₹20.
(c) Haskell's market value per share is probably greater than ₹20.
(d) Statements a and c are correct.

(ii) Rudy's, Inc. and Blackstone, Inc. are all-equity firms. Rudy's has 1,500 shares outstanding at a market price of ₹22 a share. Blackstone has 2,500 shares outstanding at a price of ₹38 a share.
Blackstone is acquiring Rudy's for ₹36,000 in cash. What is the merger premium per share?
(a) ₹2.00
(b) ₹4.25
(c) ₹6.50
(d) ₹8.00

(iii) Hayes Corporation has ₹300 million of common equity on its balance sheet and 6 million shares of common stock outstanding. The company's Market Value Added (MVA) is ₹162 million. What is the company's stock price?
(a) ₹ 23
(b) ₹ 32
(c) ₹ 50
(d) ₹ 77

(iv) Turner, Inc. has ₹4.2 million in net working capital. The firm has fixed assets with a book value of ₹48.6 million and a market value of ₹53.4 million. Martin & Sons is buying Turner, Inc. for ₹60 million in cash. The acquisition will be recorded using the purchase accounting method.
What is the amount of goodwill that Martin & Sons will record on its balance sheet as a result of this acquisition?
(a) ₹0
(b) ₹2.4 million
(c) ₹6.6 million
(d) ₹7.2 million

(v) Casey Motors recently reported the following information:
- **Net Income = ₹600,000.**
- **Tax rate = 40%.**

- **Interest expense = ₹200,000.**
- **Total investor-supplied operating capital employed = ₹9 million.**
- **After-tax cost of capital = 10%.**

What is the company's EVA?
(a) -₹300,000
(b) -₹180,000
(c) ₹200,000
(d) ₹400,000

Answer

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

(i) True

(ii) False

(iii) True

(iv) False

(v) True

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

(i) Equity carve out

(ii) Software

(iii) Standard division

(iv) Quoted

(v) Destroying

(vi) Equal to

(vii) Marginal

(viii) 4

(ix) Market price per equity share

(x) ₹ 150

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

(i) (d) Statements a and c are correct

(ii) (a) ₹2.00
Merger premium per share = (₹36,000 ÷ 1,500) – ₹22 = ₹2

(iii) (d) ₹ 77
Stock Price = ₹(300+162) ÷ 6 = ₹77

(iv) (b) ₹2.4 million
Goodwill = ₹60m – (₹4.2m + ₹53.4m) = ₹2.4m

(v) (b) - ₹1,80,000
EVA = Net Operating Profit After Tax **-** (Capital Invested x WACC)
NOPAT = EBIT x (1 − Tax Rate)
EBIT = (6,00,000/.6 + 200,000) = 12,00,000
EVA = 12,00,000 x (1 - 0.4) – (90,00,000 x **0.10) = - ₹ 1,80,000**

2. (a) K Ltd. processes raw material M to make product A. Contribution per unit of A is ₹ 32. Each unit of A requires two units of M. The company can process maximum 20,000 units of M to produce 10,000 units of A. Demand for product is unlimited at present selling price but annual production is restricted to 6,000 units due to restricted supply of raw materials. B Ltd is the only supplier of the raw material.

K Ltd. wishes to acquire controlling interest in B Ltd. to ensure supply of raw material M. B Ltd. makes two products M and N using same production facilities. Machine hour required for each unit of M and N are 4 and 5 respectively. Total machine hour available in a year is 75,000. Contribution per unit of M is ₹ 8 and that per unit of N is ₹ 15. Demand for N is restricted to 5,400 units.

Share capital of B Ltd. consists of 50,000 ordinary shares of ₹ 10 each. Tax rate is 40%and cost of capital is 10%.

Determine (i) maximum price K Ltd. can offer for 51% interest in B Ltd; (ii) Likely change in value of B Ltd. if the acquisition is successful. [8+2]

2. (b) Offer a brief profile of Mergers and Acquisition in the Indian context? [5]

Answer to 2(a):

(i)

	Product M	Product N
Contribution per unit	8.00	15.00
Machine hours required per unit	4	5
Contribution per machine hour	2.00	3.00

Since availability of machine hour is restricted and N gives higher contribution per machine hour, presumably, B Ltd. prefers to produce N to satisfy the entire demand of 5,400 units. This takes 27,000 (5,400 units x 5 machine hours per unit) machine hours, leaving 48,000 machine hours for production of M. The available machine hour permits B Ltd. to produce 12,000 units of M (48,000 machine hours / 4 machine hours per unit), which it supplies to K Ltd.

