Paper 18: Business Valuation Management

1 A) Choose the correct alternative: (Answer in **bold**)

i) Net worth of a company is equal to

a) Total assets at market value-Liabilities

b)Total assets at book value- Liabilities

c) Total assets at market value(including fictitious assets)- Liabilities- Preference shareholders claim.

d) Total assets at market value(excluding fictitious assets)- Liabilities- Preference shareholders claim.(Note: In business context net worth is also known as shareholders' equity.)

ii)Which of the following intangible assets is considered an unidentifiable intangible asset?

a)Patent right.

b)Goodwill.(Note: Intangible assets lack physical substance but possess economic value. Patent , copyright, trademark are identifiable as they can be sold individually. By contrast goodwill and customer loyalty are unidentifiable ,they cannot be realized without selling the entire enterprise.)

c)Franchise.

d)Copyright.

iii)Which of the following increases the earning capacity in the business?

a)Bank overdraft.

b)Prepaid insurance.

c)Trademarks.(Note: Trade mark is an intangible asset which increases the earning capacity of business. Bank overdraft is a liability to be repaid from earnings, prepaid insurance is a premium that is unexpired in the previous year and cash at bank is a current asset and do not directly help in increasing the earning capacity of a business.)

d)Cash at bank.

iv)YTM(Yield to Maturity) is same as:

a)NPV

b)IRR

c)Geometric Mean Return

d)Both b and c (Note: Calculating IRR for a stream of cash flows gives the true return on the bond, which is known as the YTM.)

v)The valuation of a compulsorily convertible bond is **not** a function of

a)Straight bond value

b)Conversion value

c)Option value(Note: The valuation of a compulsorily convertible bond is not a function of option value, since the investor has no option on convertibility.)

d)Both b and c above.

vi)When a right is not exercised , the value of option will be:

a)Zero(Note: If the ***option is not exercised*** by maturity, it expires worthless.)

b)Less than zero

c)Equal to market price of underlying asset

d)None of these.

vii)The difference between gross value added and net value added is :

a)Investment income

b)Extraordinary expenses

c)Dividend on shares

d)Depreciation.(Note: Gross value added is arrived by deducting from sales revenue and any direct income and investment income, the cost of all direct materials and services and other extra ordinary expenses. Net value added is derived by deducting depreciation from gross value added.)

viii)Human resource is not taken as asset in accounting books because of:

a)Conservatism concept

b)Cost concept

c)Money measurement concept(Note: Recording , classification and summarization of business transactions requires common unit of measurement, which is money. Hence human resource is not taken as asset in accounting books.)

d)Business entity concept

ix)Valuation of common stock is based on:

a)Past performance.

b)Expected future returns(Note: The expected future performance may vary from past performance.)

c)Based on opinions of shareholders.

d)Dividend payout of the company.

x)Net Present Value of growth investments is zero under:

a)Expansion model(Note: In this model the rate of return in investment is equal to cost of capital. Therefore the NPV of growth investments is zero.)

b)Simple growth model

c)Negative growth model

d)Dynamic true growth model.

B) State whether following statements are True or False. (Answer in **bold**)

i)The best estimate of the intrinsic value of an asset is its market value.(**The statement is false. The intrinsic value of an asset is a function of underlying economic values-expected returns, risks etc.**)

ii)Gold generally provides a hedge against inflation over long periods of time.(**The statement is true. The gold prices rises during inflation and thus provides a hedge against inflation over long periods of time.**)

iii)Higher the rate of return, higher will be P/E ratio.(**The statement is false. The required rate of return and price earning ration are inversely related to each other, thus higher the rate of return, lower will be P/E ratio.**)

iv)In a valuation model for a loss making company highest weightage should be given to book value. (**The statement is true. For a loss making firm the valuation techniques will be bit harsh on valuation, hence highest weightage should be given to book value.**)

v)Measures of Intellectual Capital should be interpreted as a stock valuation, not flow.(**The statement is true. This is because the value of intellectual capital is both time and context dependent.**)

vi)The valuation model for an option is same as valuation of a future.(**The statement is false. The valuation model for an option differs from valuation of a future as option is the right to exercise without an obligation and future is a right to exercise with an obligation.**)

vii)Under market extraction method, the rates on equity as well as debt financing rates are weighted according to their proportions to calculate capitalization rate of real assets. (**The statement is false. This relates to Bond of Investment method)**

viii) Research –based Brand Equity Valuations donot put financial value on brands.(**The statement is true. They measure consumer behavior and attitudes that have an impact on economic performance of brands.**)

ix)The straight value of preferred stock is internal rate of return of the company which issues preferred stock.(**The statement is false. The straight value of preferred stock is the present value of the future dividends discounted at a rate equivalent to rate on identical securities without the conversion clause.**)

x)A constant growth dividend discount model will not produce a finite value of stock if dividend growth rate is equal to its historical average.(**The statement is true. V=D1/(Ke-g); which implies ke=g; the constant growth dividend model will not produce a finite value of stock, ie V.**)

C) Fill in the blanks with appropriate words**:(Answer in bold)**

i)The fundamental purpose of ----------is to change the character of an asset or liability without liquidating that asset or liability.(hedging/**swap. Note: Example , an investor realizing returns from an equity investment can swap those returns into less risky fixed income cash flows- without liquidating the equities.**)

ii)Price risk and reinvestment risks act in ---------- directions.(same/ **different. Note: A change interest rate has two effects-reinvestment effect and price effect. If interest rate moves up after purchase of bond, interest income on bond will be reinvested at a higher rate. But rise in interest rate will reduce the bond price and hence the investor incurs a capital loss.**)

iii)Beta of a security measures its----------(Financial risk/**Market risks. Note: Beta of a security measures vulnerability of a security to market risks or non diversifiable risks.**)

iv)Tobin's Q is more a measure of the perceived quality of a firm's management than its valuation. It is estimated by dividing the market value of firm's assets by the ----------of these assets.(book cost/**replacement cost. Note: Tobin's Q was developed by** James Tobin **(Tobin 1969) as the ratio between the market value and replacement value of the same physical asset.)**

v)Sale of total firm, in parts is usually referred to as ----------(**liquidation**/divestiture. **Note: Selling a division or part of an organization is called *divestiture*.**)

vi)----------is market related intangible asset.(**Trademark**/Technical know-how. **Note: Know-how is often** tacit knowledge**, which means that it is difficult to transfer to another person by means of writing it down or verbalizing it.**)

vii)If EPS of a company is Rs 15 and the P/E ratio other similar company is Rs 10, then market value of the share of this company will be Rs----------(Rs **150**/Rs 1.5. **Note : Market value per share= EPS*P/E ratio**)

viii)If projected economic income flows are non constant, ----------capitalisation method will be useful for valuing the firm.(direct/**yield**. **Note: Direct Capitalization reflects a one year return, it has nothing to say about the future. Yield capitalization, generally considers the income streams for several years. Conceptually, yield capitalization involves the conversion of future benefits into present value by applying an appropriate yield rate to the various cash flows.**)

ix) An industry in the expansion stage is indicated by ---------- P/E ratio.(**high**/low. **Note: Other things held equal, higher growth firms will have higher PE ratios than lower growth firms.**)

x) Revaluation of assets is undertaken to attract investors by indicating to them--------- value of the asset.(**current**,future. **Note: The purpose of a revaluation is to bring into the books the** fair market value **of assets**).

2 A) Distinguish between price and value?

B) Calculate EVA of X Ltd. with information provide below:

Capital Structure:	**Equity Capital**	**Rs 170 lacs**
	Reserves and Surplus	**Rs 130 lacs**
	10% Debentures	**Rs 400 lacs**
Cost of Equity	**17%**	
Income Tax Rate(assumed)	**30%**	
Financial leverage	**1.4 times**	

Ans: A) In simple and layman terms, both price and value are the same in meaning in some usage during conversation. But in professional reports, writeups and discussion, their usage in sentences should be distinguished.

The price may be understood as 'the amount of money or other consideration asked for or given in exchange for something else.' The price is therefore, an outcome of a transaction whereas the value may not necessarily require arrival of a transaction. The term value connotes 'worth' of a thing. It can also be defined as 'bundle of benefit' expected from a thing, whether tangible or intangible.

In finance and business, cost is usually used to connote historical cost or the money used to acquire something (eg original amount paid for goods, services and assets). Price, like Cost, is usually used to denote the amount needed to pay something for purchase.

Value as used in business connotes the amount of money that say, an asset has for a certain time period whether at present or any other time. It is necessarily the amount of money paid for to acquire something since it can be an amount arrived at which is the result of estimates and assumptions. Value can also be the sum of original cost +/- estimates and assumptions. Hence, the term " Present Market Value" is an amount arrived at using present market factors such as demand, the availability and going rate of the same item in the market etc.. Another example is 'Net Book Value" or " Depreciated Book Value" which is usually the difference between the Original Cost less the calculated depreciation. We do not use "Net Market Cost" or "Net Book Cost" since it will confuse people.

Value isn't the same for everyone whereas price is.

One issue that often confounds investors in the stock market is resolving the difference between a stock's value and its price.

If you have spent any time in the stock market, you know that value and price are two different measures arrived at by different means.

Often, the stock's price is at or near that value, discounting daily fluctuations due to a rising or falling market. However, there are many occasions where a stock's price (what it is actually trading for on the open market) is way off the value. n the end, stock market analysts will arrive at a value, that is, what they believe the stock should trade for on the market.

B) Financial leverage= EBIT/EBT= 1.4(given in question)

Interest =10%* Rs 400 lacs=Rs 40lacs

Therefore, 1.4=EBIT/EBT

Or, 1.4=EBIT/(EBIT-40)

Or 1.4(EBIT-40)=EBIT

Or, 1.4 EBIT-56=EBIT

Or 1.4 EBIT-EBIT=56

Or EBIT=56/0.4

Or EBIT=140

Therefore Earnings before Interest and Taxes= Rs 140 lacs

NOPAT= EBIT-Tax

=Rs. 140 lacs(1-0.30)

WACC=(K_e*%of equity)+(K_d *%of debt),

where, K_e is cost of equity and K_d is Cost of Debt.

Or,WACC= (17.5%*300/700)+(10%(1-0.30)*400/700)

= 7.5%+4%=11.5%

EVA= NOPAT- (WACC*Total capital)

= Rs 98 lac-(0.115*Rs 700 lacs)=Rs 17.50 lacs

3 A) Distinguish between equity value and enterprise value of a company.

B) A share of GHB Ltd. is currently quoted at, a price earning ratio of 7.5 times. The retained earning per share being 37.5% is Rs. 3 per share. Compute:

(i) The company's cost of equity, if investors expect annual growth rate of 12%.

(ii) If anticipated growth rate is 13% p.a., calculate the indicated market price, with same cost of capital.

Ans: A) While both equity value and enterprise value serve the purpose of putting a value on the company, they are calculated differently and give a slightly different picture of the company's price tag.

The equity value / market cap is defined simply as the total value of all outstanding stock for the company. Since the ownership of a public company lies in its outstanding shares, the theoretical price to buy the entire company would be the price of a single share of stock multiplied by the number of shares currently outstanding.

The enterprise value jumps off the back of the equity value and calculates what the company is worth net of the amount of cash and debt that the company has on its balance sheet. This is important to look at since, if anyone were to actually buy an entire company, they inherit both the cash and the debt of the company.

Valuation of Equity/ Equity Value = Common Shares Outstanding * Share Price

Enterprise Value = Equity Value – Cash + Debt + Minority Interest + Preferred Stock

B i) **Calculation of cost of capital**

Retained earnings	37.5%	Rs. 3 per share
Dividend*	62.5%	Rs. 5 per share
EPS	100.0%	Rs. 8 per share
P/E ratio	7.5 times	

Market price is Rs. 7.5 × 8 = Rs. 60 per share

Cost of equity capital = (Dividend*/price × 100) + growth %

= (5/60 × 100) + 12% = 20.33%.

ii). Market price = Dividend/(cost of equity capital % – growth rate %)

= 5/(20.33% – 13%)

= 5/7.33%

= Rs. 68.21 per share.

*Dividend=Rs(3/37.5)*62.5=Rs 5

4 A) Given below is the extracts of Balance Sheet of S Ltd. as on 31.3.2013 :

Ref No.		Particulars	Note No.	As on 31st March, 2013	As on 31st March 2012
		1	2	3	4
I		**EQUITY AND LIABILITIES**			
(1)		**Shareholders' funds**			
	(a)	Share Capital	1	100	
	(b)	Reserves and Surplus		40	
	©	Money received against share warrants			
(2)		**Share application money pending allotment**			
(3)		**Non-current liabilities**			
	(a)	Long term liabilities			
	(b)	Deferred tax liabilities			
	(c)	Other Long term Liabilities			
	(d)	Long term provisions			
(4)		**Current Liabilities**			
	(a)	Short-term borrowings			
	(b)	Trade payables		30	
	©	Other current liabilities			
	(d)	Short-term provisions			
		TOTAL		170	
II		**ASSETS**			
(1)		**Non-current assets**			
	(a)	Fixed Assets			
		(i)Tangible assets	(2)	120	
		(ii)Intangible assets			
		(iii)Capital work in progress			
		(iv) Intangible assets under development			
	(b)	Non-current investments		10	
	©	Deferred tax assets (Net)			
	(d)	Long-term loans and advances			
	(e)	Other non-current assets			
(2)		**Current assets**			
	(a)	Inventories		20	
	(b)	Trade Receivables		15	

	©	Cash and cash equivalents		5	
	(d)				
	(e)				
		TOTAL		170	

Schedule 1 **Share Capital**	
Particulars	Rs.in lacs
Share Capital (Fully paid shares of Rs 10 each)	100
	100

Schedule 2 **Fixed Assets**	
Particulars	Rs. In lacs
Tangible assets: Land and Building Plant and Machinery	 40 80
	120

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

(i) Profit for the current year Rs. 64 lacs includes Rs. 4 lacs extraordinary income and Rs. 1 lac income from investments of surplus funds; such surplus funds are unlikely to recur.

