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=5]

(i) Under yield method of valuation of equity shares if the expected rate of return is less than the normal rate of return, the paid up value of shares increases proportionately.

(ii) Land and Building is an example of financial asset.

(iii) Firms with higher operating margins, lower reinvestment rates and lower costs of capital will trade at lower value – to - sales multiplies.

(iv) Market price of firms with high revenue ratios and low profit margins are considered by investors as overvalued.

(v) The intrinsic value of a share decreases after a bonus issue.

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

(i) While valuing the leasehold land of a company, one ……….. subject it to amortization (should/ should not).

(ii) The most appropriate method of determining the cost of equity for calculating the Weighted Average Cost of Capital is ……………….(The Dividend Discount Model/ The Capital Asset Pricing Model).

(iii) LIFO as a method of inventory valuation …………..allowed as per Indian Accounting Standards (Is/Is not).

(iv) A ratio between the market value of a company to the replacement value of its assets is known as ………..Ratio (Market Value to Book Value/ Market value to replacement value/Tobin's Q/ Price to book value).

(v) …………. Requires that the expected profit stream of an acquired business provides an attractive return on the total acquisition cost and on any new capital investment needed to sustain or expand the operations (The Cost of Entry test/Principle of Investment).

(vi) In valuing a firm, the …………tax rate should be applied to earning of every period (marginal/effective/average).

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

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

(ix) 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).

(x) If firms defer taxes, the taxes paid in the current period will be at a rate …….than the marginal tax rate (lower/higher).

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

(i) Estimated fair value of an asset is based on the ………………. value of operating cash flows.
(a) current
(b) discounted
(c) future
(d) none of these

(ii) A theory that explains why the total value from the combination resulted from a merger is greater than the sum of the value of the component companies operating independently is known as …………… theory.
(a) hubris
(b) agency
(c) operating
(d) synergy

(iii) A firm's current assets and current liabilities are 1600 and 1000 respectively. How much can it borrow on a short-term basis without reducing the current ratio below 1.25?
(a) ₹ 1,000
(b) ₹ 1,200
(c) ₹ 1,400
(d) ₹ 1,600

(iv) Identify which of the following is not a financial liability
(a) X Ltd. has 1 lakh ₹ 10 ordinary shares issued
(b) X Ltd. has 1 Lakh 8% ₹ 10 redeemable preference shares issued
(c) X Ltd. has ₹ 2,00,000 of 6% bonds issued
(d) Both (a) and (b)

(v) RICO LTD has PAT of ₹ 40.20 lakh with extra ordinary income of ₹ 7.00 lakh. If the cost of capital is 20% and the applicable tax rate is 40% the value of RICO LTD will be:
(a) ₹ 250 lakh

(b) ₹ 180 lakh
(c) ₹ 150 lakh
(d) Insufficient information

Answer

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

(i) False

(ii) False

(iii) False

(iv) True

(v) True

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

(i) Should

(ii) The Capital Asset Pricing Model

(iii) Is not

(iv) Tobin's Q

(v) The Cost of Entry Test

(vi) Marginal

(vii) 4

(viii) Market price per equity share

(ix) ₹ 150

(x) Lower

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

(i) (b) Discounted
In Discounted Cash Flow (DCF) valuation the value of an asset is the present value of the expected cash flows on the asset.

(ii) (d) Synergy
The idea that the value and performance of two companies combined will be greater than the sum of the separate individual parts is called Synergy. This term is used mostly in the context of mergers and acquisitions. For example if Company A has an excellent product but lousy distribution whereas Company B has a great distribution system but poor products the companies could create synergy with a merger.

(iii) (b) ₹ 1400

Amount of borrowing be x. (Current Asset will increase because borrowing will increase the cash amount).

$$\frac{1600+x}{1000+x}=1.25$$

Or, X = 1400

(iv) (a) X Ltd. has 1 lakh ₹ 10 ordinary shares issued
A share is an indivisible unit of capital expressing the proprietary relationship between the company and the shareholder.

