Paper 11: Capital Market Analysis and Corporate Laws

Section – I: Capital Market Analysis

Question 1.

(a) In each of the cases given below one out of four is correct. Indicate the correct answer and give your workings/ reasons briefly.

(i) You have invested ₹ 1,00,000, 30% of which is invested in Company X, which has a expected rate of return of 15%, and 70% of which is invested in Company Y, with an expected return of 12%. What is the return on your portfolio?

A. ₹ 12,000;
B. ₹ 6,450;
C. ₹ 12,900;
D. ₹ 12,500.

(ii) MS Ltd. has a debt-equity mix of 30/70. If MS Ltd.'s debt Beta is 0.30 and Beta for its activity (or project) is 1.21, what is the Beta for its Equity?

A. 1.65;
B. 1.60;
C. 1.52;
D. None of the above.

(iii) The ex-post SML for a pharmaceutical company is given by the equation:
$N(\bar{r}_i) = 8 + \beta_i 8$
If beta of the company's security is 1.5 and actual return on the security is 18%, the security's ex-post alpha (a) is —

A. -4.0%;
B. -2.0%;
C. +1.5%;
D. +2.0%.

(iv) Maruti has a beta of 0.865. If the expected market return is 17.50 and the risk freer rate of return is 8.50%, what is the appropriate required return of Maruti (using the CAPM)?

A. 16.825%;
B. 16.582%;
C. 16.285%;
D. 16.258%.

(v) Mr. Sanyal purchased 100 shares of NITCO Ltd. Futures @ ₹ 2,500 on 10th June. Expiry date is 26th of June. His total investment was ₹ 2,50,000 and the initial margin paid was ₹ 37,500. On 26th of June shares of NITCO Ltd. was closed at ₹ 2,000. How much will be the gain / loss on the shares?

A. ₹ 50,000;
B. ₹ 25,000;
C. ₹ 35,000;
D. None of the above.

(b) Choose the most appropriate one from the stated options and write it down.

(i) It is quite common for banks to issue subordinated debt. The reasons are:

- **A. Fund raising;**
- **B. It is treated as quasi-equity;**
- **C. It does not increase debt-equity ratio;**
- **D. It is included in Tier II capital for the purpose of determining capital adequacy.**

(ii) Fair value of an option represents:

- **A. Intrinsic value of the option;**
- **B. Time value of the option;**
- **C. Both (A) and (B);**
- **D. None of the above.**

(iii) A portfolio is not efficient if there is another portfolio with:

- **A. A higher expected return and lower standard deviation;**
- **B. A lower expected return and same standard deviation;**
- **C. The same expected return and higher standard deviation;**
- **D. None of the above.**

(iv) A special contract under which the owner of the contract enjoys the right to buy or sell without the obligation to do so is called:

- **A. Forward;**
- **B. Option;**
- **C. Spot;**
- **D. Future.**

(v) Bond issued at a discount and repaid at a face value is called:

- **A. Zero –coupon bond;**
- **B. Eurobond;**
- **C. Yankee bond;**
- **D. Income bond.**

Answer to Question 1(a):

(i) C. ₹ 12,900

Company X – 30% of ₹ 1,00,000 with 15% rate of return
= 0.30 x ₹ 1,00,000 x 0.15 = ₹ 4,500
Company Y – 70% of ₹ 1,00,000 with a 12% rate of return
= 0.70 x ₹ 1,00,000 x 0.12 = ₹ 8,400
The total return is ₹ 12,900 (i.e., ₹ 4,500 + ₹ 8,400)

(ii) B. 1.60

$\beta_A = \beta_d (D/V) + \beta_e (E/V)$

Or, $1.21 = 0.30 (0.3) + \beta_e \times 0.7$

$= 0.09 + 0.7 \beta_e$

Or, $\beta_e = (1.21 - 0.09)/0.7 = 1.12/0.7 = 1.60$

(iii) B. -2.0%

In the ex-post SML, average historical rates of return for securities are plotted against their betas for a particular time period.
Ex-post SML is given by the equation –

$N(\bar{r}_i) = r_0 + r_i \beta_{im}$

Where,

r_0 = Intercept of ex-post SML, and

r_i = Slope of SML, and

Alpha, a_i, the securities abnormal return, is calculated as

$a_i = \bar{r}_i - N(\bar{r}_i)$, where $\bar{r}_i$ is the actual return, and $N(\bar{r}_i)$ is the required return according to SML. In the given case $N(\bar{r}_i) = 8 + 1.5 \times 8 = 20\%$

As actual return is 18%, alpha a_i is 18% - 20% = -2%

(iv) **C. 16.285%**

Required rate of return:
= 8.50% + (17.5% - 8.5%) × 0.865
= 8.50% + 9.0% × 0.865
= 8.50% + 7.785%
= 16.285%

(v) **A. ₹ 50,000**

Loss to Mr. Sanyal (2,500 – 2,000) × 100 = ₹ 50,000.