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

(iii) Market value of Land and Building and Plant and Machinery have been ascertained at Rs. 96 lacs and Rs. 100 lacs respectively. This will entail additional depreciation of Rs. 6 lacs each year.

(iv) Effective Income-tax rate is 30%.

(v) The capitalization rate applicable to similar businesses is 15%.

B) Calculate the price of 3 months ABC futures, if ABC (FV Rs.10) quotes Rs.220 on NSE and the three months future price quotes at Rs.230 and the one month borrowing rate is given as 15 percent and the expected annual dividend yield is 25 percent per annum payable before expiry.

Ans: A)

	Rs in lacs
Net Assets Method	
Assets:	
Land & Buildings	96
Plant & Machinery	100
Investments	10
Stocks	20
Debtors	15
Cash & Bank	5
Total Assets	246
Less: Creditors	30
Net Assets	216

Value per share

(a) Number of shares $\frac{1,00,00,000}{10} = 10,00,000$

(b) Net Assets Rs.2,16,00,000

$$\frac{Rs.2,16,00,000}{10,00,000} = Rs.21.6$$

Profit-earning Capacity Method

Profit before tax			64.00
Less: Extraordinary income		4.00	
Investment income (not likely to recur)		1.00	5.00
			59.00
Less: Additional expenses in forthcoming years			
Advertisement		5.00	
Depreciation		6.00	11.00
Expected earnings before taxes			48.00
Less: Income-tax @ 30%			14.40
Future maintainable profits (after taxes)			33.60
			224

Value of business

Capitalisation factor $\frac{33.60}{0.15} =$

Less: External Liabilities (creditors)	30
	194

Value per share

$$= \frac{1,94,00,000}{10,00,000} = Rs.19.4$$

Fair Price of share	Rs.
Value as per Net Assets Method	21.6
Value as per Profit earning capacity (Capitalisation) method	19.4

Fair Price= $\frac{21.6+19.4}{2} = \frac{41}{2} = Rs.20.5$

B) Future's Price = Spot + cost of carry – Dividend

F = 220 + 220 × 0.15 × 0.25 – 0.025** × 10

= 225.75

** Entire 25% dividend is payable before expiry, which is Rs.2.50.

Thus we see that futures price by calculation is Rs.225.75 which is quoted at Rs.230 in the exchange.

Analysis:

Fair value of Futures less than Actual futures Price: Futures Overvalued .Hence it is advised to sell.

5 A) **The following information is available of a concern; calculate E.V.A.:**

Debt capital 12%	**Rs. 2,000 crores**
Equity capital	**Rs. 500 crores**
Reserve and surplus	**Rs. 7,500 crores**
Capital employed	**Rs. 10,000 crores**
Risk-free rate	**9%**
Beta factor	**1.05**
Market rate of return	**19%**
Equity (market) risk premium	**10%**
Operating profit after tax	**Rs.2,100 crores**
Tax rate	**30%**

B) CC Ltd is considering two mutually exclusive projects. Investment outlay of both the projects is Rs. 5,00,000 and each is expected to have a life of 5 years. Under three possible situations their annual cash flows and probabilities are as under:

Situation	Probabilities	Cash Flow Rs. Project P	Project Q
Best	**0.3**	**6,00,000**	**5,00,000**
Normal	**0.4**	**4,00,000**	**4,00,000**
Worse	**0.3**	**2,00,000**	**3,00,000**

The cost of capital is 7 per cent, which project should be accepted? Explain with workings.

Ans: A) E.V.A. = NOPAT – COCE

NOPAT = Net Operating Profit after Tax

COCE = Cost of Capital Employed

COCE = Weighted Average Cost Of Capital × Average Capital Employed

= WACC × Capital Employed

Debt Capital Rs.2,000 crores

Equity capital 500 + 7,500 = Rs.8,000 crores

Capital employed = 2,000+8,000 = Rs.10,000 crores

Debt to capital employed = $\frac{2,000}{10,000}=0.20$

Equity to Capital employed = $\frac{8,000}{10,000}=0.80$

Debt cost before Tax 12%

Less: Tax (30% of 12%) 3.6%

Debt cost after Tax 8.4%

According to Capital Asset Pricing Model (CAPM)

Cost of Equity Capital = Risk Free Rate + Beta × Equity Risk Premium

Or

= Risk Free Rate + Beta (Market Rate – Risk Free Rate)

= 9 + 1.05 × (19-9)

= 9 + 1.05 × 10 = 19.5%

WACC = Equity to CE x Cost of Equity capital + Debt to CE x Cost of debt

= 0.8× 19.5% + 0.20× 8.40%

= 15.60% + 1.68% = 17.28%

COCE = WACC × Capital employed

= 17.28% × 10,000 crores = 1728 crores

E.V.A. = NOPAT – COCE

= Rs. 2,100 – Rs. 1,728 = Rs. 372 crores

B) **Project P**

Expected Net Cash flow (ENCF)

=.3 (6,00,000) + .4 (4,00,000) + .3 (2,00,000) = 4,00,000

σ^2 = .3 (6,00,000 – 4,00,000)^2 + .4 (4,00,000 – 4,00,000)^2 + .3 (2,00,000 – 4,00,000)^2

$\sigma = \sqrt{24,00,00,00,000}$

σ = 1,54,919.33

ENPV = 4,00,000 × 4.100 = 16,40,000

NPV = 16,40,000 – 5,00,000 = 11,40,000

Project Q

ENCF = .3 (5,00,000) + .4 (4,00,000) + .3 (3,00,000) = 4,00,000

σ^2 = .3 (5,00,000 – 4,00,000)^2 + .4 (4,00,000 – 4,00,000)^2 + .3 (3,00,000 – 4,00,000)^2

$\sigma = \sqrt{6,00,00,00,000}$

σ = 77,459.66

ENPV = 4,00,000 × 4.100 = 16,40,000

NPV = 16,40,000 – 5,00,000 = 11,40,000

Recommendation:

NPV in both projects being the same, the project should be decided on the basis of standard deviation and hence project 'Q' should be accepted having lower standard deviation, means less risky.

6 A) LAK Ltd. took a machine on lease from LSS Ltd., the fair value being Rs.7,00,000. The economic life of the machine as well as the lease term is 3 years. At the end of each year LAK Ltd. pays Rs.3,00,000. Guaranteed Residual Value (GRV) is Rs.22,000 on expiry of the lease. Implicit Rate of Return (IRR) is 15% p.a. and present value factors at 15% are 0.869, 0.756 and 0.657 at the end of first, second and third years respectively.

Calculate the value of machine to be considered by LAK Ltd.

B) K Ltd. has equity capital of Rs.40,00,000 consisting of fully paid equity shares of Rs.10 each. The net profit for the year 2012-13 was Rs.60,00,000. It has also issued 36,000, 10% convertible debentures of Rs.50 each. Each debenture is convertible into five equity shares. The tax rate applicable is 30%. Compute the value of diluted earnings.

Ans: A) Value of machine will be lower of the fair value or present value (PV) of Minimum Lease Payments (MLP).

Present value (PV) of Minimum Lease Payments (MLP)

Year	MLP	PV at 15%	PV Amount
		Rs.	Rs.
1	3,00,000	0.869	2,60,700
2	3,00,000	0.756	2,26,800
3	3,22,000 (considering residual value)	0.657	2,11,554
			6,99,054

Since PV of MLP Rs. 6,99,054 being lower than the fair value Rs. 7,00,000, therefore, value of machine will be taken as Rs.6,99,054.

B)Interest on Debentures @ 10% for the year $36,000 \times 50 \times \frac{10}{100}$

= Rs.1,80,000

Tax on interest @ 30% = Rs.54,000

Diluted Earnings (Adjusted net profit) = (60,00,000 + 1,80,000-54,000)

= Rs. 61,26,000

7 A) PQR Ltd. is intending to acquire DEF Ltd. by merger and the following information is available in respect of the companies:

	PQR Ltd.	DEF Ltd.
Number of equity shares	**10,00,000**	**6,00,000**
Earnings after tax (Rs.)	**50,00,000**	**18,00,000**
Market value per share (Rs.)	**42**	**28**

Required:

(i) What is the present EPS of both the companies?

(ii) If the proposed merger takes place, what would be the new earning per share for PQR Ltd.? Assume that the merger takes place by exchange of equity shares and the exchange ratio is based on the current market price.

(iii) What should be exchange ratio, if DEF Ltd. wants to ensure the earnings to members are as before the merger takes place?

B) What are the different types of Mergers?

Ans: A) (i)Earnings per share = Earnings after tax /No. of equity shares

PQR Ltd. = Rs. 50,00,000/10,00,000 = Rs. 5

DEF Ltd. = Rs. 18,00,000 / 6,00,000 = Rs. 3

(ii) Number of Shares DEF limited's shareholders will get in PQR Ltd. based on market value per share = Rs. 28/ 42 × 6,00,000 = 4,00,000 shares

Total number of equity shares of PQR Ltd. after merger = 10,00,000 + 4,00,000 = 14,00,000 shares

Earnings per share after merger = Rs. 50,00,000 + 18,00,000 / 14,00,000 = Rs. 4.86

(iii) Calculation of exchange ratio to ensure shareholders of DEF Ltd. to earn the same as was before merger:

Shares to be exchanged based on EPS = (Rs. 3/Rs. 5) × 6,00,000 = 3,60,000 shares

EPS after merger = (Rs. 50,00,000 + 18,00,000)/13,60,000 = Rs. 5

Total earnings in PQR Ltd. available to shareholders of DEF Ltd. = 3,60,000 × Rs. 5 = Rs. 18,00,000.

Exchange ratio based on market price is beneficial to shareholders of DEF Ltd. because of higher Earnings available to them i.e. (4,00,000 shares × Rs. 4.86 = Rs. 19,44,000).

B) There are five commonly-referred to types of business combinations known as mergers : These are as follows:

(i)Vertical Merger : A merger between two companies producing different goods or services for one specific finished product. A vertical merger occurs when two or more firms, operating at different levels within an industry's supply chain, merge operations. Most often the logic behind the merger is to increase synergies created by merging firms that would be more efficient operating as one.

(ii) Horizontal Merger : A merger occurring between companies in the same industry. Horizontal merger is a business consolidation that occurs between firms who operate in the same space, often as competitors offering the same good or service. Horizontal mergers are common in industries with fewer firms, as competition tends to be higher and the synergies and potential gains in market share are much greater for merging firms in such an industry.

(iii) Conglomerate Merger : A merger between firms that are involved in totally unrelated business activities. There are two types of conglomerate mergers: pure and mixed. Pure conglomerate mergers involve firms with nothing in common, while mixed conglomerate mergers involve firms that are looking for product extensions or market extensions.

(iv) Market Extension Mergers: The main benefit of a market extension merger is to help two organizations that may provide similar products and services grow into markets where they are currently weak.

(v) Product Extension Mergers: Two companies may merge when they sell products into different niches of the same markets. A manufacturer of high-end stoves may merge with a company that makes budget-conscious models. The combined organization now has a complete product line that spans various price points.

8 A) Q Ltd. wants to acquire R Ltd. and has offered a swap ratio of 1:2 (0.5 shares for every one share of T Ltd.). Following information is provided:

	Q Ltd.	R Ltd.
Profit after tax	**Rs.18,00,000**	**Rs.3,60,000**
Equity shares outstanding (Nos.)	**6,00,000**	**1,80,000**
EPS	**Rs.3**	**Rs.2**
PE Ratio	**10 times**	**7 times**
Market price per share	**Rs.30**	**Rs.14**

Required:

(i) The number of equity shares to be issued by Q Ltd. for acquisition of R Ltd.

(ii) What is the EPS of Q Ltd. after the acquisition?

(iii) Determine the equivalent earnings per share of R Ltd.

(iv) What is the expected market price per share of Q Ltd. after the acquisition, assuming its PE multiple remains unchanged?

(v) Determine the market value of the merged firm.

B) List defensive strategies available to a company in case of hostile takeover.

Ans: A) (i)**The number of shares to be issued by Q Ltd.:**

The Exchange ratio is 0.5

So, new Shares = 1,80,000 x .5 = 90,000 shares.

(ii) **EPS of Q Ltd. after acquisition:**

Total Earnings	(18,00,000+3,60,000)	Rs.21,60,000
No. of Shares	(6,00,000 + 90,000)	6,90,000
EPS	(21,60,000)/6,90,000)	Rs.3.13

(iii) **Equivalent EPS of R Ltd.:**

No. of new Shares	0.5
EPS	Rs.3.13
Equivalent EPS (3.13 x .5)	Rs.1.57

(iv) **New Market Price of Q Ltd. (P/E remaining unchanged):**

Present P/E Ratio of QLtd.	10 times
Expected EPS after merger	Rs.3.13
Expected Market Price (3.13 x 10)	Rs.31.30

(v) **Market Value of merged firm:**

Total number of Shares	6,90,000
Expected Market Price	Rs.31.30
Total value (6,90,000 x 31.30)	Rs.2,15,97,000

B)The defensive strategies available in case of hostile takeover may be preventive measures and active measures.

i)Preventive measures are undertaken to reduce the chances of hostile takeover bids.