If the acquisition is successful, K Ltd. will require B Ltd. to use whole of 75,000 hours for production of M. This means, B Ltd. will lose Re 1 per hour (₹ 3.00 – ₹ 2.00) for each of 27,000 hours currently used for production of N.

In 75,000 machine hours, B Ltd. will make 18,750 units of M allowing K Ltd. to produce 9,375 units of A. If acquisition is successful, K Ltd. can expect to produce and sell 9,375 units of A instead of current 6,000 units. The additional contribution expected from additional sale of 3,375 units is ₹ 1,08,000 (3375 units × ₹ 32 per unit).

If acquisition is successful, K Ltd can expect its PAT to increase by ₹ 64,800 annually [₹ 1,08,000 (1-0.40)]. Since cost of capital is 10%, value of K Ltd. is expected to rise by ₹ 6,48,000 [₹ 16,200 / 0.10) after acquisition. The maximum consideration, that K Ltd. can offer for controlling interest in B Ltd. is ₹ 6,48,000.

B Ltd. has 50,000 shares outstanding, 51% interest in this share capital consists of 25,500 shares.
Maximum price per share = ₹ 25.41 (₹ 6,48,000 / 25,500).

(ii) If acquisition is successful, the PAT of B Ltd. is expected to fall by ₹ 16,200 annually [₹ 27,000 (1-0.40)]. Since cost of capital is 10%, value of B Ltd. is expected to fall by ₹ 1,62,000 (₹ 16,200 / 0.10) after acquisition.

Answer to 2 (b):

In India, the concept of mergers, acquisitions and takeovers has not been popular and kept a low profile, and the reason for this is quite obvious. The regulatory and prohibitory provisions of MRTP Act, 1969 provided for a cumbersome procedure to get approval for mergers and acquisitions under the Act. Most of the provisions of the MRTP Act, 1969, have been repealed as a part of economic liberalization drive of the Government of India. Still, in most of the cases, merger in India used to be friendly amalgamation resulting as a consequence of a negotiated deal, unless 1988 when there was the well-known unsuccessful hostile takeover bid by Swaraj Paul (of Caparo Group of the U.K.) to get control over DCM Ltd. and Escorts Ltd. Many other Nonresident Indians, such as Chabrias, Hindujas etc. also attempted to take over many Indian companies by buying shares of these companies at stock exchanges.

During recent years, there has been a spate of merger moves by various industrial groups. Volrho Ltd., a loss making company was amalgamated with Voltas Ltd. Hindustan Lever Ltd., First, acquired Tata Oil Mills from the Tata Group and then merged other group companies i.e., Brook Bond Lipton (India) Ltd. and Ponds (India Ltd.) with it. The SCICI Ltd. which was initially promoted by ICICI Ltd. has been merged with the latter. Jindal Ferroy Alloys Ltd. has been merged with Jindal Strips Ltd. ITC Classic Ltd. has been merged with ICICI Ltd. British Gas Company has taken over Gujarat Gas Company. Company like Nicholas Piramal has been built only by mergers and acquisitions. India Cement Ltd.'s offer for Raasi cement Ltd. and the offer of Sterlite Ltd. for taking over Indian Aluminum Company have heralded a new era of hostile takeovers in India.

3. (a) How do you react to various uncertainties during the process of business valuation? [5]

3. (b) The Optical Machineries Ltd. requests you to ascertain the amount at which the inventory should be included in the financial statement for the year 2013-14. The value of inventory as shown in the books is ₹6,25,000.

To determine the net realizable value of the inventory (on a test check basis), you had selected several items whose book value was ₹1,75,000. You ascertain that except for items (1) to (3) mentioned below, the cost was in excess of the realizable value by ₹14,766.

The following items require special treatment.