Answer to Question 1(b):

(i) D. It is included in Tier II capital for the purpose of determining capital adequacy.
(ii) C. Both (A) and (B)
(iii) A. A higher expected return and lower standard deviation
(iv) B. Option
(v) A. Zero –coupon bond

Question 2.

(a) What are advantages of share repurchase over dividends?

(b) What are the principal weaknesses of Indian Stock Market?

(c) A new equity based mutual fund collected ₹ 50 crores through the New Fund Offer at ₹ 10 a unit. On the first day when the NAV was to be released, the following stock purchases were made. The balance was parked in reverse repo for a day at 6% yield. The initial expense is 6% and is expected to be amortized over 5 years. The total recurring expenses which would be deducted on a daily basis (which also includes investment and advisory fees for this fund size) is 2.5% per annum. Assume recurring expenses is charged on opening balance of net assets. Find 1st day NAV for this fund.

Name of the stock	Qty.	Cost	Closing price
BHEL	2500	1968.00	1968.25
Infosys	3000	1600.00	1630.20
TCS	2500	928.00	928.00

ITC	25600	169.00	164.55
Reliance Communication	16500	265.00	258.20

Answer:

(a) The advantages of share repurchase over dividends are as follows :

(i) Cash dividend implies a commitment on the part of company to continue payments in future, as investors keep expecting them. However, share repurchase is an one time affair.

(ii) The decision to repurchase the shares offers a company more flexibility as to number of shares, the period etc.

(iii) Share repurchase are more focused in terms of paying out cash only to those shareholders who need it. However, dividends are paid to all.

(iv) Share buyback provide a way of increasing control in the firm. If only outsiders tender their shares, automatically insiders control increases.

(b) Weaknesses of Indian Stock Market:

1. Scarcity of floating stocks: Financial institutions, banks and insurance companies own 80 percent of the equity capital of the private sector.
2. Speculation: 85 percent of the transactions on the NSE and BSE are speculative in nature.
3. Price rigging: evident in relatively unknown and low quality scripts. Causes short term fluctuations in the prices.
4. Insider trading: Obtaining market sensitive information to make money in the markets.

(c) Fund collection : ₹ 50.00000 crores

Stock purchases : ₹ 2.07389 crores

Balance corpus : ₹ 47.92611 crores

Income – repo (₹ 47,92,61,100 x 0.06) x (1/365) = ₹ 78,783

Unrealized loss : - ₹ 1,34,895

Initial expenses (0.06 × ₹ 50 crores) ÷ (5 x 365)= ₹ 16,438 [amortised over five years]

Recurring expenses (0.025 × ₹ 50 crores) ÷ 365 = ₹ 34,247

Name of the stock	Qty	Cost (₹)	Closing price (₹)	Total cost (₹)	Unrealized gain/loss (₹)
BHEL	2,500	1,968	1,968.25	49,20,000	625
Infosys	3,000	1,600	1,630.20	48,00,000	90,600
TCS	2,500	928	928.00	23,20,000	0
ITC	25,600	169	164.55	43,26,400	-1,13,920
Reliance Communication	16,500	265	258.20	43,72,500	-1,12,200
				2,07,38,900	**-1,34,895**

First day's NAV of equity based fund

$$= \frac{\text{Balance Corpus} + \text{Income} + \text{Stock Purchases} - \text{Unrealised Loss} - \text{Expenses}}{\text{Outstanding Number of Units}}$$

$$= \frac{47.92611\text{crores} + 78,783 + 2.07389\text{ crores} - 1,34,895 - 16,438 - 34,247}{5\text{ crores}}$$

= ₹ 9.9979

Question 3.

(a) State the various risks associated with derivatives?

(b) List out the differences between merchant banks and commercial banks?