They are as follows:

A)Poison pill is a tactic to make a takeover more expensive or unattractive so that task of the bidder becomes more difficult.

B)Golden parachutes- Unacceptably high compensation packages that must be paid to the senior managers in case of termination .so raider loses interest.

C)Shark repellents-Amendments made in company charter to forestall takeover attempts.

D)Crown jewel option- is to sell the valuable assets of the firm at below market price .

ii)Active measures- are employed when hostile bids are launched.

A)White Knight- A friendly party saves the company from hostile takeover.

B)Greenmail-Premium paid by a target company to buy back its stock from a potential acquirer.

C)Standstill agreements- Target company reaches a contractual agreement with potential buyer that buyer will not increase his holding in the target firm for a particular period.

D)Capital structure changes-These includes ownership reorganization, employee stock ownership plans, leveraged buyouts etc.

E)Pac-Man defense- The company under attack turns table by bidding for the acquirer company.

F)Litigation- One of the most common antitakeover measures and used as a delaying tactic.

G)Trigger the application of state anti-takeover laws.

9 A) A Ltd., is studying the possible acquisition of B Ltd., by way of merger. The following data are available in respect of the companies:

Particulars	A Ltd.	B Ltd.
Earnings after tax (Rs.)	80,00,000	24,00,000
No. of equity shares	16,00,000	4,00,000
Market value per share (Rs.)	200	160

(i) If the merger goes through by exchange of equity and the exchange ratio is based on the current market price, what is the new earning per share for A Ltd.?

(ii) B Ltd. wants to be sure that the earnings available to its shareholders will not be diminished by the merger. What should be the exchange ratio in that case?

B) K earns Rs. 6 per share having capitalisation rate of 10 per cent and has a return on investment at the rate of 20 per cent. According to Walter's model, what should be the price per share at 30 per cent dividend payout ratio? Is this the optimum payout ratio as per Walter?

Ans: A(i) **Calculation of new EPS of A Ltd.**

No. of equity shares to be issued by A Ltd. to B Ltd.

= 4,00,000 shares × Rs. 1.6/Rs. 2.0 = 3,20,000 shares

Total no. of shares in A Ltd. after acquisition of B Ltd.

= 16,00,000 + 3,20,000 = 19,20,000

Total earnings after tax [after acquisition]

= 80,00,000 + 24,00,000 = 1,04,00,000

$$\text{EPS} = \frac{\text{Rs.}1,04,00,000}{19,20,000\,\text{equity shares}} = \text{Rs. } 5.42$$

(ii) **Calculation of exchange ratio which would not diminish the EPS of B Ltd. after its merger with A Ltd.**

Current EPS:

$$\text{A Ltd.} = \frac{\text{Rs. } 80,00,000}{16,00,000 \text{ equity shares}} = \text{Rs. } 5$$

$$\text{B Ltd.} = \frac{\text{Rs. } 24,00,000}{4,00,000 \text{ equity shares}} = \text{Rs. } 6$$

Exchange ratio = 6/5 = 1.20

No. of new shares to be issued by A Ltd. to B Ltd.

= 4,00,000 × 1.20 = 4,80,000 shares

Total number of shares of A Ltd. after acquisition

= 16,00,000 + 4,80,000 = 20,80,000 shares

$$\text{EPS [after merger]} = \frac{\text{Rs. } 1,04,00,000}{20,80,000 \text{ shares}} = \text{Rs. } 5$$

Total earnings in A Ltd. available to new shareholders of B Ltd.

= 4,80,000 × Rs. 5 = Rs. 24,00,000

Recommendation: The exchange ratio (6 for 5) based on market shares is beneficial to shareholders of 'B' Co. Ltd.

B) Walter Model is $V_c = \dfrac{D + \frac{R_a}{R_c}(E - D)}{R_c}$

Where:

V_c = Market value of the share

R_a = Return on Retained earnings

R_c = Capitalisation Rate

E = Earning per share

D = Dividend per share

Hence, if Walter model is applied

$$\text{Market value of the share } P = \frac{1.80 + \frac{.20}{.10}(6 - 1.80)}{.10}$$

$$P = \frac{1.80 + 8.40}{.10}$$

$$p = \frac{1.80 + \frac{.20}{.10}(4.20)}{10}$$

P = Rs. 102

This is not the optimum pay out ratio because $R_a > R_c$ and therefore V_c can further go up if payout ratio is reduced.

10 A) Mr. H on 1.7.2010, during the initial offer of some Mutual Fund invested in 10,000 units having face value of Rs.10 for each unit. On 31.3.2011 the dividend operated by the M.F. was 10% and Mr. X found that his annualized yield was 153.33%. On 31.12.2012, 20% dividend was given. On 31.3.2013 Mr. X redeemed all his balance of 11,296.11 units when his annualized yield was 73.52%. What are the NAVs as on 31.3.2011, 31.12.2012 and 31.3.2013?

B) A Mutual Fund having 300 units has shown its NAV of Rs.8.75 and Rs.9.45 at the beginning and at the end of the year respectively. The Mutual Fund has given two options:

(i) Pay Rs.0.75 per unit as dividend and Rs.0.60 per unit as a capital gain, or

(ii) These distributions are to be reinvested at an average NAV of Rs.8.65 per unit.

What difference it would make in terms of return available and which option is preferable?

Ans: A) Yield for 9 months = (153.33 x 9/12) = 115%

Amount receivable as on 31.03.2011 = 1,00,000/- + (1,00,000x 115%) = Rs.2,15,000/-

Therefore, NAV as on 31.03.2011 = (2,15,000-10,000)/10,000= Rs.20.50

Therefore, units as on 31.03.2011 = 10487.80 i.e., (2,15,000/20.50)

Dividend as on 31.03.2012 = 10,487.80 x 10x0.2 = Rs.20,975.60

Therefore, NAV as on 31.03.2012 = 20,795.6/(11,296.11- 10,487.80) = Rs.25.95

NAV as on 31.03.2013 = 1,00,000 (1+0.7352x33/12)/11296.11 = Rs.26.75

B) Returns for the year:

(All changes on a Per -Unit Basis)

Change in Price: Rs.9.45 – Rs.8.75 = Re.0.70

Dividends received: Re. 0.75

Capital gains distribution Re. 0.60

Total reward Rs. 2.05

Holding period reward : $\frac{Rs.2.05}{Rs.8.75} = 23.43\%$

(ii) When all dividends and capital gains distributions are re-invested into additional units of the fund @ (Rs. 8.65/unit)

Dividend + Capital Gains per unit

= Re.0.75 + Re 0.60 = Rs. 1.35

Total received from 300 units = Rs.1.35 x 300 = Rs.405/-.

Additional Units Acquired

= Rs.405/Rs.8.65 = 46.82 Units.

Total No.of Units = 300 units + 46.82 units

= 346.82 units.

Value of 346.82 units held at the end of the year

= 346.82 units x Rs.9.45 = Rs.3277.45

Price Paid for 300 Units at the beginning of the year

= 300 units x Rs.8.75 = Rs.2,625.00

Holding Period Reward

Rs.(3277.45 – 2625.00) = Rs.652.45

%age of Holding Period Reward

$\frac{Rs.652.45}{Rs.2625.00} = 24.85\%$

Conclusion: Since the holding period reward is more in terms of percentage in option-two i.e., reinvestment of distributions at an average NAV of Rs.8.65 per unit, this option is preferable.

11 A) A Company is in the process of setting up a production line for manufacturing a new product. Based on trial runs conducted by the company, it was noticed that the production lines output was not of the desired quality. However, company has taken a decision to manufacture and sell the sub-standard product over the next one year due to the huge investment involved.

In the background of the relevant accounting standard, advise the company on the cut-off date for capitalization of the project cost.

B) Why might discounted cash flow valuation be difficult in case of a firm that owns a lot of valuable land that is currently unutilized?

Ans: A) As per provisions of AS 10 'Accounting for Fixed Assets', expenditure incurred on start-up and commissioning of the project, including the expenditure incurred on test runs and experimental production, is usually capitalized as an indirect element of the construction cost. However, the expenditure incurred after the plant has begun commercial production *i.e.,* production intended for sale or captive consumption, is not capitalized and is treated as revenue expenditure even though the contract may stipulate that the plant will not be finally taken over until after the satisfactory completion of the guarantee period. In the present case, the company did stop production even if the output was not of the desired quality, and continued the sub-standard production due to huge investment involved in the project. Capitalization should cease at the end of the trial run, since the cut-off date would be the date when the trial run was completed.

B) Discounted cash flow valuation reflects the nil value of all assets that are unutilized (and hence do not produce any cash flows), the value of these assets will not be reflected in the value obtained from discounting expected future cash flows. The same caveat applies to a lesser degree to under utilized assets, since their value will be understated in discounting cash flow valuation. While this is a problem, it is not insurmountable. The value of these assets can always be obtained externally and added to value obtained from discounted cash flow valuation. Alternatively they may be valued as though used optimally.

12 A) Estimate the brand value of ABC Tech Ltd with help of following information:

Rs. in crores

Year ended 31st March	**2013**	**2012**	**2011**
PBIT	**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)	**55.57**		
Tax@30%			
Multiple applied	**22.18**		

B) How do you differentiate between brand equity and brand value?

Ans: A) The Computation of Brand Value for ABC Tech Ltd is as follows:

Rs.in crores

Year ended 31st March	2013	2012	2011
PBIT	696.03	325.65	155.86
Less: Non branded income	53.43	35.23	3.46
Adjusted profits	642.60	29.42	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
Weightage factor	3	2	1
Weightage profits	1927.80	631.38	179.98
Three years average weighted profits	456.53	-	-
Remuneration of Capital(5% of Average Capital Employed)	55.57		
Brand related profits	400.96		
Tax at 30%	120.29		
Brand earnings	280.67		
Multiple applied	22.18		
Brand value(Rs)	6225.26 crore		

B) Brand equity and brand value are both measures that estimate what a brand is worth. The difference between these two measures is that brand value refers to the financial asset that the company records on its balance sheet, while brand equity refers to the importance of the brand to a customer of the company.

Basis of determination:

Brand value is easier for a company to estimate. The company can determine the fair market value of the brand by asking other companies what price they would pay to purchase the brand. The company can also add up its costs of hiring marketers, consultants and advertising experts to develop a brand it already owns, or estimate the cost for the company to produce a new brand for its products.

Brand equity is more difficult to estimate because it relies on customers' beliefs. The company does not know whether a customer makes a purchase because he recognizes the company's brand or whether the customer uses other criteria, such as price and convenience, to make his decision. The company can attempt to estimate its brand equity by sending surveys to its customers to see if they recognize the brand.

Creation:

A brand may have a positive value on the company's books and still lack brand equity. When the company begins a new branding project, the company pays its employees while they work on the brand, but customers do not know about the brand yet. The company records these brand value development costs, establishing brand value before the brand gains equity.

A company needs to develop brand equity past a certain point in a customer's mind before it becomes effective. The customer may watch several advertisements on television and radio, see the product in the store and buy the product several times before he recognizes the brand. This threshold effect complicates the valuation of brand equity because the equity suddenly goes from zero value to a high value.

Improving Value:

Once the company establishes brand equity, brand equity can increase the value of the brand.

13) From the Books of SBH Ltd., following information are available as on 1.4.2011 and 1.4.2012:

(I)	**Equity Shares of Rs. 10 each**	**1,00,000**
(II)	**Partly paid Equity Shares of Rs. 10 each Rs. 5 paid**	**1,00,000**
(III)	**Options outstanding at an exercise price of Rs. 60 for one equity share Rs. 10 each. Average Fair Value of equity share during both years Rs. 75**	**10,000**
(IV)	**10% convertible preference shares of Rs. 100 each. Conversion ratio 2 equity shares for each preference share**	**80,000**
(V)	**12% convertible debentures of Rs. 100. Conversion ratio 4 equity shares for each debenture**	**10,000**
(VI)	**10% dividend tax is payable for the years ending 31.3.2013 and 31.3.2012.**	
(VII)	**On 1.10.2012 the partly paid shares were fully paid up**	
(VIII)	**On 1.1.2013 the company issued 1 bonus share for 8 shares held on that date.**	

Net profit attributable to the equity shareholders for the years ending 31.3.2013 and 31.3.2012 were Rs. 10,00,000.

Calculate :

(A) Earnings per share for years ending 31.3.2013 and 31.3.2012.

(B) Diluted earnings per share for years ending 31.3.2013 and 31.3.2012.

(C) Adjusted earnings per share and diluted EPS for the year ending 31.3.2012, assuming the same information for previous year, also assume that partly paid shares are eligible for proportionate dividend only.

Ans: (A)**Earnings per share**

	Year ended 31.3.2013	*Year ended 31.3.2012*
Net profit attributable to equity shareholders	Rs. 10,00,000	Rs. 10,00,000
Weighted average number of equity shares [(W.N. 1) – without considering bonus issue	2,00,000	1,50,000

for the year ended 31.3.2012]

Earning per share	Rs. 5	Rs. 6.667

(B) **Diluted earnings per share**

Options are most dilutive as their earnings per incremental share is nil. Hence, for the purpose of computation of diluted earnings per share, options will be considered first. 12% convertible debentures being second most dilutive will be considered next and thereafter convertible preference shares will be considered (as per W.N. 2).