(v) (b) ₹ 180 lakh
PAT - ₹ 40.20 lakh
Extraordinary income = ₹ 7 lakh
Tax @ 40% = ₹ 2.8 lakh
PAT of Extraordinary income = ₹ 4.2 lakh
PAT excluding extraordinary income = ₹ 40.2 lakh - ₹ 4.2 lakh = ₹ 36 lakh

Value of firm $\frac{36}{0.20}=180$ lakh

2. (a) Company X is contemplating the purchase of Company Y, Company X has 3,00,000 shares having a market price of ₹ 30 per share, while Company Y has 2,00,000 shares selling at ₹ 20 per share. The EPS are ₹ 4.00 and ₹ 2.25 for Company X and Y respectively. Managements of both companies are discussing two alternative proposals for exchange of shares as indicated below:

(i) in proportion to the relative earnings per share of two Companies.

(ii) 0.5 share of Company X for one share of company Y (0.5: 1).

You are required:

(i) to calculate the Earnings Per Share (EPS) after merger under two alternatives; and

(ii) to show the impact on EPS for the shareholders of two companies under both alternatives.

(b) Shyam Ltd. has announced issue of warrants on 1:1 basis for its equity share holders. The current price of the stock ₹10 and warrants are convertible at an exercise price of ₹11.71 per share. Warrants are detachable and are trading at ₹3. What is the minimum price of the warrant? What is the warrant premium? Now had the current price been ₹16.375, what is the minimum price and warrant premium? (Consider warrants are tradable at ₹9.75). [(7+4)+4]

Answer: 2 (a)

Working Notes:

Computation of total earnings after merger

Particulars	Company X	Company Y	Total
Outstanding shares	3,00,000	2,00,000	
EPS (₹)	4	2.25	
Total earnings (₹)	12,00,000	4,50,000	16,50.000

(i) (a) Calculation of EPS when exchange ratio is in proportion to relative EPS of two companies

Company X	3,00,000
Company Y (2,00,000 × 2.25/4)	1,12,500
Total number of shares after merger	4,12,500

Company X

EPS before merger = ₹ 4

EPS after merger = ₹16,50,000/4,12,500 shares = ₹ 4

Company Y

EPS before merger = ₹2.25

EPS after merger = EPS before merger / Share Exchange ratio on EPS basis

$$= \frac{2.25}{2.25/4} = \frac{2.25}{0.5625} = ₹4$$

(i) (b) Calculate of EPS when share exchange ratio is 0.5:1

Total earnings after merger = ₹ 16,50,000

Total number of shares after merger = 3,00,000 + (2,00,000 × 0.5) = 4,00,000 shares

EPS after merger = ₹ 16,50,000 / 4,00,000 = ₹ 4.125

(ii) Impact of merger on EPS for shareholders of Company X and Company Y

(a) Impact on Shareholders of Company X

	(₹)
EPS before merger	4.000
EPS after merger	4.125
Increase in EPS	0.125

(b) Impact on shareholders of Company Y

(₹)

Equivalent EPS before merger (2.25/0.5)	4.500
EPS after merger	4.125
Decrease in EPS	0.375

Answer: 2 (b)

$$\text{Minimum Price} = \left(\begin{matrix}\text{Market price of} \\ \text{common stock}\end{matrix} - \begin{matrix}\text{Exercise} \\ \text{Price}\end{matrix}\right) \times \text{Exercise Ratio}$$

= (₹ 10.00 – 11.71) × 1.0 = – ₹ 1.71

Thus, the minimum price of this warrant is considered to be zero, because things simply do not sell for negative prices.

Warrant premium = Market price of warrant - Minimum price of warrant = ₹3 - 0 = ₹3

Minimum price = (Market price of common stock - Exercise price) × (Exercise ratio)

= (₹16.375 - 11.71) x 1.0

= ₹ 4.665

Warrant premium = Market price of warrant - Minimum price of warrant = ₹9.75 - 4.665 = ₹5.085

3. (a) Calculate Eeconomic Value Added (EVA) with the help of the following information Sun Limited.
Financial leverage: 1.4 times;
Equity capital ₹170 lakhs;
Reserve and surplus ₹ 130 lakhs;
10% debentures ₹400 lakh;
Cost of Equity: 17.5%
Income tax rate: 30%
Also explain the reason for the difference between the EVA and the MVA (Market Value Added).