(1) One machine (cost ₹65,000) can now fetch ₹57,500. It was priced at ₹35,000 and was written down to the same figure at the end of 2013-14.
(2) A pump (cost ₹25,000) was expected to realize ₹17,500. A special commission of 15% would have to be paid to the broker.
(3) 6 units of Product No. 15710 were in stock valued each at ₹2,760; the selling price was ₹2,250 per unit; selling expenses are 10% of the selling price.

Taking into consideration only the above mentioned items requiring special treatment, compute the value of their inventory as at 31st March 2014 you would consider reasonable. [10]

Answer to 3(a):

The advantage of breaking uncertainty down into estimation uncertainty, firm-specific and macroeconomic uncertainty is that it gives us a window on what we can manage, what we can control and what we should just let pass through into the valuation.

Building better models and accessing superior information will reduce estimation uncertainty but will do little to reduce exposure to firm-specific or macro-economic risk. Even the best-constructed model will be susceptible to these uncertainties.

In general, analysts should try to focus on making their best estimates of firm-specific information – how long will the firm are able to maintain high growth? How fast will earnings grow during that period? What type of excess returns will the firm earn? – and steer away from bringing in their views on macro economic variables. To see why, assume that you believe that interest rates today are too low and that they will go up by about 1.5% over the next year. If you build in the expected rise in interest rates into your discounted cash flow valuations, they will all yield low values for the companies that you are analyzing. A person using these valuations will be faced with a conundrum because she will have no way of knowing how much of this over valuation is attributable to your macroeconomic views and how much to your views of the company.

In summary, analysts should concentrate on building the best models they can with as much information as they can legally access, trying to make their best estimates of firm-specific components and being as neutral as they can on macro economic variables. As new information comes in, they should update their valuations to reflect the new information. There is no place for false pride in this process. Valuations can change dramatically over time and they should if the information warrants such a change.

Answer to 3 (b):

Books value of selected items is given.
From the given information, realizable value of remaining selected items will have to be found. Then the value of inventory (net realizable value) for all the items to be included in the financial statements of the company for the year 2013-2014 is to be determined.

Working showing Realisable value of selected Items:

Particulars	Amount (₹)	Amount (₹)
Book value of Selected items		1,75,000
Less: Book value of items (1) to (3)		
(1) One Machine	35,000	
(2) One Pump	25,000	
(3) 6 units of product No. 15710 @ ₹2,760	16,560	(76,560)
Remaining Book Value		**98,440**

It is given in the question that except for the items (1) to (3) the cost was in excess of realizable value by ₹14,766. In order to find out the realizable value of remaining items, this amount should be deducted from the book value of selected items.

The realizable value of remaining selected items will be = (₹98,440 – ₹14,766) = ₹83,674.
Percentage of the cost in excess of realizable value to the book value of selected items =

$= \frac{14766}{98440} x100 = 15\%$.

Statement showing the Inventory Valuation (on Net Realisable Value basis) as on 31.03.2014.

Particulars	Amount (₹)	Amount (₹)
Value of all the items as shown in the books		6,25,000
Less: Book value of special items		(1,75,000)
Book value of the Remaining items		4,50,000
Less: Cost of excess of realizable value by 15% i.e. (4,50,000 x 15%)		(67,500)
Add: Realisable value of remaining selected items		83,674
Add: Realisable value of selected items:		
One machine	57,500	
One Pump (17500 less 15% brokerage)	14,875	
6 units of product No. 15710 [6 x 2250 – 10% selling exp]	12,150	84,525
Value of all items of inventory as on 31.03.2014		**5,50,699**

4. (a) A company invested in 5-year bond issues of another company in 2012 carrying a coupon rate of 10% per annum. The interest is payable at half-yearly rates and the principal repayable after 5 years in 2016 end. The current market yield has fallen to any willing buyer. Compute the value of the bond at the end of 2013. Assume par value of each bond ₹2000. [5]

4. (b) Jain Co. Ltd. purchased a machine costing ₹2,50,000 for its manufacturing operations and paid shipping cost of ₹40,000. Jain Ltd. spent an additional amount of ₹20,000 for testing and preparing the machine for use. What amount should Jain Ltd. record as the cost of the machine? [3]

4. (c) From the following details, compute according to Lev and Schwartz model, the total value of unman resources of the employee groups skilled and unskilled. [7]

	Skilled	Unskilled
Annual average earning of an employee till the retirement age	₹80,000	₹60,000
Age of retirement	65 Years	62 Years
Discount rate	15%	15%
No. of employees in the group	30	35
Average age	62 years	60 years

Answer to 4 (a):

Par value of each Bond ₹2000; coupon rate (%) 10 per annum.
Value of the bond as at the end of 2013 is equivalent to present value of future cash flow streams from the bond till its maturity discounted at the prevailing market yield 9%. The bond holder would receive half yearly interests for 2014, 2015 and 2016 and the principal at the end of 2016. Given the market yield in 2010 at 9%.