	Year ended 31.3.2013			*Year ended 31.3.2012*	
	Net profit attributable to equity shareholders Rs.	*No. of equity shares*	*Net Profit attributable per share* Rs.	No. of equity shares *(without considering bonus issue)*	*Net Profit attributable per share* Rs.
As reported (for years ended 31.3.2013 and 31.3.2012)	10,00,000	2,00,000	5	1,50,000	6.667
Options	_____	2,000		2,000	
	10,00,000	2,02,000	4.95 Dilutive	1,52,000	6.579 Dilutive
12% Convertible Debentures	84,000	40,000		40,000	
	10,84,000	2,42,000	4.48 Dilutive	1,92,000	5.646 Dilutive
10% Convertible Preference Shares	8,80,000	1,60,000		1,60,000	
	19,64,000	4,02,000	4.886 Anti-Dilutive	3,52,000	5.58 Dilutive

Since diluted earnings per share is increased when taking the convertible preference shares into account (Rs. 4.48 to Rs. 4.886), the convertible preference shares are anti-dilutive and are ignored in the calculation of diluted earnings per share for the year ended 31.3.2013. Therefore, diluted earnings per share for the year ended 31st March, 2013 is Rs. 4.48.

For the year ended 31st March, 2012, Options, 12% Convertible debentures and Convertible preference shares will be considered dilutive and diluted earnings per share will be taken as Rs. 5.58.

	Year ended 31.3.2013	*Year ended 31.3.2012*
Diluted earnings per Share	4.48	5.58

(C) **Adjusted earnings per share and diluted earnings per share for the year ending 31.3.2012.**

Net profit attributable to equity shareholders	Rs. 10,00,000
Weighted average number of equity shares [(W.N. 1) – considering bonus issue]	1,75,000
Adjusted earnings per share	Rs. 5.714

Calculation of adjusted diluted earnings per share

	Net profit attributable to equity shareholders	*No. of equity shares (after considering bonus issue)*	*Net profit attributable per share*
	Rs.		*Rs.*
As reported	10,00,000	1,75,000	5.714
Options	_____	2,000	
	10,00,000	1,77,000	5.65 Dilutive
12% Convertible Debentures	84,000	40,000	
	10,84,000	2,17,000	4.995 Dilutive
10% Convertible Preference Shares	8,80,000	1,60,000	
	19,64,000	3,77,000	5.21 Anti –Dilutive

Since diluted earnings per share is increased when taking the convertible preference shares into account (from Rs. 4.995 to Rs. 5.21), the convertible preference shares are anti-dilutive and are ignored in the calculation of diluted earnings per share. Therefore, adjusted diluted earnings per share for year ended 31.3.2012 is Rs. 4.995.

Adjusted diluted earnings per share Rs. 4.995

Working Notes:

1. **Weighted average number of equity shares**

		31.3.2013	*31.3.2012*
		No. of Shares	*No. of Shares*
(a)	Fully paid equity shares	1,00,000	1,00,000
(b)	Partly paid equity shares*		50,000
	Partly paid equity shares	25,000	
	Fully paid equity shares	50,000	
	(Partly paid shares converted into fully paid up on 1.10.2002)		
(c)	Bonus Shares**	25,000	_____
	Weighted average number of equity shares	2,00,000	1,50,000
(without considering bonus issue for year ended 31.3.2012)			
	Bonus Shares		25,000
	Weighted average number of equity shares		1,75,000
	(after considering bonus issue for year ended 31.3.2012)		

*Since partly paid equity shares are entitled to participate in dividend to the extent of amount paid, 1,00,000 equity shares of Rs. 10 each, Rs. 5 paid up will be considered as 50,000 equity shares for the year ended 31st March, 2012.

On 1st October, 2012 the partly paid shares were converted into fully paid up. Thus, the weighted average equity shares (for six months ended 30th September, 2002) will be calculated as

$50,000 \times \frac{6}{12}$ = 25,000 shares

Weighted average shares (for six months ended 31st March, 2013) will be calculated as

$1,00,000 \times \frac{6}{12}$ = 50,000 shares

** Total number of fully paid shares on 1st January, 2013

Fully paid shares on 1st April, 2012	1,00,000
Partly paid shares being made fully paid up on 1st October, 2012	1,00,000
	2,00,000

The company issued 1 bonus share for 8 shares held on 1st January, 2013.

Thus 2,00,000/8 = 25,000 bonus shares will be issued.

Bonus is an issue without consideration, thus it will be treated as if it had occured prior to the beginning of 1st April, 2011, the earliest period reported.

2. Increase in earnings attributable to equity shareholders on conversion of potential equity shares

	Increase in earnings	*Increase in number of equity shares*	*Earnings per incremental share*
	(1)	*(2)*	*(3) = (1) ÷ (2)*
	Rs.		*Rs.*
Options			
Increase in earnings	Nil		
No. of incremental shares issued for no consideration [10,000 × (75 – 60)/75]		2,000	Nil
Convertible Preference Shares			
Increase in net profit attributable to equity shareholders as adjusted by attributable dividend tax [(Rs. 10 × 80,000) + 10% (Rs. 10 × 80,000)]	8,80,000		
No. of incremental shares (2 × 80,000)		1,60,000	5.50
12% Convertible Debentures			
Increase in net profit [(Rs.10,00,000 × 0.12 × (1 – 0.30)]*	84,000		
No. of incremental shares (10,000 × 4)		40,000	2.10

* Tax rate is assumed at 30% .

14A) J Ltd. purchased machinery from K Ltd. on 30.09.2011. The price was Rs. 370.44 lakhs after charging 8% Sales-tax and giving a trade discount of 2% on the quoted price. Transport charges were 0.25% on the quoted price and installation charges come to 1% on the quoted price.

A loan of Rs. 300 lakhs was taken from the bank on which interest at 15% per annum was to be paid.

Expenditure incurred on the trial run was Materials Rs. 35,000, Wages Rs. 25,000 and Overheads Rs. 15,000.

Machinery was ready for use on 1.12.2011. However, it was actually put to use only on 1.5.2012. Find out the cost of the machine and suggest the accounting treatment for the expenses incurred in the interval between the dates 1.12.2011 to 1.5.2012. The entire loan amount remained unpaid on 1.5.2012.

B) TT Limited has set up its business in a designated backward area which entitles the company to receive from the Government of India a subsidy of 20% of the cost of investment. Having fulfilled all the conditions under the scheme, the company on its investment of Rs. 50 crore in capital assets, received Rs. 10 crore from the Government in January, 2013 (accounting period being 2012-2013). The company wants to treat this receipt as an item of revenue and thereby reduce the losses on profit and loss account for the year ended 31st March, 2013.

Keeping in view the relevant Accounting Standard, discuss whether this action is justified or not.

Ans : A)

	Rs. (in Lacs)	(Rs. in Lacs)	
Quoted price (refer to working note)	350.00		
Less: 2% Trade Discount	7.00		
	343.00		
Add: 8% Sales tax (8% × Rs. 343 lacs)	27.44	370.44	
Transport charges (0.25% × Rs. 350 lacs)		0.88	(approx.)
Installation charges (1% × Rs. 350 lacs)		3.50	
Financing cost (15% on Rs.300 Lacs) for the period 30.9.2011 to 1.12.2011		7.50	
Trial Run Expenses			
Material	0.35		
Wages	0.25		
Overheads	0.15	0.75	
Total cost		383.07	

Interest on loan for the period 1.12.2011 to 1.05.2012 is Rs. 300 lakhs $\times \frac{15}{100} \times \frac{5}{12}$

= Rs.18.75 lacs

This expenditure may be charged to Profit and Loss Account or deferred for amortization between say three to five years. Assumed that no other expenses are incurred on the machine during this period.

Working Note:

Let the quoted price 'X'

Less: Trade Discount 0.02X.

Actual Price = 0.98X.

Sale Tax @8% = 1.08 × 0.98X

$$\text{or } X = \frac{\text{Rs.}370.44\text{lakhs}}{1.08 \times 0.98} = \text{Rs.}350\text{lakhs}$$

B) As per para 10 of AS 12 'Accounting for Government Grants', where the government grants are of the nature of promoters' contribution, i.e. they are given with reference to the total investment in an undertaking or by way of contribution towards its total capital outlay (for example, central investment subsidy scheme) and no repayment is ordinarily expected in respect thereof, the grants are treated as capital reserve which can be neither distributed as dividend nor considered as deferred income.

In the given case, the subsidy received is neither in relation to specific fixed asset nor in relation to revenue.Thus it is inappropriate to recognise government grants in the profit and loss statement, since they are not earned but represent an incentive provided by government without related costs. The correct treatment is to credit the subsidy to capital reserve. Therefore, the accounting treatment followed by the company is not proper.

15 A) ` In view of the provisions of Accounting Standard 25 on Interim Financial Reporting, on what basis will you calculate, for an interim period, the provision in respect of defined benefit schemes like pension, gratuity etc. for the employees?

B) In May, 2012 Q Ltd. took a bank loan to be used specifically for the construction of a new factory building. The construction was completed in January, 2013 and the building was put to its use immediately thereafter. Interest on the actual amount used for construction of the building till its completion was Rs. 24 lacs, whereas the total interest payable to the bank on the loan for the period till 31st March, 2013 amounted to Rs. 31 lacs.

Can Rs. 31 lacs be treated as part of the cost of factory building and thus be capitalized on the plea that the loan was specifically taken for the construction of factory building?

Ans: A) Accounting Standard 25 suggests that provision in respect of defined benefit schemes like pension and gratuity for an interim period should be calculated based on the year-to-date basis by using the actuarially determined rates at the end of the prior financial year, adjusted for significant market fluctuations since that time and for significant curtailments, settlements or other significant one-time events.

B) AS 16 clearly states that capitalization of borrowing costs should cease when substantially all the activities necessary to prepare the qualifying asset for its intended use are completed. Therefore, interest on the amount that has been used for the construction of the building upto the date of completion (January, 2013) i.e. Rs. 24 lac alone can be capitalized. It cannot be extended to Rs. 31 lacs.

16 A) The Managing Director of SS Ltd. has just attended a meeting with an investment analyst who has suggested that SS's shares are over valued by 10%. The data used by the investment analyst is shown below:

Year	Total Dividend(Rs)	Number of shares	Total earnings(Rs)
2010	113,000	57200	365200
2011	122,680	57200	426400
2012	162,160	70000	534200
2013	200,140	80000	572400

SS's current share price is Rs 75 and cost of equity is estimated to be 12%. Prepare a brief report for the managing director, discuss whether or not SS's shares are overvalued. Relevant calculations should form part of report.

B) ADB Ltd. is trying to estimate its debt ratio .It has 1 million equity shares outstanding, trading at Rs 50 per share. ADB Ltd. has Rs 250 million in straight debt outstanding (with a market interest rate of 9 %). It has two other securities outstanding:

(i) 10,000 convertible bonds, with a coupon rate of 6% and 10 years to maturity.

(ii) 200000 warrants outstanding, conferring on its holders the right to buy stock in the ADB ltd. at Rs 65 per share.

These warrants are trading at Rs.12 each.

You are required to calculate the debt ratio in market value terms.

Ans: A) According to the dividend growth model, the intrinsic value of the SS's shares should be

Year	Dividend per share	Growth in dividends(g)%
2010	1.986	-
2011	2.144	8
2012	2.317	8
2013	2.502	8

Price=Dt/(Ke-g)=2.502(1.08)/(0.12-0.08)

= 2.70216/0.04=67.554

Using the dividend growth model the intrinsic value of the company's shares should be Rs 67.55 as calculated above but current market price is Rs 75 . This suggests that the shares are over valued by approximately (Rs 75/Rs 67.55)-1=11.03%

B) Value of common stock=1million*50=Rs 50 million.

Value of warrants=200000*Rs 12=Rs 2.4 million

Value of straight debt=Rs 250 million

Value of straight debt portion of convertible debt=10000*[60*(PVA,9%of 10)+1000/(1.09)10]

=Rs8.075 million.

Value of conversion portion=10000*1000-Rs8075000=Rs 1.925 million.

Value of debt=Rs 250+ Rs 8.075 million.

Value of equity=(Rs 50+Rs 2.4+Rs 1.925) million=Rs 54.325 million.

Debt ratio=258.075/(258.075+54.325)=82.61%

17 A)SMT Air Ltd is a telecommunications firm that generate Rs 300lakh in pretax operating income and reinvested Rs 60 lacs in most recent financial year. As a result of tax deferrals the firm has an effective tax rate of 20% while its marginal tax rate is 40%. Both the operating income and the reinvestment are expected to grow 10% a year for 5 years and 5% thereafter. The firm's cost of capital is 9% and is expected to remain unchanged over time.

Estimate the value of SMT Air Ltd. using the different assumptions about tax rates:

(i) The effective tax rate----------20% to be considered.

(ii) The marginal tax rate----------40% to be considered.

B)XM Ltd had earning per share of Rs 11.04 in 2012-13 and paid a dividend of Rs 7 per share. The growth rate in earnings and dividends in the long term is expected to be 5%. The return on equity at XM Ltd is expected to be 13.66%. The beta of XM Ltd is 0.80 and the risk free Treasury bond is 6% while risk premium is 4%. Based on the information , calculate Price To Book Value Ratio.