(b) Sanju Ltd. gives the following information:

Current Profit	**₹210 lakhs**
Compound growth rate of profit	**7.5%**
Current cash flows from operations	**₹270 lakhs**
Compound growth rate of cash flows	**6.5% p.a.**
Current price earning ratio	**12**
Discount factor	**15%**

Find out the value of Sanju Ltd. taking 10 years projected profit or cash flows based on
(i) Discounted earning method,
(ii) Discounted cash flows method. **[6+9]**

Answer: 3 (a)

$$\text{Financial Leverage} = \frac{\text{EBIT}}{\text{EBIT} - \text{Interest}} = \frac{\text{EBIT}}{\text{EBIT} - 10\% \text{ of } 400} = 1.40$$

EBIT = {(10% of 400) X 1.40] /0.40 = 140
EBIT (I – t) = 140 (1 – 0.30) = 98
Equity capital = 170 + 130 = 300
Debt Capital = 400
Post-tax cost of debt = 10% (1- 0.30) = 7%
Overall cost of capital [Post – tax]= 17.5% of 300 + 7% of 400 = 80.5
Economic Value Added (EVA)
= EBIT (I – t) – Overall cost of capital (Post – tax) = 98 – 80.5 = 17.5 (₹ Lakhs)

Reasons for the difference between EVA and Market Value Added

1. The Market Value of a firm reflects not only the Expected EVA of assets in place but also the Expected EVA from Future Projects.
2. MVA of a company is the Net Present Value (NPV) of all its future EVAs.
3. EVA reflects only the current earning efficiency of the company.

Answer: 3 (b)

(i) Discounted earning method **(₹in lakhs)**

Year	Earnings	Discount Factor @ 15%	Present Value
1	225.75	0.8696	196.312
2	242.68	0.7561	183.490
3	260.88	0.6575	171.529
4	280.45	0.5717	160.333
5	301.48	0.4972	149.896
6	324.09	0.4323	140.104
7	348.40	0.3759	130.963
8	374.53	0.3269	122.434
9	402.62	0.2842	114.425
10	432.82	0.2472	106.993
			1476.479

Value of the business ₹1476.479 lakhs

(ii) Discounted Cash flows method **(₹in lakhs)**

Year	Earnings	Discount Factor @ 15%	Present Value
1	287.55	0.8696	250.053
2	306.24	0.7561	231.548
3	326.15	0.6575	214.444
4	347.35	0.5717	198.580
5	369.92	0.4972	183.924
6	393.97	0.4323	170.313
7	419.58	0.3759	157.720
8	446.85	0.3269	146.075
9	475.89	0.2842	135.248
10	506.83	0.2472	125.288
			1813.193

Value of the business ₹1813.193 lakhs.

4. Write Short Notes on *any three* **(5×3= Marks)**

(i) Reasons for mergers and acquisition.
(ii) Net realizable value of Inventories
(iii) Walter's valuation Model.
(iv) Fair Market value of Intangible assets
(v) Characteristic of Brand

(i) Reasons for mergers and acquisitions

Answer:

There are a number of reasons for mergers and acquisition, why two companies may be worth more together, than when they are apart. These are given below:

1. **Economies of Scale:** Economies are stated to accrue in terms of sharing central services such as procurement, accounting, financial control, human resources management and development, and top-level management and control.
2. **Economies of Vertical Integration:** Organizations seek to attain economies by moving both forward and backward. Reliance Industries is a classic case, as it set up its polymer plants to cater to its textile operations, moved back further to set up petroleum refinery and then moved forward to set up its own outlets for petroleum products. The current trend of all metallurgical companies such as Tata Steel, SAIL, JSW Steel, Vedanta and Hindalco to acquire mines across the globe is a classic example.
3. **Complementary Resources**: When two companies have a complimentary resource that is each having what the other needs, they may see some logic to come together. The recently announced decision of HP to acquire EDS appears to be for these reasons.
4. **Investible** Surplus **Funds:** When organizations have investible surplus funds, that had not been distributed to the shareholders as higher dividends or bonus stocks, they look for investment opportunities. Organizations that have excess cash and do not payout to their shareholders or invest it through acquisitions may become targets of take-over.
5. **Eliminating Inefficiencies:** Organizations with unexploited opportunities to cut costs and improve revenues become take-over targets of organizations with better management. Consider Tata Motors' recent acquisition of Jaguar and Land Rover: The key here is the ability of Tata Motors to implement cost savings at JLR. What will help assess the long-term impact of the acquisition 90 the profitability of Tata Motors is how much of the marquee brands' component sourcing can actually be done from India….."