Value of the Bond of ₹2000 with 6 half-yearly interests of ₹100 each and repayment of principal of ₹2000 at year end 6.

$$= \frac{100}{(1.045)} + \frac{100}{(1.045)^2} + \frac{100}{(1.045)^3} + \frac{100}{(1.045)^4} + \frac{100}{(1.045)^5} + \frac{2100}{(1.045)^6} = ₹2051.58$$

Answer to 4 (b):

As per para 20 of AS – 10, the cost of fixed asset should comprise its purchase price and any attributable cost of bringing the asset to its working condition for its intended use. In this case the cost of machinery includes all expenditures incurred in acquiring the asset and preparing it for use. Cost includes the purchase price, freight and handling charges, insurance transit, cost of special foundations, and costs of assembling installation and testing. Therefore the cost to be recorded is = ₹(2,50,000 + 40,000 + 20,000) = ₹3,10,000.

Answer to 4 (c):

According to Lev and Schwartz $V_x = \sum_{t=x}^{T} \frac{I(t)}{(1+R)^{T-X}}$

Where,

V_x = The human capital value of a person 'x' years old

T = Retirement Age

I(t) = The person's annual earnings upto Retirement

R = discount Rate

Value of skilled employees:

$= \frac{80000}{(1+0.15)^{65-62}} + \frac{80000}{(1+0.15)^{65-63}} + \frac{80000}{(1+0.15)^{65-64}} = 52,601.3 + 60,491.5 + 69,565.22 = ₹1,82,658.02$

Therefore, total value of skilled employees = ₹1,82,658.02 x 30 = ₹54,79,741

Value of unskilled employees:

$= \frac{60000}{(1+0.15)^{62-60}} + \frac{60000}{(1+0.15)^{62-61}} = 45,368.62 + 52,173.91 = ₹97,542.53$

Therefore, total value of unskilled employees = ₹97,542.53 x 35 = ₹34,13,989

Therefore, value of human resources (skilled and unskilled) = ₹(54,79,741 + 34,13,989) = ₹88,93,730.

5. (a) Mukesh Ltd. furnishes the following particulars about their investment in shares of Sasco Ltd. for the year 2013-14.

Balance of shares held on 1st April, 2013 ₹1,31,000 [5000 shares @ ₹10 each]

Purchased 1000 shares on 1st July 2013 ₹30,000

Sold 250 shares on 1st August 2013 ₹8,750 @ ₹35 per share cum dividend

Sasco Ltd. declared final dividend for 2012-13 on 1st September 2013. 20%

Received 1 : 5 bonus shares on 1st February 2014.

Brokerage for each transaction is 2%. Find out cost of shares held by Mukesh Ltd. as on 31st March, 2014. [8]

5. (b) The following financial share date pertaining to ALPHA LTD on IT company is made valuable to you:

Year ended March 31st	2014	2013	2012
EBIT (₹)	696.03	325.65	155.86

Non-branded Income (₹)	**53.43**	**35.23**	**3.46**
Inflation compound factor @ 8%	**1.000**	**1.087**	**1.181**
Remuneration of Capital	**5% of average Capital employed**		
Average Capital Employed (₹)	**1200.00**		
Corporate Tax Rate	**30%**		
Capitalization Factor	**15%**		

You are required to calculate the Brand Value for ALPHA Ltd. **[7]**

Answer to 5 (a):