Ans: A i) **Computation of the value of SMT Air Ltd assuming the effective tax rate(T) to be 20%**

Rs in lacs

	Year Current	1	2	3	4	5	Terminal	Total
EBIT	300	330	363	399	439	483	507	
EBIT(1-T)	240	264	290	319	351	386	406	
Reinvestment	60	66	73	80	88	97	102	
FCFF	180	198	217	239	263	289	304	
Terminal value								
PV factor at 9%	1.00	0.917	0.842	0.773	0.708	0.649	7600*	
PV		182	183	185	186	188	4932	5856

The value of SMT Air Ltd as per effective tax rate of 20% is Rs 924 lacs +Rs 4932 lacs=Rs 5856 lacs.

(ii)Value of SMT Air Ltd. assuming marginal tax rate(T) of 40%

Rs. In lacs

	Year Current	1	2	3	4	5	Terminal	Total
EBIT	300	330	363	399	439	483	507	
EBIT(1-T)	180	198	218	239	263	290	304	
Reinvestment	60	66	73	80	88	97	102	
FCFF	120	132	145	159	175	193	202	
Terminal value							5050**	
PV factor at 9%	1.00	0.917	0.842	0.773	0.708	0.649	0.649	
PV	-	121	122	123	124	125	3277	3892

Value of SMT Air Ltd as per marginal tax rate of 40%is Rs 615 lacs +Rs 3277 lacs=Rs 3892 lacs.

*304/(9%-5%)

**202/ (9%-5%)

B)Current dividend payout ratio=7/11.04*100=63.41%

Expected growth rate in earnings and dividends=5%

Return on equity=13.66%

Cost of equity=6%+0.80*4%=6%+3.2%=9.20%

PBV Ratio=ROE*Payout Ratio/(Cost of equity-Growth rate)

=0.1366*0.6341/(0.092-0.05)=2.06.

18) The following are the extracts from Balance Sheets of B Ltd. and S Ltd. as at 31.3.13:
Rs in lacs

Ref No.		Particulars	Note No.	B Ltd As on 31st March, 2013	S Ltd As on 31st March 2013
		1	2	3	4
I		**EQUITY AND LIABILITIES**			
(1)		**Shareholders' funds**			
	(a)	Share Capital		40	15
	(b)	Reserves and Surplus			
		Profit and Loss Account		7.5	(2.5)
(2)		**Share application money pending allotment**			
(3)		**Non-current liabilities**			
	(a)	Long term liabilities			
	(b)	Deferred tax liabilities			
	(c)	Other Long term Liabilities			
	(d)	Long term provisions			
(4)		**Current Liabilities**			
	(a)	Short-term borrowings			
	(b)	Trade payables		12.5	12.5
	©	Other current liabilities			
	(d)	Short-term provisions			
		TOTAL		**60.0**	25.0
II		**ASSETS**			
(1)		**Non-current assets**			
	(a)	Fixed Assets			
		(i)Tangible assets(including cost of shares)		56.0	20.0
		(ii)Intangible assets			
		Goodwill		4	5

	(b)	Non-current investments			
	©	Deferred tax assets (Net)			
	(d)	Long-term loans and advances			
	(e)	Other non-current assets			
(2)		**Current assets**			
	(a)	Current investments			
	(b)	Inventories			
	©	trade receivables			
	(d)	Cash and cash equivalents			
	(e)	Short-term loans and advances			
		TOTAL		60.0	25.0

Additional Information:

(i) The two companies agree to amalgamate and form a new company, M Ltd.

(ii) B Ltd. holds 10,000 shares in S Ltd. acquired at a cost of Rs.2,50,000 and S Ltd. holds 5,000 shares in B Ltd. acquired at a cost of Rs.7,00,000.

(iii) The shares of B Ltd. are of Rs.100 and are fully paid and the shares of S Ltd. are of Rs.50 each on which Rs.30 has been paid-up.

(iv) It is agreed that the goodwill of B Ltd. would be valued at Rs.1,50,000 and that of Small Ltd. at Rs.2,50,000.

(v) The shares which each company holds in the other are to be valued at book value having regard to the goodwill valuation decided as given in (iv).

(vi) The new shares are to be of a nominal value of Rs.50 each credited as Rs.25 paid.

You are required to:

(i) Show how the above transactions will be reflected in the Balance Sheet of M Ltd., as at 31st March, 2013; and

(ii) Prepare a statement showing the shareholdings in the new company attributable to the shareholders of the merged companies.

Answer :Name of the Company: Balance Sheet M Ltd as on 31st March 2013.

(i)

Ref No.		Particulars	Note No.	As on 31st March, 2013	
		1	2	3	4
I		**EQUITY AND LIABILITIES**			
(1)		**Shareholders' funds**			
	(a)	Share Capital	1	45,50,000	
	(b)	Reserves and Surplus			
		Profit and Loss Account			
(2)		**Share application money pending allotment**			
(3)		**Non-current liabilities**			
	(a)	Long term liabilities			
	(b)	Deferred tax liabilities			
	(c)	Other Long term Liabilities			
	(d)	Long term provisions			
(4)		**Current Liabilities**			
	(a)	Short-term borrowings			
	(b)	Trade payables		25,00,000	
	©	Other current liabilities			
	(d)	Short-term provisions			
		TOTAL		**70,50,000**	
II		**ASSETS**			
(1)		**Non-current assets**			
	(a)	Fixed Assets			
		(i)Tangible assets	2	66,50,000	
		(ii)Intangible assets	3		
		Goodwill		4,00,000	
	(b)	Non-current investments			
	©	Deferred tax assets (Net)			
	(d)	Long-term loans and advances			
	(e)	Other non-current assets			
(2)		**Current assets**			
	(a)	Current investments			
	(b)	Inventories			
	(c)	trade receivables			
	(d)	Cash and cash equivalents			
	(e)	Short-term loans and advances			
		TOTAL		**70,50,000**	

Schedule 1 **Share Capital**	
Particulars	Rs.
1,82,000 shares of Rs.50/- each, Rs.25 paid up [Issued for consideration other than cash]	45,50,000
	45,50,000

Schedule 2 **Fixed Assets:**	
Particulars	Rs.
Sundry Assets(Rs5350000+Rs1300000)	66,50,000
	66,50,000
Schedule 3	
Fixed Assets:Intangible Assets	
Particulars	Rs.
Goodwill(Rs150000+Rs250000)	400000
	400000

(ii) **Statement of Shareholding in M Ltd.**

	Big Ltd.	Small Ltd.
	Rs.	Rs.
Total value of Assets	44,20,513	8,52,564
Less: Pertaining to shares held by the other company	5,52,564	1,70,513
	38,67,949	6,82,051
Rounded off to	38,67,950	6,82,050
Shares of new company (at Rs. 25 per share)	1,54,718	27,282

Total purchase consideration to be paid to Big Ltd and Small Ltd. (Rs.38,67,950 + Rs.6,82,050)	Rs. 45,50,000
Number of shares in B Ltd. (40,00,000/100)	40,000 shares
Number of shares in S Ltd. (15,00,000/30)	50,000 shares
Holding of Small Ltd. in B Ltd. (5,000/40,000)	1/8
Holding of B Ltd. in S Ltd. (10,000/50,000)	1/5
Number of shares held by outsiders in B Ltd. (40,000 – 5,000) =	35,000
Number of shares held by outsiders in S Ltd. (50,000 – 10,000)	40,000

Workings Note:

Calculation of Book Value of Shares

	B Ltd	S Ltd.
	Rs.	Rs.
Goodwill	1,50,000	2,50,000
Sundry Assets other than shares in other company		
(56,00,000 – 2,50,000)	53,50,000	
(20,00,000 – 7,00,000)		13,00,000
	55,00,000	15,50,000
Less: Sundry Creditors	12,50,000	12,50,000
	42,50,000	3,00,000

If "x" is the Book Value of Assets of B Ltd and "y" of S Ltd.

$x = 42,50,000 + \frac{1}{5}y$

$y = 3,00,000 + \frac{1}{8}x$

$x = 42,50,000 + \frac{1}{5}(3,00,000 + \frac{1}{8}x)$

$= 42,50,000 + 60,000 + \frac{1}{40}x$

$\frac{39}{40}x = 43,10,000$

$x = 43,10,000 \times \frac{40}{39}$

$x = 44,20,513$ (approx.)

$y = 3,00,000 + \frac{1}{8}(44,20,513)$

$= 3,00,000 + 5,52,564$

$=$ Rs. 8,52,564 (approx.)

Book Value of one share of B Ltd. $= \frac{44,20,513}{40,000} = Rs.110.513 (approx.)$

Book Value of one share of S Ltd. $= \frac{8,52,564}{50,000} = Rs.17.05 (approx.)$

19A) Explain the salient features of McKinsey Model of Value based management.

B)X Ltd is in IT sector providing wireless networking solutions. It is a company with an annual turnover of Rs. 2500 crores. Now , it is looking for growth through acquiring BPO companies which would provide it strategic synergic fit. For this , the CFO of the company is negotiating a deal to acquire SS BPO Pvt Ltd whose balance sheet as on March 3013 is given below:

Name of the Company: X Ltd.

Balance Sheet of X Ltd. as at 31st March 2013.

Rs in crores

Ref No.		Particulars	Note No.	As on 31st March, 2013	As on 31st March 2012
		1	2	3	4
I		**EQUITY AND LIABILITIES**			
(1)		**Shareholders' funds**			
	(a)	Share Capital	(1)	400	
	(b)	Reserves and Surplus	(2)	100	
	©	Money received against share warrants			
(2)		**Share application money pending allotment**			
(3)		**Non-current liabilities**			
	(a)	Long term liabilities	(3)	200	
	(b)	Deferred tax liabilities			
	(c)	Other Long term Liabilities			
	(d)	Long term provisions			
(4)		**Current Liabilities**			
	(a)	Short-term borrowings			
	(b)	Trade payables			
	©	Other current liabilities			
	(d)	Short-term provisions			
		TOTAL		**700**	
II		**ASSETS**			
(1)		**Non-current assets**			
	(a)	Fixed Assets			
		(i)Tangible assets	(4)	650	
		(ii)Intangible assets			
		(iii)Capital work in progress			
		(iv) Intangible assets under development			
	(b)	Non-current investments	(5)	20	
	©	Deferred tax assets (Net)			
	(d)	Long-term loans and advances			
	(e)	Other non-current assets			

(2)		**Current assets**	(6)	30	
	(a)	Current investments			
	(b)	Inventories			
	©	trade receivables			
	(d)	Cash and cash equivalents			
	(e)	Short-term loans and advances			
		TOTAL		650	

Schedule 1 **Share Capital**	
Particulars	Rs.in crores
Share Capital (Fully paid shares of Rs 10 each)	400
	400

Schedule 2 **Reserves and Surplus**	
Particulars	Rs.in crores
General reserves	100
	100

Schedule 3 **Fixed Assets**	
Particulars	Rs. In crores
Tangible assets	650
	650

Schedule 4 **Non-current liabilities**	
Particulars	Rs.in crores
Long Term Liabilities	200
	200

Schedule 5 **Non Current Investments**	
Particulars	Rs.in crores
Investments	20
	20

Schedule 6 **Current Assets**	
Particulars	Rs.in crores
Net Current Assets	30
	30

Additional Information:

- The share holders of SS BPO Pvt . Ltd will get 1.5 shares in X Ltd for every share held. The shares of X ltd. would be issued at its current price of Rs 18 per share.
- The lenders of loan funds will be given 11% debentures of the same amount by the acquiring company.
- The external liabilities are expected to be settled at Rs 150 crores.
- The dissolution expenses of Rs 15 crores are to be borne by the acquiring company.
- The following are projected incremental free cash flows expected from the acquisition for next 6 years(Rs. In crores):

Year end	Rs. In crores
1	150
2	200
3	260
4	300
5	220
6	120

- The free cash flows of SS BPO Pvt Ltd are expected to grow at 3% per annum after 6 years forever.
- Seeing the risk profile of the target company, it is estimated that the cost of capital relevant to it will be 13%.
- It is found that the target company has unaccounted liabilities totalling Rs20 crores.

You are required to advice X Ltd whether the deal to acquire SS BPO Pvt Ltd would be financially feasible and profitable.

Ans: A) Mckinsey and Company, a leading international consultancy firm developed this model to help companies implement Value-Based Management. This approach is based on the discounted cash flow principle, which is a direct measure of value creation.