(ii) Net realizable value of Inventories

Answer:

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:

(a) Inventor/ being damaged
(b) Inventories becoming obsolete
(c) Market price having declined
(d) 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.

(iii) Walter's valuation Model.

Answer:

Prof. Walter's theory is that in the long-run the share price reflect only the present value of expected dividends. Retentions influence stock price only through their effect on future dividends. In this view the investment policy of a firm cannot be separated from its dividend policy. The firm would have an optimum dividend policy which will be determined by the relationship or its internal rate of return and its cost of capital.

Assumptions

a) All financing is done through retained earnings: external sources of funds like debt or new equity capital are not used.
b) With additional investments undertaken, the firm's business risk does not change. It implies that *r* and *k* are constant.
c) There is no change in the key variables, namely, beginning earnings per share, *E*, and dividends per share, *D*. The values of *D* and *E* may be changed in the model to determine results, but, any given value of *E* and *D* are assumed to remain constant in determining a given value.
d) The firm has perpetual (or very long) life.

(iv) Fair Market value of Intangible assets:

Answer:

Any intangible asset acquired is value on the basis of the fair value of the asset, Intangible assets include

(a) Computer software
(b) Patents
(c) Copyrights
(d) Mining rights
(e) Quotas
(f) 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 could derive the fair market values of intangibles.

The appropriate market price is the current bid price. In the absence of such a price, the 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 knowledgeable and willing parties, is taken as the fair market value.

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

(v) Characteristic of Brand;

Answer:

Characteristics of Brand: A Brand is an intangible asset; Some see it as a name or a symbol or a logo. Its associated tangible and emotional attributes is intended to identify the goods/services of one seller in order to differentiate them from those of competitors.

A Brand designates a product, as being different form competitors' product by signaling certain key values specific to a particular brand. It is the associations, which consumers make with the brand that establish an emotional a rational pact between the supplier and the customer.

A Brand is the medium through which consumers identify their experiences with the product offerings of the company. The name of the company is often forgotten but the brand remains in the mind of the consumers.

5. (a) Following are the information of two companies for the year ended 31st March, 2013:

Particulars	Company X	Company Y
Equity Shares of ₹ 10 each	20,00,000	25,00,000
10% Pref. Shares of ₹ 10 each	15,00,000	10,00,000
Profit after tax	7,50,000	7,50,000

Assume the Market expectation is 18% and 80% of the Profits are distributed.

(i) What is the rate you would pay to the Equity Shares of each Company?

(a) If you are buying a small lot.

(b) If you are buying controlling interest shares.

(ii) If you plan to Invest only in preference shares which company's preference shares would you prefer?

(iii) Would your rates be different for buying small lot, if the company 'X' retains 30% and company 'Y' 10% of the profits?

(b) A Ltd. is considering the acquisition of B Ltd. with stock. Relevant financial information is given below.

Particulars	A Ltd.	B Ltd.
Present earnings	₹7.5 lakhs	₹2.5 lakhs
Equity (No. of shares)	4.0 lakhs	2.0 lakhs
EPS	₹ 1.875	₹ 1.25
P/E ratio	10	5

Answer the following question:

(i) What is the market price of each company?

(ii) What is the market capitalization of each company?