Statement of cost

Date	Particulars	Amount (₹)	Amount (₹)
01.04.13	Balance (5000 shares)		1,31,000
01.07.13	Purchased 1000 shares:		
	Cost (cum-dividend)	30,000	
	Add: Brokerage [30,000 x 2%]	600	
		30,600	
	Less: Dividend for 2012-13 (1000 x 10 x 20%)	2,000	
			28,600
01.08.13	Sold (250 shares cum dividend		
	Cost of Sales = 250 x $\frac{(1,31,000+28,600)}{(5,000+1,000)}$		(6,650)
01.02.14	Bonus Shares (1 : 5) = (5750 x $\frac{1}{5}$) = 1150 shares		NIL
31.03.14	**Cost of investment**		**1,52,950**

Notes:

(1) Treatment of dividend received

Particulars	Amount (₹)
Dividend received from Sasco Ltd. during 2013-14 = (5750 x ₹10) x 20%	11,500
Less: Dividend deducted from cost of investment (1000 x 10 x 20%)	(2,000)
Add: Dividend included in sales proceeds of 250 shares (250 x 10 x 20%)	500
Dividend received to be shown in P/L	**10,000**

(2) Profit on sale of investment

Particulars	Amount (₹)
Sale proceeds of 250 shares	8,750
Less: Brokerage (8,750 x 2%)	(175)
	8,575
Less: Dividend for 2012-13 included	(500)
Less: Cost of sales	(6,650)
Profit on sales	**1,425**

Answer to 5 (b):

ALPHA LTD.

Year ended March 31st	2014	2013	2012
EBIT (₹)	696.03	325.65	155.86
Less: Non-brand income(₹)	53.43	35.23	3.46
Adjusted Profits (₹)	642.60	290.42	152.40
Inflation Compound Factor @ 8%	1.000	1.087	1.181
Present Value of Profits for the brand (₹)	642.60	315.69	179.98
Weight age Factor	3	2	1
Weight age profits (₹)	1927.80	631.38	179.98
Profits (₹)	456.53		
Remuneration of Capital (5% of Average capital employed)	60.00		
Brand Related	396.53		
Corporate tax @ 30%	118.96		
Brand Earning	277.57		
Capitalization Factor	15%		

Brand value: (Return/Capitalization rate) = 277.57/0.15 = ₹1850.47 crore

6. Consider two firms that operate independently and have following characteristics:

Particulars	ABC Ltd. ₹in lakhs	XYZ Ltd. ₹in lakhs
Revenues	**600**	**300**
COGS	**350**	**180**
EBIT	**250**	**120**
Expected Growth rate	**6%**	**8%**
Cost of capital	**9%**	**10%**

Both firms are in steady state with capital spending offset by depreciation. Both firms have an effective tax rate of 40% and are financed only by equity. Consider the following two scenarios:-

Scenario – I: Assume that combining the two firms will create economics of scale that will reduce the COGS to 50% of Revenue.
Scenario – II: Assume that as a consequence of the manager, the combined firm is expected to increase its future growth to 8% while COGS will be 60%.

It is given that scenario I & II are mutually exclusive.

You are required to:
(1) Compute the values of both the firms as separate entities.

(2) Compute the values of both the firms together if there were absolutely no synergy at all from the merger.

(3) Compute the value of cost of capital and the expected growth rate.

(4) Compute the value of synergy in (i) Scenario – I & (ii) Scenario – II.

[(2+2)+1+(1+1)+(4+4)]

Answer to 6:

(1) Value of ABC Ltd. $= \frac{FCCF(1+g)}{K_e - g}$

$= \frac{EBIT(1-t)(1+g)}{K_e - g}$

$= \frac{250(1-0.40)(1+0.06)}{0.09-0.06}$

= ₹5300 lakhs

Value of XYZ Ltd. $= \frac{FCCF(1+g)}{K_e - g}$

$= \frac{EBIT(1-t)(1+g)}{K_e - g}$

$= \frac{120(1-0.40)(1+0.08)}{0.10-0.08}$

= ₹3888 lakhs.

(2) Value of both firms without synergy = ₹5300 lakhs + ₹3888 lakhs = ₹9188 lakhs

(3) Cost of capital = $9\% \times \frac{5300}{9188} + 10\% \times \frac{3888}{9188} = 9.42\%$.

Expected growth = $6\% \times \frac{5300}{9188} + 8\% \times \frac{3888}{9188} = 6.85\%$.