The important steps in the Mckinsey approach to value maximisation are as follows:

- Emphasis on value maximisation
- Finding value drivers
- Establishing appropriate managerial processes
- Implementing value based management properly

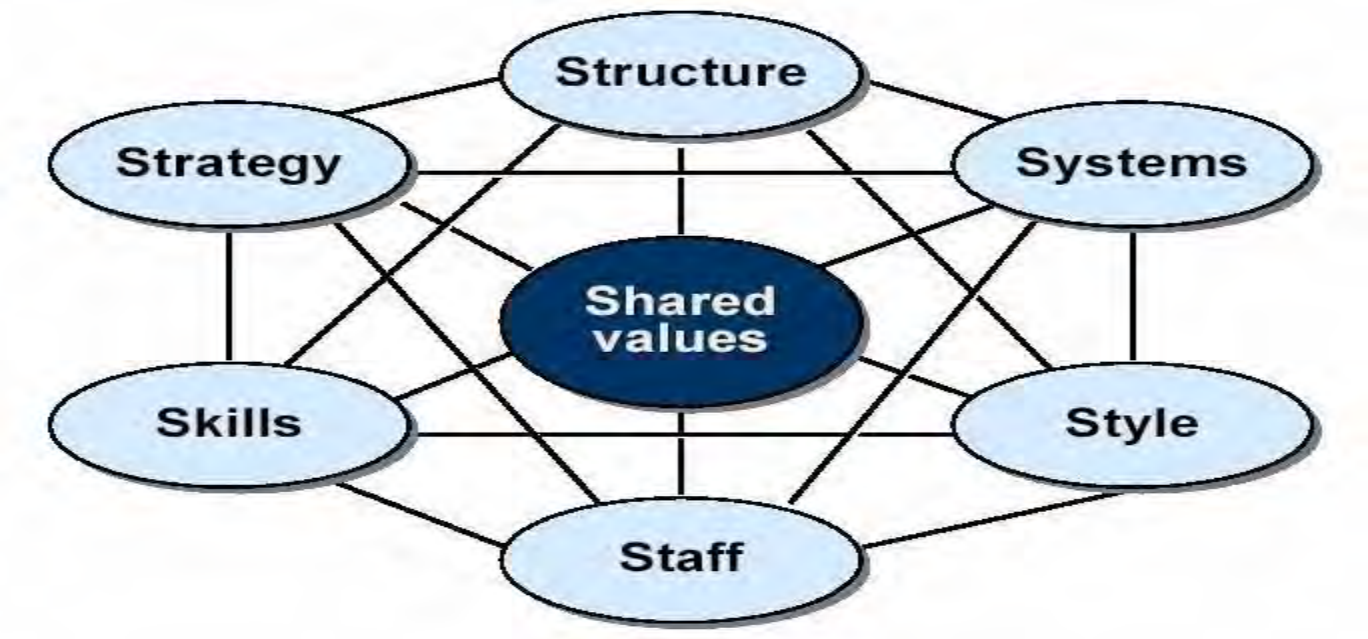
Value maximisation involves endorsing the principle that value maximisation is the ultimate financial objective and that the top management should adopt the discounted cash flow method to assess value-creating activities. The organisation's activities can be classified into financial and non-financial types. The former helps the senior management sustain focus, while the latter motivates the entire workforce. Non-financial activities include product development, customer satisfaction and quality improvement efforts, which are normally consistent with the financial goal of value maximisation.

In case of conflict between financial and non-financial goals, financial goals are given precedence.

The 7-S framework of McKinsey is a Value Based Management (VBM) model that describes how one can holistically and effectively organize a company. Together these factors determine the way in which a corporation operates. The 7's of McKinsey Framework are listed below:

I. Shared Value

The interconnecting center of McKinsey's model is: Shared Values. What does the organization stands for and what it believes in. Central beliefs and attitudes.



II. Strategy - Plans for the allocation of a firms scarce resources, over time, to reach identified goals. Environment, competition, customers.

III. Structure - The way the organization's units relate to each other: centralized, functional divisions (top-down); decentralized (the trend in larger organizations); matrix, network, holding, etc.

IV. System - The procedures, processes and routines that characterize how important work is to be done: financial systems; hiring, promotion and performance appraisal systems; information systems.

V.Staff - Numbers and types of personnel within the organization.

VI. Style - Cultural style of the organization and how key managers behave in achieving the organizationï¿½s goals. Management Styles.

VII. Skill - Distinctive capabilities of personnel or of the organization as a whole. Core Competences.

B) **Cost of acquisition:**

	Rs. In crores
Share Capital(40 crores shares*1.5*18)	1080
11% Debenture	200
Settlement of external liabilities	150
Unrecorded Liabilities	20
Dissolution expenses	15
Total	**1465**

Calculation of PV of Free Cash Flows

Year end	Free Cash Flows (Rs in crores)	PV factor@13%	PV of Free Cash Flows.
1	150	0.8850	132.74
2	200	0.7831	156.63
3	260	0.6931	180.19
4	300	0.6133	184.00
5	220	0.5428	119.41
6	120	0.4803	57.64
		Total	**830.61**

Therefore , Total PV of Free Cash Flows during the explicit forecast period period=Rs 830.61 crores.

Value of Free Cash Flows after explicit forecast period =120(1+3%)(/(13%-3%)=Rs 1236 crores.

Discounted Value of of Free Cash Flows after explicit forecast period=1236/(1+13%)^6=Rs 593.67 crores

Determining Net Present Value of Acquisition:

	Rs .in crores
PV of Free Cash Flows(1-6 years)	830.61
PV of Free Cash Flows subsequent to 6 years	593.67
Total PV benefits	**1424.28**
Less: Cost of Acquisition	1465.00
	(40.72)

Since NPV is negative, it is not advisable to acquire SS BPO Pvt Ltd.

20 A) A share of TTM Ltd. is currently quoted at, a price earning ratio of 7.5 times. The retained earning per share being 37.5% is Rs. 3 per share. Compute:

(I) The company's cost of equity, if investors expect annual growth rate of 12%.

(II) If anticipated growth rate is 13% p.a., calculate the indicated market price, with same cost of capital.

(III) If the company's cost of capital is 18% and anticipated growth rate is 15% p.a., calculate the market price per share, assuming other conditions remain the same.

B) What issues do you consider that need to incorporated within the Net Present Value (NPV) model for the evaluation of foreign investment proposals?

Ans:A) **I. Calculation of cost of capital**

Retained earnings		37.5%	Rs. 3 per share
Dividend*		62.5%	Rs. 5 per share
EPS		100.0%	Rs. 8 per share
P/E ratio	7.5		
times			

Market price is Rs. 7.5 × 8 = Rs. 60 per share

Cost of equity capital = (Dividend/price × 100) + growth %

= (5/60 × 100) + 12% = 20.33%.

* $\left(\frac{Rs.3}{37.5} \times 62.5 = Rs.5\right)$

II. Market price = Dividend/(cost of equity capital % – growth rate %) = 5/(20.33% – 13%) = 5/7.33% = Rs. 68.21 per share.

III. Market price = Dividend/(cost of equity capital % – growth rate %) = 5/(18% – 15%)

= 5/3% = Rs. 166.66 per share.

B) The issues that need to be considered by an Indian investor and incorporated within the Net Present Value (NPV) model for the evaluation of foreign investment proposals are the following:

(I) *Taxes on income associated with foreign projects*: The host country levies taxes (rates differ from country to country) on the income earned in that country by the Multi National Company (MNC). Major variations that occur regarding taxation of MNC's are as follows:

(i) Many countries rely heavily on indirect taxes such as excise duty, value added tax and turnover taxes etc.

(ii) Definition of taxable income differs from country to country and also some allowances e.g. rates allowed for depreciation.

(iii) Some countries allow tax exemption or reduced taxation on income from certain "desirable" investment projects in the form of tax holiday's, exemption from import and export duties and extra depreciation on plant and machinery etc.

(iv) Tax treaties entered into with different countries e.g. double taxation avoidance agreements.

(v) Offer of tax havens in the form of low or zero corporate tax rates.

(II) *Political risks*: The extreme risks of doing business in overseas countries can be seizure of property/nationalisation of industry without paying full compensation. There are other ways of interferences in the operations of foreign subsidiary e.g. levy of additional taxes on profits or exchange control regulations may block the flow of funds, restrictions on employment of foreign managerial/technical personnel, restrictions on imports of raw materials/supplies, regulations requiring majority ownership vetting within the host country.

NPV model can be used to evaluate the risk of expropriation by considering probabilities of the occurrence of various events and these estimates may be used to calculate expected cash flows. The resultant expected net present value may be subjected to extensive sensitivity analysis.

(III) *Economic risks*: The two principal economic risks which influences the success of a project are exchange rate changes and inflation.

The impact of exchange rate changes and inflation upon incremental revenue and upon each element of incremental cost need to be computed.

21 A) What are the SEBI guidelines for valuation of unlisted shares?

B) From the following data, compute the 'Net Assets' value of each category of equity shares of GHI Ltd.:

Shareholders funds

10,000 'P' Equity shares of Rs.100 each, fully paid

10,000 'Q' Equity shares of Rs.100 each, Rs.80 paid

10,000 'R' Equity shares of Rs.100 each, Rs.50 paid

Retained Earnings Rs.9,00,000

Ans: A)SEBI guidelines for valuation of unlisted shares are as under:

With a view to bringing about uniformity in calculation of net asset values(NAVs) of mutual fund schemes, SEBI has vide circular MFD/CIR/03/526/2002 dated May 9, 2002 issued guidelines in consultation with Association of Mutual Funds in India .The guidelines also prescribe exercise of due diligence while making such investments in and review of MF's performance so as to protect the interests of investors.

Unlisted equity shares of a company shall be valued "in good faith" on the basis of the valuation principles laid down below:

a.)Based on the latest available audited balance sheet, net worth shall be calculated as lower of (i) and (ii) below:

i.

Net worth per share = [share capital plus free reserves (excluding revaluation reserves) minus Miscellaneous expenditure not written off or deferred revenue expenditure, intangible assets and accumulated losses] divided by Number of Paid up Shares.

ii.

After taking into account the outstanding warrants and options, Net worth per share shall again be calculated and shall be = [share capital plus consideration on exercise of Option/Warrants received/receivable by the Company plus free reserves(excluding revaluation reserves) minus Miscellaneous expenditure not written off or deferred revenue expenditure, intangible assets and accumulated losses] divided by {Number of Paid up Shares plus Number of Shares that would be obtained on conversion/exercise of Outstanding Warrants and Options}

The lower of (i) and (ii) above shall be used for calculation of net worth per share and for further calculation in (c) below.

b.)Average capitalisation rate (P/E ratio) for the industry based upon either BSE or NSE data (which should be followed consistently and changes, if any, noted with proper justification thereof) shall be taken and discounted by 75% i.e. only 25% of the Industry average P/E shall be taken as capitalisation rate (P/E ratio). Earnings per share of the latest audited annual accounts will be considered for this purpose.

c.)The value as per the net worth value per share and the capital earning value calculated as above shall be averaged and further discounted by 15% for illiquidity so as to arrive at the fair value per share.

B) (i) Computation of Net assets

Worth of net assets is equal to shareholders' fund, i.e.

		Rs.
Paid up value of 'P' equity shares	10,000 x Rs.100	10,00,000
Paid up value of 'Q' equity shares	10,000 x Rs. 80	8,00,000
Paid up value of 'R' equity shares	10,000 x Rs. 50	5,00,000
Retained earnings		9,00,000
Net assets		32,00,000

(ii) Net asset value of equity share of Rs.100 paid up

Notional calls of Rs. 20 and Rs.50 per share on 'Q' and 'R' equity shares respectively will make all the 30,000 equity shares fully paid up at Rs. 100 each. In that case,

	Rs.
Net assets	32,00,000
Add: Notional calls (10,000 x Rs.20 + 10,000 x Rs.50)	7,00,000
	39,00,000

Value of each equity share of Rs.100 fully paid up = Rs. 39,00,000 / 30,000=Rs.130

(iii)Net asset values of each category of equity shares ***Rs.***

Value of 'P' equity shares of Rs. 100 fully paid up	130
Value of 'Q' equity shares of Rs. 100 each, out of which Rs. 80 paid up (130-20)	110
Value of 'R' Equity shares of Rs.100 each, out of which Rs. 50 paid up (130-50)	80

22 A) Write short note on Opportunity Cost (HRA).

B) FBG Ltd. has a capital base of Rs.1 crore and has earned profits to the tune of Rs.11 lacs. The Return on Investment (ROI) of the particular industry to which the company belongs is 12.5%. If the services of Mr. Y are acquired by the company, it is expected that the profits will increase by Rs.2.5 lakhs over and above the target profit.

Determine the amount of maximum bid price for the particular executive and the maximum salary that could be offered to him.

Ans: A) Opportunity Cost is one of the Economic value models used for measurement and valuation of Human assets. As per this model, opportunity cost is the value of an employee in his alternative use. This opportunity cost is used as a basis for estimating the value of Human resources. Opportunity cost value may be established by competitive bidding within the firm so that in effect, Managers must bid for any scarce employee. A Human asset will have a value only if it is a scarce resource, that is, when its employment in one division denies it to another division. This method excludes employees of the type of which can be readily hired from outside the firm. Also, it is in very rare cases that managers would like to bid for an employee.

B) Capital Base = Rs.1,00,00,000
Actual Profit = Rs. 11,00,000
Target Profit @ 12.5% = Rs. 12,50,000

Expected Profit on employing the particular executive

= Rs.12,50,000 + 2,50,000 = Rs.15,00,000

Additional Profit = Expected Profit – Actual Profit

= 15,00,000 – 11,00,000 = Rs.4,00,000

$$\text{Maximum bid price} = \frac{\text{Additional Profit}}{\text{Rate of Return on Investment}}$$

$$= \frac{4,00,000}{12.5} \times 100 = \text{Rs.}32,00,000$$

Maximum salary that can be offered = 12.5% of Rs.32,00,000 i.e., 4,00,000

Maximum salary can be offered to that particular executive upto the amount of additional profit i.e., Rs.4,00,000.

23) UB Finance Ltd. is a non-banking finance company. It makes available to you the costs and market price of various investments held by it as on 31.3.2013.