(iii) If the P/E of A Ltd. changes to 7.5, what is the market price of A Ltd?
(iv) Does market value of A Ltd. change?
(v) What would be the exchange ratio based on Market Price? (Take revised Price of A Ltd.) **[(4+3+3)+(1×5)]**

Answer: 5 (a)

(i) **(a) Buying a small lot of equity shares:** If the purpose of valuation is to provide data base to aid a decision of buying a small (non-controlling) position of the equity of the companies, dividend capitalisation method is most appropriate. Under this method, value of equity share is given by:

$$\frac{\text{Dividend per share}}{\text{Market capitalisation rate}} \times 100$$

$$\text{Company X : ₹}\frac{2.4}{18} \times 100 = ₹13.33$$

$$\text{Company Y : ₹}\frac{2.08}{18} \times 100 = ₹11.56$$

(b) Buying controlling Interest equity shares: If the purpose of valuation is to provide data base to aid a decision of buying controlling interest in the company, EPS capitalisation method is most appropriate. Under this method, value of equity is given by:

$$\frac{\text{Earning per share (EPS)}}{\text{Market capitalisation rate}} \times 100$$

$$\text{Company X : ₹}\frac{3}{18} \times 100 = ₹16.67$$

$$\text{Company Y : ₹}\frac{2.6}{18} \times 100 = ₹14.44$$

(ii) Preference Dividend coverage ratios of both companies are to be compared to make such decision.
Preference dividend coverage ratio is given by:

$$\frac{\text{Profit after tax}}{\text{Preference Dividend}} \times 100$$

$$\text{Company X : ₹}\frac{7{,}50{,}000}{1{,}50{,}000} = 5 \text{ times}$$

$$\text{Company Y : ₹}\frac{7{,}50{,}000}{1{,}00{,}000} = 7.5 \text{ times}$$

If we are planning to invest only in preference shares, we would prefer shares of Y Company as there is more coverage for preference dividend.

(iii) Yes, the rates will be different for buying *a* small lot of equity shares, if the company 'X' retains 30% and company 'Y' 10% of profits.

The new rates will be calculated as follows:

Company X : ₹ $\frac{2.1}{18} \times 100$ = ₹ 11.67

Company Y : ₹ $\frac{2.34}{18} \times 100$ = ₹ 13.00

Working Notes:

1. **Computation of earning per share and dividend per share (companies distribute 80% of profits)**

	Company A	Company B
Profit after tax	7,50,000	7,50,000
Less: Preference dividend	1,50,000	1,00,000
Earnings available to equity shareholders (A)	6,00,000	6,50,000
Number of Equity Shares (B)	2,00,000	2,50,000
Earning per share (A/B)	3.0	2.60
Retained earnings 20%	1,20,000	1,30,000
Dividend declared 80% (C)	4,80,000	5,20,000
Dividend per share (C/B)	2.40	2.08

2. **Computation of dividend per share (Company X retains 30% and Company Y 10% of profits)**

Earnings available for Equity Shareholders	6,00,000	6,50,000
Number of Equity Shares	2,00,000	2,50,000
Retained Earnings	1,80,000	65,000
Dividend Distribution	4,20,000	5,85,000
Dividend per share	2.10	2.34

Answer: 5 (b)

(i) P/E = Market Price/ EPS. Therefore we have, Market price = P/E x EPS

A Ltd.'s Market Price = 10 x 1.875 = ₹18.75

B Ltd.'s Market Price = 5 x 1.25 = ₹6.25

(ii) Market Capitalization (same as market value or in short referred as market Cap)

= Number of outstanding shares × market Price

A Ltd.'s Market cap = 4.0 lakhs × ₹ 18.75 = ₹75 Lakhs

B Ltd.'s market cap = 2.0 lakhs × ₹ 6.25 = ₹12.5 Lakhs

(iii) If the P/E of A ltd. changes to 7.5, then the market price is given by

= 7.5 x ₹1.875 = ₹14.0625

(iv) Yes. The market value decreases. i.e. = A Ltd.'s market Value = 4.0 lakhs × ₹ 14.0625

= ₹56.25 Lakhs.

(v) General Formula for exchange ratio = = 6.25/14.0625 = 0.44

6. (a) What is Human Resource Accounting? What are its benefits? State the two main methods of its measurement.

(b) Assume the current market value of the bidding company is ₹40 crores, and that of the target company is also ₹40 crores. Then, the sum of the values as independent companies is ₹ 80 crores. Suppose, as a combined entity, due to synergistic effects, the value increases to ₹ 100 crores. The amount of value created is ₹ 20 crores. How will the increase in value be shared or divided between the bidder and the target company?