(4) Calculation of value of synergy

	Scenario – I (₹)	**Scenario – II (₹)**
Revenues	900	900
COGS (50% of 900)	450	
(60% of 900)		540
EBIT	**450**	**360**
EAT = EBIT (1 – t)	270	216
Cost of capital	9.42%	9.42%
Growth rate	6.85%	8%
Value of the firm with Synergy	11225.49	

$= \frac{270(1.0685)}{0.0942-0.0685}$ $= \frac{216(1.08)}{(0.0942-0.08)}$ Value of the firm without synergy	9188	16428.17 9188
Value of synergy	**2037.49**	**7240.17**

7. The following Balance Sheet of Forex Ltd. is given:

Balance Sheet of Forex Ltd. as on 31st March, 2014

Equity and Liability	₹	Assets	₹
(1) Shareholders Fund:		**(1) Non-Current Assets:**	
(a) Share Capital		**(a) Fixed Assets**	
Equity Share Capital of ₹ 10 each	**50,00,000**	**(i) Tangible Assets:**	
(b) Reserve & Surplus		**— Land and Building**	**32,00,000**
P & L Appropriation Account	**21,20,000**	**— Plant and Machinery**	**28,00,000**
		(ii) Intangible Assets:	
(2) Current Liabilities:		**— Goodwill**	**4,00,000**
(a) Short Term Borrowings – Bank O/D	**18,60,000**		
(b) Trade Payables		**(2) Current Assets:**	
— Sundry Creditors	**21,10,000**	**(a) Inventories**	**32,00,000**
(c) Short Term Provision		**(b) Trade Receivables**	
— Provision for Taxation	**5,10,000**	**— Sundry Debtors**	**20,00,000**
Total	**1,16,00,000**	**Total**	**1,16,00,000**

In 1995 when the company commenced operation the paid up capital was same. The Loss/Profit for each of the last 5 years was - years 2009-2010 - Loss (₹ 5,50,000); 2010-2011 ₹ 9,82,000; 2011-2012 ₹ 11,70,000; 2012-2013 ₹ 14,50,000; 2013-2014 ₹ 17,00,000;

Although income-tax has so far been paid @ 40% and the above profits have been arrived at on the basis of such tax rate, it has been decided that with effect from the year 2013-2014 the Income-tax rate of 45% should be taken into consideration. 10% dividend in 2010-2011 and 2011-2012 and 15% dividend in 2012-2013 and 2013-2014 have been paid. Market price of shares of the company on 31st March, 2014 is ₹ 125. With effect from 1st April, 2014 Managing Director's remuneration has been approved by the Government to be ₹ 8,00,000 in place of ₹ 6,00,000. The company has been able to secure a contract for supply of materials at advantageous prices. The advantage has been valued at ₹ 4,00,000 per annum for the next five years.

Ascertain goodwill at 3 year's purchase of super profit (for calculation of future maintainable profit weighted average is to be taken). [15]

Answer to 7:

(1) Future Maintainable Profit

Year	Profit (P) ₹	Weight (W)	Product (PW) ₹
2010-2011	9,82,000	1	9,82,000
2011-2012	11,70,000	2	23,40,000
2012-2013	14,50,000	3	43,50,000
2013-2014	17,00,000	4	68,00,000
		10	1,44,72,000

$$\text{Weighted average annual profit (after tax)} = \frac{\sum PW}{\sum P} = \frac{₹1,44,72,000}{10} = 14,47,200$$

Particulars	₹
Weighted average annual profit before tax $\left(₹14,47,200 \times \frac{100}{60}\right)$	24,12,000
Less: Increase in Managing Director's remuneration	2,00,000
	22,12,000
Add: Saving in cost of materials	4,00,000
	26,12,000
Less: Taxation @ 45%	11,75,400
Future maintainable profit	14,36,600

(ii) Average Capital Employed

Particulars	₹	₹
Assets:		
Land and Buildings		32,00,000
Plant and Machinery		28,00,000
Stock		32,00,000
Sundry Debtors		20,00,000
		1,12,00,000
Less: Outside liabilities:		
Bank overdraft	18,60,000	
Creditors	21,10,000	
Provision for taxation	5,10,000	44,80,000
Capital employed at the end of the year		67,20,000
Add: Dividend @ 15% paid during the year		7,50,000