		(Rs. Lakhs)	
		Cost	**Market Price**
Scripts:			
I.	**Equity Shares-**		
	E-1	**60.00**	**61.20**
	E-2	**31.50**	**24.00**
	E-3	**60.00**	**36.00**
	E-4	**60.00**	**120.00**
	E-5	**90.00**	**105.00**
	E-6	**75.00**	**90.00**
	E-7	**30.00**	**6.00**
II.	**Mutual funds-**		
	MF-1	**39.00**	**24.00**
	MF-2	**30.00**	**21.00**
	MF-3	**6.00**	**9.00**
III.	**Government securities-**		
	GV-1	**60.00**	**66.00**
	GV-2	**75.00**	**72.00**

(i) Can the company adjust depreciation of a particular item of investment within a category?

(ii) What should be the value of investments as on 31.3.2013?

(iii) Is it possible to off-set depreciation in investment in mutual funds against appreciation of the value of investment in equity shares and government securities?

Ans: (i) Quoted current investments for each category shall be valued at cost or market value, whichever is lower. For this purpose, the investments in each category shall be considered scrip-wise and the cost and market value aggregated for all investments in each category. If the aggregate market value for the category is less than the aggregate cost for that category, the net depreciation shall be provided for or charged to the profit and loss account. If the aggregate market value for the category exceeds the aggregate cost for the category, the net appreciation shall be ignored. Therefore, depreciation of a particular item of investments can be adjusted within the same category of investments.

(ii) Value of Investments as on 31.3.2013

Type of Investment	Valuation Principle	Value
		Rs.in lakhs
EquityShares (Aggregated)	Lower of cost or market Value	406.50
Mutual Funds	NAV (Market value, assumed)	54.00
Government securities	Cost	135.00
		595.50

As per para 14 of AS 13 "Accounting for Investments", the carrying amount for current investments is the lower of cost and market price. Sometimes, the concern of an enterprise may be with the value of a category of related current investments and not with each individual investment, and accordingly, the investments may be computed at the lower of cost and market value computed categorywise.

(iii) Inter category adjustments of appreciation and depreciation in values of investments cannot be done. It is not possible to offset depreciation in investment in mutual funds against appreciation of the value of investments in equity shares and Government securities.

24) Capital structure of CD Ltd. as at 31.3.2013 as under:

	(Rs. in lacs)
Equity share capital	**10**
10% preference share capital	**5**
15% debentures	**8**
Reserves	**4**

CD Ltd. earns a profits of Rs. 5 lacs annually on an average before deduction of interest on debentures and income tax which works out to 30%.

Normal return on equity shares of companies similarly placed is 12% provided:

(a) Profit after tax covers fixed interest and fixed dividends at least 3 times.

(b) Capital gearing ratio is .75.

(c) Yield on share is calculated at 50% of profits distributed and at 5% on undistributed profits.

Lot Ltd. has been regularly paying equity dividend of 10%.

Compute the value per equity share of the company.

Ans:)

(i)	**Profit for calculation of interest and fixed dividend coverage:**	*Rs.*
	Average profit of the Company (before interest and taxation)	5,00,000
	Less: Debenture interest (15% on Rs. 8,00,000)	1,20,000
		3,80,000
	Less: Tax @ 30%	1,14,000
	Profit after interest and taxation	2,66,000
	Add back: Debenture interest	1,20,000
	Profit before interest but after tax	3,86,000
(ii)	**Calculation of interest and fixed dividend coverage:**	*Rs.*
	Fixed interest and fixed dividend:	
	Debenture interest	1,20,000
	Preference dividend	50,000
		1,70,000

Fixed interest and fixed dividend coverage = 386000/170000=2.27 times

Interest and fixed dividend coverage 2.05 times is less than the prescribed three times.

(iii) Capital gearing ratio:

Equity share capital + reserves = Rs. 10,00,000 + Rs. 4,00,000

= Rs. 14,00,000

Preference share capital + debentures = Rs. 5,00,000 + Rs. 8,00,000

= Rs. 13,00,000

Capital Gearing Ratio = $\frac{13,00,000}{14,00,000} = 0.93 (\text{approximately})$

Ratio 0.93 is more than the prescribed ratio of 0.75.

(iv) Yield on equity shares:

		Rs.
Average profit after interest and tax		2,66,000
Less: Preference Dividend	50,000	
Equity Dividend (10% on Rs. 10,00,000)	1,00,000	1,50,000
Undistributed profit		116,000
50% of distributed profit (50% of Rs. 1,00,000)		50,000
5% of undistributed profit (5% of Rs. 78,000)		5,800
		55,800

Yield on equity shares = 55800/10,00,000*100=5.58%

(v) Expected yield of equity shares:

	%
Normal return	12.00
Add: For low coverage of fixed interest and fixed dividends (2.27 < 3)	0.50*
Add: For high capital gearing ratio (0.93 > 0.75)	0.50**
	13.00

(vi) Value per equity share:

=5.58/13*Rs.100***=Rs42.92

Notes: * When interest and fixed dividend coverage is low, riskiness of equity investors is high. So they should claim additional risk premium over and above the normal rate of return. Here, the additional risk premium is assumed to be 0.50%.

** Similarly, higher the ratio of fixed interest and dividend bearing capital to equity share capital plus reserves, higher is the risk and so higher should be risk premium. Here also the additional risk premium has been taken as 0.50%. The students may make any other reasonable assumption.

*** Paid up value of a share has been taken as Rs. 100.

25) The Balance Sheet of PQR Limited as on 31.12.2012 is as follows :

Name of the Company: POR Ltd.
Balance Sheet of PQR Ltd. as at 31st December 2012.

Rs. In lacs

Ref No.		Particulars	Note No.	As on 31st March, 2013	As on 31st March 2012
		1	2	3	4
I		**EQUITY AND LIABILITIES**			
(1)		**Shareholders' funds**			
	(a)	Share Capital	(1)	16	
	(b)	Reserves and Surplus	(2)	4	
	©	Money received against share warrants			
(2)		**Share application money pending allotment**			
(3)		**Non-current liabilities**			
	(a)	Long term liabilities	(3)	10	
	(b)	Deferred tax liabilities			
	(c)	Other Long term Liabilities			
	(d)	Long term provisions			
(4)		**Current Liabilities**			
	(a)	Short-term borrowings			
	(b)	Trade payables			
	©	Other current liabilities			
	(d)	Short-term provisions			
		TOTAL		**30**	
II		**ASSETS**			
(1)		**Non-current assets**			
	(a)	Fixed Assets			
		(i)Tangible assets	(4)	15	
		(ii)Intangible assets	(5)	8	
		(iii)Capital work in progress			
		(iv) Intangible assets under development			
	(b)	Non-current investments			
	©	Deferred tax assets (Net)			
	(d)	Long-term loans and advances			
	(e)	Other non-current assets			

(2)		**Current assets**	(6)	5	
	(a)	Current investments			
	(b)	Inventories			
	©	trade receivables			
	(d)	Cash and cash equivalents			
	(e)	Short-term loans and advances			
	(f)	Other current assets	7	2	
		TOTAL		30	

Schedule 1 - **Share Capital**	
Particulars	Rs.in lacs
Share Capital 100,000equity shares of Rs 10 each 100,000equity shares of Rs 6 each	 10 6
	16

Schedule 2 **Reserves and Surplus**	
Particulars	Rs.in lacs
General reserves	4
	4

Schedule 3 **Non-current liabilities**	
Particulars	Rs.in lacs
Long Term Liabilities	10
	10

Schedule 4 **Fixed Assets**	
Particulars	Rs. In lacs
Tangible assets	15
	15

Schedule 5 **Fixed Assets**	
Particulars	Rs.in lacs
Goodwill Other intangible assets	5 3
	8

Schedule 6 **Current Assets**	
Particulars	Rs.in lacs
Other tangible assets	5
	5

Schedule 7 **Current Assets**	
Particulars	Rs.in lacs
Other current assets (Misc . exp to the extent not written off)	2
	2

Fixed assets are worth Rs. 24 lakhs. Other Tangible assets are revalued at Rs. 3 lakhs. The company is expected to settle the disputed bonus claim of Rs. 1 lakh not provided for in the accounts. Goodwill appearing in the Balance Sheet is purchased goodwill. It is considered reasonable to increase the value of goodwill by an amount equal to average of the book value and a valuation made at 3 years' purchase of average super-profit for the last 4 years.

After tax, profits and dividend rates were as follows :

Year	PAT (Rs. in Lacs)	Dividend %
2009	3.0	11%
2010	3.5	12%
2011	4.0	13%
2012	4.1	14%

Normal expectation in the industry to which the company belongs is 10%.

A holds 20,000 equity shares of Rs. 10 each fully paid and 10,000 equity shares of Rs. 6 each, fully paid up. He wants to sell away his holdings.

(i) Determine the break-up value and market value of both kinds of shares.

(ii) What should be the fair value of shares, if controlling interest is being sold ?

Ans: (i) Break-up value of Re. 1 of share capital $= \frac{\text{Rs. 28.98 lakhs}}{\text{Rs. 16.00 lakhs}}$

= Rs. 1.81

Break up value of Rs. 10 paid up share = 1.81 × 10 = Rs. 18.10

Break up value of Rs. 6 paid up share = 1.81 × 6 = Rs. 10.86

Market value of shares :

Average dividend $= \left(\frac{11\% + 12\% + 13\% + 14\%}{4}\right) = 12.5\%$

Market value of Rs. 10 paid up share $= \frac{12.5\%}{10\%} \times 10 =$ Rs. 12.50

Market value of Rs. 6 paid up share $= \frac{12.5\%}{10\%} \times 6 =$ Rs. 7.50

(ii) Break-up value of share will remain as before even if the controlling interest is being sold. But the market value of shares will be different as the controlling interest would enable the declaration of dividend upto the limit of disposable profit.

$\frac{\text{Average Profit}^*}{\text{Paid up value of shares}} \times 100 = \frac{\text{Rs. 3.4 lakhs}}{\text{Rs. 16 lakhs}} \times 100 =$ 21.25%

Market value of shares :

For Rs. 10 paid up share $= \frac{21.25\%}{10\%} \times 10 =$ Rs. 21.25

For Rs. 6 paid up share $= \frac{21.25\%}{10\%} \times 6 =$ Rs. 12.75

Fair value of shares $= \frac{\text{Break up value} + \text{Market value}}{2}$

Fair value of Rs. 10 paid up share $= \frac{18.10 + 21.25}{2} =$ Rs. 19.68

Fair value of Rs. 6 paid up share $= \frac{10.86 + 12.75}{2} =$ Rs. 11.81

* (Transfer to reserves has been ignored)

Working Notes:

(Rs. in lakhs)

(a) Calculation of average capital employed

Fixed assets		24.00
Other tangible assets	3.00	
Intangible assets	3.00	
	30.00	
Less : Liabilities	10	
Bonus	1	11.00
		19.00
Less : ½ of profits [½ (4.1 – Bonus 1.0)]		1.55
Average capital employed		17.45

(b) Calculation of super profit

Average profit	= ¼ (3 + 3.5 + 4 + 4.1 – Bonus 1.0)	
	= ¼ × 13.6	3.400
Less : Normal profit	= 10 % of Rs. 17.45 lakhs	1.745
Super profit		1.65

(c) Calculation of goodwill

3 Years' purchase of average super-profit = 3 × 1.655 = Rs. 4.965 lakhs

Increase in value of goodwill = ½ (book value + 3 years' super profit)

= ½ (5 + 4.965) = Rs. 4.9825 lakh

Net assets as revalued including book value of goodwill	24.00
Add : Increase in goodwill (rounded-off)	4.98
Net assets available for shareholders	28.98

Note : In the above solution, tax effect of disputed bonus and corporate dividend tax have been ignored.

26 A) 14 years ago a man took a 21 years lease of a premises on payment of salami and rent which was equivalent to a net rent of Rs 3000/- per month. The net Rack Rent of the property is Rs 5000/- per month. He now wishes to cancel his existing lease and to take a new lease for 21 years at the existing rental. What should be the value of fair premium or salami for him to pay? Assume interest on capital is required at 9 % and sinking fund of 3%.

B) Briefly discuss the financial aspect of valuation of farm house.

Ans: A) Net Rack rent =Rs 5000 p.m

Less: Rent reserved on lease = Rs 3000 p.m

Rs 2000 p.m

Profit on rental = Rs 2000*12 = Rs 24000p.a

Multiplying by years' purchase(Y.P) at 9% and 3% for 14 years

$= 1/(i+S)$

$= 1/[i+\{r(1+r)^n -1\}]$

Where, i= interest on capital

r=interest on sinking fund

n= years.

Substituting,

$= 1/[.09+P\{0.03/(1+0.03)^{14} -1$

=6.7328126

And present value of Re. 1 @ 9% for 7 years$=1/(1+i)^n =1/(1+.0.09)^7$

=0.5470342

Y.P dual rate 9% and 3% for 14 years deferred by 7 years

= 6.7328126*0.5470342*24000

=3.6830791*Rs24000

=Rs 88393.898

Or, =Rs 88394/-

Amount of premium to be paid =Rs 88394/-

B) The Farm building happen to be part of the whole farm. General modes of valuation of farm houses are as follows:

(i) Land and Building method: This method is used for farm houses located within 8 km from municipal limit. Capital gains tax is applicable to transfer of such properties.