(c) Print plus Publishers Ltd. has been approached by another publisher Welldone Ltd. which is interested in buying the copyright of the book 'Portfolio Management'

To estimate the value of the following assumptions are made:

(i) The book is to generate ₹ 1,50,000 in after-tax cash flows each year for the next three years and ₹ 1,00,000 a year for the subsequent two years. These are the flows after payment of author royalties, promotional expenses and production costs.

(ii) About 40% of these cash flows are from large organizations that place bulk orders and considered predictable and stable. The cost of capital applied to these cash flows is 7%.

(iii) The remaining 60% of the cash flows are to the general public and this segment of the cash flows are to the general public and this segment of the cash flows is considered much more volatile. The cost of capital applied to these cash flows is 10%.

Based on the information given above, estimate the value of the copyright.

[(2+2+2)+3+6]

Answer 6 (a)

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 remuneration. HRA promotes the description of investments in staff, thus enabling the design of human resource management systems to follow and evaluate the consequences of various HR management principles.

The basic aims of HRA are several. First, HRA improves the management of human resources from an organizational perspective – through increasing the transparency of human resource costs, investments and outcomes in traditional financial statements. Second, HRA attempts to improve the bases for investor's company-valuation.

The following are the two main methods of measuring Human resource

(i) Input Measurement – Inputs (such as training) are not necessarily effective, so cost is not always a good proxy measure of output value. Trained personnel may also move to another

employer through higher labour mobility – thus inhibiting the returns from corporate training investment.

(ii) Replacement Value – Such values are rare, usually calculated to help product sales or the sale of the company, and are often highly debatable.

Answer: 6 (b)

Targets usually receive a premium. If the bidder pays the target a premium of less than ₹20 crores, it will share in the value increases. If the bidder pays ₹60 crores to the target, all gains will go the target company. The bidder achieves no value increase for itself. On the other hand, if the bidder pays ₹70 crores to the target, the value of bidder will down to ₹30 crores.

Answer 6 (c)

The Value of the copyright can be estimated as follows:

Year	Stable Cash Flows	PVF @ 7% approx	PV @ 7%	Volatile cash flows	PVF @ 10% approx	PV @ 10%
1	60,000	0.9345	56,075	90,000	0.9091	81,818
2	60,000	0.8734	52,406	90,000	0.8264	74,380
3	60,000	0.8163	48,978	90,000	0.7513	67,619
4	40,000	0.7629	30,516	60,000	0.6830	40,981
5	40,000	0.7130	28,519	60,000	0.6209	37,255
			2,16,494			3,02,053

The value of the copyright is ₹ 2,16,494 + 3,02,053 = ₹ 5,18,547

7. (a) Given below is the Balance Sheet of MNC Ltd as on 31.03.2013 (₹ Lakhs)

Liabilities	**₹**	**Assets**	**₹**
Share Capital	**100.00**	**Sundry Fixed**	**144.00**
Reserve	**64.00**	**Non- Trade Investments**	**24.00**
Profit and Loss Account	**6.00**	**Stock**	**15.60**
Sundry Creditors	**16.40**	**Debtors**	**12.40**
Proposed Dividend	**20.00**	**Cash & Bank**	**10.40**
Total	**206.40**	**Total**	**206.40**

Other Information:

(i) Profit Before Tax and Other relevant information: (₹ Lakhs)

Year	**Profit Before Tax**	**Provision for Gratuity required**	**Gratuity Paid**	**Loss of uninsured stock**
2009	**84.00**	**4.40**	**-**	**-**
2010	**78.00**	**4.60**	**3.34**	**1.24**

2011	88.00	5.00	0.64	-
2012	84.00	5.20	2.84	-
2013	74.00	5.40	0.24	-

(ii) Post Tax Rate is 51% while Expected Tax Rate is 45%.

(iii) The Company wants to switch over towards maintaining gratuity provision on actuarial calculation rather than accounting on payment basis. The Company's Non-Trade Investments fetched 11%.