		74,70,000
Less: Half of the profit (after tax) for the year i.e. ₹ 17,00,000 x ½		8,50,000
		66,20,000

(iii) Normal Profit

Average dividend for the last 4 years = 12.5%
Market price of share = ₹ 125
Normal rate of return = = 10%
Normal profit (10% of ₹ 66,20,000) = ₹ 6,62,000

(iv) Valuation of goodwill

Particulars	₹
Future maintainable profit	14,36,600
Less: Normal profit	6,62,000
Super profit	7,74,600
Goodwill at 3 years' purchase of super profits (₹ 7,74,600 x 3)	23,23,800

8. Write short notes (*any three*): [3×5=15]

(i) Intrinsic Value
(ii) Valuation of Preference Share
(iii) Fair Market Value of Intangible assets.
(iv) Put Option

Answer to 8:

(i) Intrinsic Value

Intrinsic or fundamental value is used when an investor wants 'true' or 'real' value on the basis of an analysis of fundamentals without considering the prevailing price in the market. It is true economic worth of a share, business or property.

IGBVT defines intrinsic value as "the value that an investor considers, on the basis of an evaluation or available facts to be the "true" or "real" value that will become the market value when other investors reach the same conclusion." Graham & Dodd has defined the intrinsic value as "the value which is justified by assets, earnings, dividends definite prospects and factor of management." There are four major components of intrinsic value of a going concern:

- Level of normal earning power and profitability in the employment of assets as distinguished from the reported earnings which may be and frequently are, distorted by transient influences.

- Dividends actually paid or the capacity to pay such dividends currently and in the future
- A realistic expectation about the trend line growth of earning power
- Stability and predictability of those quantitative and qualitative projections of the future economic value of the enterprise.

Intrinsic value and investment value may seem like similar concepts but they are different. The first represents an estimate of value based on the expected cash flow of the business and not of the investor. The second represents an estimate of value based on expected cash flow in the hands of a specific investor.

(ii) Valuation of Preference Share

In a going concern, preference shares are valued on yield basis.

The formula is: $\frac{\text{Preference dividend rate}}{\text{Market expectation rate}} \times 100$

With fluctuations in the normal rate of return in respect of preference shares, the value of preference shares of a company will fluctuate inversely. The yield-based valuation of preference shares hold good.

(1) If the company has paid preference dividends regularly and is expected to pay in future years as well as

(2) The total asset backing is equal to 4 to 5 times the preference capital.

If dividends on 'cumulative preference shares' are in arrear but there is the possibility of their payment, the present value of such arrears should be taken into account while valuing the preference shares.

Additional right as and where attached to preference shares to get additional share of profits or the right to get the shares converted into equity shares at a certain rate will probably increase the market value of the existing preference shares.

(iii) Fair Market Value of Intangible assets

Any intangible assets acquired are valued on the basis of the fair value of the asset. It includes computer software, patents, copyrights, mining rights, quotas and marketing rights etc. 'three important criteria are used to identify an intangible asset. They are identifiability, control and existence of future economic benefits.

Using the quoted market price in an active market control derive the fair market value of intangibles. The appropriate market price is the current bid price. In the absence of such a price, price quoted in a transaction for similar intangible asset can provide a basis for deriving fair value. Otherwise, the amount which the business unit would have paid in arm's length transaction between knowledge and willing parties is taken as the fair market value.

However, finally it must be admitted that if the fair value of the intangible assets cannot be measured reliably, that asset is not recognized as separate intangible but included in the goodwill.

(iv) Put Option

A put option is a contract that offers the right to its holder but not the obligation to sale a specified quantity of an underlying asset at a specified price on or before the expiration date by paying a premium. The person who has the right to sale the underlying asset is known as the "buyer of the put option". Since the buyer of the put option has the right (but not the obligation) to sell the underlying asset, he will exercise his right to sell the underlying asset if and only if the price of the underlying asset in the market is less than strike price on or before the expiry date of the contract.

The sellers are writers of options who offer a deal that may or may not be 'taken up' by the buyer. It is always the buyer who has an option to exercise, not the seller. The writer is obliged to do what the buyer decides. Writers can offer a call option, meaning shares can be called away from the owners at an agreed price, or they can insist that the writers buy shares at an agreed price. The buyer is known as the option taker (who bids for the option).