(ii)Comparative Sales method: The sales comparison approach in farm house valuation is based primarily on the principle of substitution. This approach assumes a prudent individual will pay no more for a property than it would cost to purchase a comparable substitute property. The approach recognizes that a typical buyer will compare asking prices and seek to purchase the property that meets his or her wants and needs for the lowest cost. In developing the sales comparison approach, the appraiser attempts to interpret and **measure** the actions of parties involved in the marketplace, including buyers, sellers, and investors. This method may be applied if sale value of comparable farm houses are available from Revenue Authorities.

(iii) The income capitalization approach (often referred to simply as the "income approach") is used to value resorts in and around cities/towns. It should be remembered that the appurtenant land and the land for amenities with building donot give additional agricultural income. Because it is intended to directly reflect or model the expectations and behaviors of typical market participants, this approach is generally considered the most applicable valuation technique for income-producing properties, where sufficient market data exists.

In a commercial income-producing property this approach capitalizes an income stream into a value indication. This can be done using revenue multipliers or capitalization rates applied to a Net Operating Income (NOI). Usually, an NOI has been stabilized so as not to place too much weight on a very recent event. An example of this is an unleased building which, technically, has no NOI. A stabilized NOI would assume that the building is leased at a normal rate, and to usual occupancy levels. The Net Operating Income (NOI) is gross potential income (GPI), less vacancy and collection loss (= Effective Gross Income) less operating expenses (but excluding debt service, income taxes, and/or depreciation charges applied by accountants).

(iv)Replacement Cost less depreciation method: Farm houses generally have constraints of free access and hence lack ability or marketability of the buildings thereon as separate units. This then rules out capitalization mode of valuation. Hence replacement cost less depreciation is the prominent method used for valuation of farm house buildings.

27 A)KBC Bank had issued a tax saving bond carrying an interest of 8% on face value of Rs10000/- per bond with 6 years to maturity and interest payable each year. BB Finance had also issued a tax saving bond of Rs 10000 each with 8 years to maturity and carrying a coupon rate of 6%.

As on date, i.e two years after the issue date, when a new bond with 6 years to maturity carries a coupon rate of 7% and bonds with 8 years to maturity carries 5%, and both these bonds are priced correctly , which is cheaper to buy and how many bonds can be bought for Rs 5 lacs (assume part of a bond can also be bought)?

B) Mr. X is contemplating purchase of 1,000 equity shares of a PQR Ltd. His expectation of return is 10% before tax by way of dividend with an annual growth of 5%. The Company's last dividend was Rs. 2 per share. Even as he is contemplating, Mr. X suddenly finds, due to a budget announcement dividends have been exempted from tax in the hands of the recipients. But the imposition of dividend Distribution tax on the Company is likely to lead to a fall in dividend of 20 paise per share. X's marginal tax rate is 30%.

Calculate what should be Mr. X's estimates of the price per share before and after the Budget announcement?

Ans: A) Value of Bonds based on expected yields:

Particulars	KBC	BB
i)Desired Yield	7%	5%
ii)Face Value	Rs 10000	Rs 10000
iii)Annual Coupon Rate	8%	6%
iv)Period of maturity	4 years	6 years
v)Annual cash flows(Interest)(i*ii)	Rs 800	Rs 600
vi)PV of Interest Factor for Annuity for period to maturity at the rate of yield	3.387	5.076
vii)Present Value of Interest Payments (iv*v)	Rs 2710	Rs 3046
viii)Maturity Value	Rs 10000	Rs 10000
ix)PV at Yield Rate at the time of maturity(4^{th} year and 6^{th} year)	0.763	0.746
x)Present Value of maturity proceeds(viii*ix)	Rs 7630	Rs 7460
xi)Value of Bond today(vii+x)	**Rs 10340**	**Rs 10506**

Evaluation:

Cheaper Bond is that issued by KBC Bank.

Bonds that can be bought:Rs 500000/Market price of Bond=Rs 500000/10340=48.35 Bonds.

B) The formula for determining value of a share based on expected dividend is:

$$P_0 = \frac{D_0 (1+g)}{(k-g)}$$

Where

P_0 = Price (or value) per share

D_0 = Dividend per share

g = Growth rate expected in dividend

k = Expected rate of return

Hence,

Price estimate before budget announcement:

$$P_0 = \frac{2 \times (1+0.05)}{(0.10-0.05)} = \text{Rs.}42.00$$

Price estimate after budget announcement:

$$P_0 = \frac{1.80 \times (1.05)}{(.07-.05)} = \text{Rs.}94.50$$

28 A) XYZ Ltd. has just installed Machine – P at a cost of Rs. 2,00,000. The machine has a five year life with no residual value. The annual volume of production is estimated at 1,50,000 units, which can be sold at Rs. 6 per unit. Annual operating costs are estimated at Rs. 2,00,000 (excluding depreciation) at this output level. Fixed costs are estimated at Rs. 3 per unit for the same level of production.

XYZ Ltd. has just come across another model called Machine – Q capable of giving the same output at an annual operating cost of Rs. 1,80,000 (exclusive of depreciation). There will be no change in fixed costs. Capital cost of this machine is Rs. 2,50,000 and the estimated life is for five years with nil residual value.

The company has an offer for sale of Machine – P at Rs. 1,00,000. But the cost of dismantling and removal will amount to Rs. 30,000. As the company has not yet commenced operations, it wants to sell Machine – Pand purchase Machine –Q

XYZ Ltd. will be a zero-tax company for seven years in view of several incentives and allowances available.

The cost of capital may be assumed at 14%. P.V. factors for five years are as follows:

Year	P.V. Factors
1	0.877
2	0.769
3	0.675
4	0.592
5	0.519

(i) Advise whether the company should opt for the replacement.

(ii) Will there be any change in your view, if Machine-P has not been installed but the company is in the process of selecting one or the other machine?

State your view with necessary workings.

Ans: A) (i) Replacement of Machine – P:

Incremental cash out flow

	Rs.
Cash outflow on Machine – Q	2,50,000
Less: Sale value of Machine – P	
Less: Cost of dismantling and removal	
(Rs. 1,00,000 – 30,000)	70,000
Net outflow	1,80,000
Incremental cash flow from Machine –Q	
Annual cash flow from Machine – Q	2,70,000
Annual cash flow from Machine – P	2,50,000
Net incremental cash in flow	20,000

Present value of incremental cash in flows = Rs. 20,000 × (0.877 + 0.769 + 0.675 + 0.592 + 0.519)

= 20,000 × 3.432 = Rs. 68,640

NPV of Machine – Q = Rs. 68,640 – Rs. 1,80,000 = (–) Rs. 1,11,360.

Rs. 2,00,000 spent on Machine – P is a sunk cost and hence it is not relevant for deciding the replacement.

Decision: Since Net present value of Machine –Q is in the negative, replacement is not advised.

If the company is in the process of selecting one of the two machines, the decision is to be made on the basis of independent evaluation of two machines by comparing their Net present values.

(ii) Independent evaluation of Machine– P and Machine –Q

	Machine– P	*Machine– Q*
Units produced	1,50,000	1,50,000
Selling price per unit (Rs.)	6	6
Sale value	9,00,000	9,00,000
Less: Operating Cost (exclusive of depreciation)	2,00,000	1,80,000
Contribution	7,00,000	7,20,000
Less: Fixed cost	4,50,000	4,50,000
Annual Cash flow	2,50,000	2,70,000
Present value of cash flows for 5 years	8,58,000	9,26,640
Cash outflow	2,00,000	2,50,000

Net Present Value	6,58,000	6,76,640

As the NPV of Cash inflow of Machine-Q is higher than that of Machine-P, the choice should fall on Machine-Q.

Note: As the company is a zero tax company for seven years (Machine life in both cases is only for five years), depreciation and the tax effect on the same are not relevant for consideration.

29 A) G Ltd. has a choice between three projects X, Y and Z. The following information has been estimated :

Rs.'000

Projects	**Market Demand/Profit**		
	D1	**D2**	**D3**
X	**190**	**50**	**15**
Y	**110**	**200**	**160**
Z	**150**	**140**	**110**

Probabilities are D1=0.6, D2=0.2, D3=0.2

i) Which projects should be undertaken if decision is made by expected value approach?

ii) Calculate value of perfect information.

B) Explain briefly about net asset value (NAV) of a Mutual Fund Scheme.

Ans: Ai)The elements of material should be identified – profits, demand, probabilities , action(Project X,Y, or Z) and outcomes(expected values):

Particulars		Profit(Rs in 000)	Probability	Rs. In 000
Project X	D1	190	0.6	114
	D2	50	0.2	10
	D3	15	0.2	3
				EV=127
Project Y	D1	110	0.6	66
	D2	200	0.2	40
	D3	160	0.2	30
				EV=138

Project Z	D1	150	0.6	90
	D2	140	0.2	28
	D3	110	0.2	22
				EV=140

Analysis: Project Z should be chosen because it has the highest expected value of Rs.140000.

ii)Perfect information:

In order to obtain perfect information about future states of demand from market researchers, a company has to pay for information. The maximum value of this perfect information will be equal EV with the information less the EV without information.

Demand	Choose	Profit(Rs in 000)	Probability	EV(Rs. in '000)
D1	X	190	0.6	114
D2	Y	200	0.2	40
D3	Y	160	0.2	32
EV with Perfect Information				**=186**

Therefore EV of the Perfect Information =186-140=Rs.46 i.e Rs 46000.

B) Net Asset Value (NAV) is the total asset value (net of expenses) per unit of the fund calculated by the Asset Management Company (AMC) at the end of every business day. Net Asset Value on a particular date reflects the realizable value that the investor will get for each unit that he is holding if the scheme is liquidated on that date.

The performance of a particular scheme of a mutual fund is denoted by Net Asset Value (NAV). Net Asset Value may also be defined as the value at which new investors may apply to a mutual fund for joining a particular scheme.

It is the value of net assets of the fund. The investors' subscription is treated as the capital in the balance sheet of the fund, and the investments on their behalf are treated as assets. The NAV is calculated for every scheme of the MF individually. The value of portfolio is the aggregate value of different investments.

$$\text{The Net Asset Value (NAV)} = \frac{\text{Net Assets of the scheme}}{\text{Number of units outstanding}}$$

Net Assets of the scheme will normally be:

Market value of investments + Receivables + Accrued Income + Other Assets – Accrued Expenses – Payables – Other Liabilities

Since investments by a Mutual Fund are marked to market, the value of the investments for computing NAV will be at market value.

NAV of MF schemes are published on a daily basis in Newspapers and electronic media and play an important part in investors' decisions to enter or to exit. Analyst use the NAV to determine the yield on the schemes.

The Securities and Exchange Board of India (SEBI) has notified certain valuation norms calculating net asset value of Mutual fund schemes separately for traded and non-traded schemes.

30 A)A share of face value of Rs 100 has current market price of Rs 480.Annual expected dividend is 30%. During the 5Th year, the share holder is expecting a bonus in ratio of 1:5.Dividend rate is expected to be maintained on the expanded capital base. The shareholder intends to retain the share till the end of 8Th year. At the time the value of share is expected to be Rs 1000/-. Incidental expenses at the time of purchase and sale are estimated at 5% on the market price. There is no tax on dividend income and capital gain. The shareholder expects a minimum return of 15% per annum. Should he buy the share? What is the maximum price he can pay for the share? Show complete working.

B)LM Pvt Ltd. is negotiating to sell their business to a public limited company. The following is a summarized extract fro Balance Sheet as on 31st March , 2013 of LM Pvt Ltd.

(Rs.)

Share Capital(1000 shares of Rs.1000 each)		**10,00,000**
Free reserve		**2,00,000**
		12,00,000
Fixed Assets at depreciated cost		**6,40,000**
Current assets	**7,20,000**	
Less:CurrentLiabilities	**160,000**	**5,60,000**
		12,00,000

The profits of LM Pvt . Ltd. for the last 5 years has been in existence after eliminating any extraneous or non-recurring debits and credits were Rs 90,000;Rs 130,000;Rs 115000;Rs240000; and Rs 275000. A return on capital employed at 10% is considered to be reasonable and it is expected that future requirements as to capital will not materially vary fro capital employed as on 31st March.

Ignoring extraneous factors that may affect the position, suggest the amount that should reasonably be paid to the company for goodwill for acquiring the company. You may make necessary assumptions.

Ans: A) During 5th year bonus issue made in ratio of 1:5.

After bonus issue the face value becomes Rs. 120.

Dividend rate of 30% is maintainable on expended capital base of Rs.120.

Then, dividend is Rs. 120*30/100=Rs.36(5-8 years)

(Rs.)

Value of share at the end of 8th year	1000
Add: 20% addition for bonus issue	200
	1200
Less: Incidental expenses on sale @5%	60
Net sales realisation	1140

Calculation of present value of net benefit @15% DCF

(Rs.)

Dividend for 1 to 4 years (Rs. 30*2.855)	85.65
Dividend for 5 to 8 years (Rs. 36*1.632)	58.75
Sales realization at the end of 8th year(Rs.1140*0.327)	372.78
	517.18
Less: Cost of 100 shares (Rs.480+5% incidental expenses)	504.00
Present value of net benefit	13.18

B) Calculation of average profit of last 5 years=Rs(90000+130000+115000+240000+275000)/5

=Rs850000/5= Rs170000

Expected return on capital employed= Rs1200000*10/100=Rs 120000

Super profit =Rs170000-Rs 120000=Rs 50000

Goodwill (assumed to be 3 years super profit)=Rs50000*3=Rs 150000.

Alternatively,

As per Capitalisation method, Goodwill is =(Rs170000/.10)- Rs 1200000

=Rs1700000-Rs1200000

=Rs500000/-