Find out value of Goodwill. It may be assumed that Super Profit, if any, is maintainable for 5 years. 18% should be the appropriate discount factor. Normal Rate of Return may be taken as 15%.

(b) Explain the investment implications of the efficient market theory? [10+5]

Answer: 7(a)

1. Computation of Future Maintainable Profits **(₹ Lakhs)**

Particulars	2009	2010	2011	2012	2013
Profit Before Tax	84.00	78.00	88.00	84.00	74.00
Less: Provision for Gratuity	(4.40)	(4.60)	(5.00)	(5.20)	(5.40)
Add: Gratuity Paid	—	3.34	0.64	2.84	0.24
Add: Abnormal Loss	—	1.24	—	—	—
Adjusted Profits	79.60	77.98	83.64	81.64	68.84
Simple Average Profit (See Note below) (79.60 + 77.98 + 83.64 + 81.64 + 68.84)÷5					78.34
Less : Income from Non-Trade Investments at 11% of ₹24 Lakhs					(2.64)
Adjusted Profit Before Tax = Future Maintainable PBT					75.70
Less : Tax Expense at 45%					(34.06)
Adjusted Profit After Tax = Future Maintainable PAT					41.64

Note: Since Profits show an oscillating trend, Simple Average Profit shall be more appropriate than Weighted Average or Trend Equation Methods.

2. Computation of Average Capital Employed

Particulars	₹ Lakhs	
Total of Assets as per Balance Sheet		206.40

Less: Non- Trade Investments and Sundry Creditors (24.00 +16.40)		(40.40)
Closing Capital Employed		**166.00**
Less: 50% of Profit After Tax earned in 2013 as per Books		
PAT = PBT less Tax at 51% = 74.00 Less 51% thereon = ₹36.26 Lakhs	36.26	
50% of the above PAT for the year		(18.13)
Average Capital Employed		**147.87**

3. Computation of Goodwill (₹ Lakhs)

(a) Capitalization Method:

Expected Capital (Future Maintainable Profit ÷ NRR) =₹41.64 Lakhs ÷ 15%	277.60
Less: [Closing Capital Employed **Less** Proposed Dividend] = 166.00 - 20.00	146.00
Goodwill using Capitalization Method	**131.60**

(b) Super Profit Method:

Future Maintainable Profit	41.64
Less: Normal Profit at 15% Average Capital Employed (15% of ₹147.87 Lakhs)	22.18
Super Profits	**19.46**
Goodwill at 5 years' purchase of Super Profits	**97.30**

Note: Alternatively Normal Profit can be computed based on Closing Capital Employed

(c) Annuity Method:

Super Profits	19.46
Annuity Factor for 5 years at 18%	3.127
Goodwill using Annuity Method	**60.85**

Note and Assumptions:

1. Under Capitalization Method, Closing Capital is considered, whereas under Super Profit Method, Average Capital Employed is considered for calculating Normal Profits.
2. Discount Rate and Normal Rate of Return given above are after tax rates.

Answer: 7(b)

Investment implications of the efficient market theory:

(i) The substantial evidence in favour of the randomness of stock price behavior suggests that technical analysis, which is based on the premise that stock prices follow certain patterns, represents useless market folklore.

(ii) Routine and conventional fundamental analysis is not of much help in identifying profitable courses of action more so when you are looking at actively traded securities. The efficiency of the market place depends on the presence of numerous investors who make competent, efforts to analyze information and take appropriate actions on their analysis.

(iii) The Key levers for earning superior rates or return are:-

- Early action on any new development
- Sensitivity to market imperfections and anomalies
- Use of original unconventional and innovative modes of analysis
- Access to inside information and its sensible interpretation.

8. X Ltd and Y Ltd , two private Companies, decide to amalgamate their business into a new Holding Company Z Ltd ., which was incorporated on 1st Nov 2012 with an Authorized Capital of ₹40,00,000 in Equity Share of ₹10 each. The new Company plans to commence operation on 1st Jan 2013.

From the information given below, and assuming that all transactions are completed by 30th June 2013, you are required to –

Show the computation of the number of shares to be issued to the former shareholders of X Ltd & Y Ltd.

Calculate the Cash Flow available to Z Ltd. based on the information available to you.

Information

(i) Z Ltd will acquire the whole of Equity Share Capital of X Ltd and Y Ltd by issuing its own shares fully paid.

(ii) The number of shares to be issued is to be calculated by multiplying the future annual maintainable profits available to the Equity Shareholders in each of the two Companies by the agreed Price Earning Ratios.

(iii) The following information is relevant.

Particulars	X Ltd	Y Ltd
Equity Shares of ₹10 each fully paid	10,00,000	4,00,000
8% Cumulative Preference Shares	-	1,00,000
10% Debentures	2,00,000	-
Future annual maintainable pre-tax profits (before interest/ dividends)	2,30,000	1,12,000
Price Earning Ratio	10 times	8 times

(iv) Shares in the Holding Company are to be issued to the shareholders in Subsidiary Companies at a premium of 20% and thereafter these shares will be marketed on the Stock Exchange.

(v) It is expected that the Group Profits of the new Company in 2013 will be at least ₹4,50,000 but that will be required as additional Working Capital to facilitate expansion. Accordingly, it is planned to make a further issue of 37,500 Equity shares to the public for Cash at a premium of 30% on 1st May 2013. The new shares will not rank for interest / dividend to be paid on 30th June 2013.

(vi) Out of the proceeds of the Public Issue, Z Ltd will advance ₹2,50,000 to X Ltd and ₹2,00,000 to Y Ltd on 1st May 2013 for Working Capital. These advances will carry interest @ 15% p.a to be paid monthly.

(vii) Preliminary Expenses are estimated at ₹8,000 and Administrative Expenses for the half-year ended 30th June 2013 at ₹16,000 but this expenditure will be covered by temporary overdraft facility. It is estimated that Bank Overdraft cost will be ₹1,600 in the first six months.

(viii) A provision for ₹7,500 should be made for Directors Fee for the half year.

(ix) On 30th June 2013, it is planned to pay interim dividend as: Per share X Ltd – 5% , Y Ltd - 4.40%, Z Ltd - 4%

(x) Income tax 50%. (Say) [15]

Answer:

1. Computation of number of Shares to be issued

Particulars	X Ltd	Y Ltd
Future Maintainable EBIT	2,30,000	1,12,000
Less: Debenture Interest	(20,000)	-
Profit Before Tax	2,10,000	1,12,000
Less: Income Tax at 50%	(1,05,000)	(56,000)
Profit After Tax	1,05,000	56,000
Less: Preference Dividend	-	(8,000)
Profit to Equity Shareholders	1,05,000	48,000
PE Ratio	10	8
$\text{Capitalized Earnings} = \left(\frac{\text{Profit to Equity Share holders}}{1/\text{P E Ratio}} \right)$ $\Theta K_e = \frac{1}{\text{P E Ratio}}$	10,50,000	3,84,000
Number of Shares to be exchanged in Z Ltd at ₹12 per share (including premium of ₹ 2 each)	87,500	32,000

2. Computation of Total Purchase Consideration

Particulars	₹
Issued Share Capital [87,500 + 32,000 = 1,19,500 Shares of ₹10]	11,95,000
Securities Premium 1,19,500 X ₹2 per Share	2,39,000
Total Purchase Consideration	**14,34,000**

3. Cash Flow Analysis

Receipts	₹	Payments	₹
To Proceeds of Public Issue		By Payments:	
37,500 shares at ₹10 each	3,75,000	Preliminary Expenses	8,000
Share Premium at 30%	1,12,500	Administration Expenses	16,000
To Interest received on Advances:		Advance to X Ltd	2,50,000
From X Ltd (2,50,000 x 15% x 2/12)	6,250	Advance to Y Ltd	2,00,000
From Y Ltd (2,00,000 x 15% x 2/12)	5,000	Bank Interest	1,600
To Dividends Received:		By Dividends Payable:	
From X Ltd (10,00,000 x 5%)	50,000	₹11,95,000 X 4%	47,800
From Y Ltd (4,00,000 x 4.40%)	17,600	By Balance c/d (balancing figure)	42,950
Total	**5,66,350**	**Total**	**5,66,350**