(c) Given the following risky portfolios

	A	B	C	D	E	F	G	H
Return %	**10**	**12.5**	**15**	**16**	**17**	**18**	**18**	**20**
σ%	**23**	**21**	**25**	**29**	**29**	**32**	**35**	**45**

(i) Which of these portfolios are efficient? Which are inefficient?

(ii) Suppose one can tolerate a risk of 25%, what is the maximum return one can achieve if no borrowing or lending is resorted to?

(iii) Suppose one can tolerate a risk of 25%, what is the maximum return one can achieve if borrowing or lending at the rate of 12% is resorted to?

Answer:

(a) Various risks associated with derivatives are as follows :

(i) Market Risk – Price sensitivity to fluctuations in interest rates and foreign exchange rates.

(ii) Liquidity Risk – Most derivatives are customized instruments, hence may exhibit substantial liquidity risk.

(iii) Credit Risk – Derivatives trades not traded on exchange are traded in the Over the Counter (OTC) markets. OTC contracts are subject to counter party defaults.

(iv) Hedging Risk – Derivatives are used as hedges to reduce specific risks. If the anticipated risks do not develop, the hedge may limit the funds total return.

(v) Regulatory Risk – Owing to the high risk characteristics inherent in the derivatives market, the regulatory controls is sometimes too oppressive for market participants.

(b) The differences between merchant banks and commercial banks are summarized below:

Merchant Banks	Commercial Banks
The area of activities of merchant bankers is "equity and equity related". They deal with mainly funds raised through money market and capital market.	Basically deal and debt related finance and their activities are appropriately arrayed around credit proposal, credit appraisal and loan sanctions.
The merchant bankers are management oriented. They are willing to accept risk of business.	Commercial banks are asset oriented and their lending decisions are based on detailed credit analysis of loan proposals and the value of security offered against loans. They generally avoid risks.
The activities of merchant bankers include project counselling, corporate counselling in areas of capital restructuring,	Commercial bankers are merely financiers.

amalgamations, mergers, takeover etc, discounting and rediscounting of short term paper in money markets, managing, underwriting and supporting public issues in new issue market and acting as brokers and advisers on portfolio management in stocks exchange. Merchant banking activities have impact on growth, stability and liquidity of money markets.	

(c)

(i) Using the risk-return tradeoff, an investor would prefer B to A (B gives higher return for lower risk, hence dominant); would prefer C; would prefer E to D (E gives higher return for lower risk and hence dominant); would prefer F to G (F is dominant because it offers 18% at lower risk); and H; Hence portfolios B, C, E, F & H are efficient. Portfolios A, D & G are inefficient.

(ii) As seen from the table, if the maximum risk of 25% can be tolerated, then Portfolio C can be chosen to give a maximum return of 15%.

(iii) However, if borrowing/lending can be resorted @12%, then one can borrow in such a manner that the total risk does not exceed 25%. As we know higher returns can be obtained by borrowing at the risk free rate and investing in a risky portfolio. Obviously risk too would increase. Now we need to find that portion of investment in risky portfolio, which will give us maximum return for a risk not greater than 25%. Therefore let us assume weight of investment in risky portfolio be 'x'. Therefore (1-x) would be the weight in risk free asset. It is clear that since □ of risk free asset is zero, we need to find just that proportion in risky security to get 25%.

Thus we have for Portfolio A investment in proportion of 25/23 and -2/23 in risk free instrument (including borrowing) to arrive at a total risk of 25%. We simply used the below formula. [Note substitute σ of Risk free portfolio = 0]

x × σ of Risky Portfolio + (1-x) × σ of Risk free portfolio = 25%

'x' found above, would be used it to find total return.

Total return = x × Return of Risky Portfolio + (1-x) × 12

Thus we get the table given below.

	A	B	C	D	E	F	G	H
Proportion in risky security	25/23	25/21	25/25	25/29	25/29	25/32	25/35	25/45
To get Risk	25	25	25	25	25	25	25	25
Return	9.83	12.60	15.00	15.45	16.31	16.69	16.29	16.44

We see from the table that a maximum return of 16.69% is obtained for portfolio F, when we invest in a proportion of 25/32 in portfolio F & balance 7/32 in risk free asset.

Question 4.

(a) Describe the portfolio interpretation of index movements.

(b) What are the different types of fixed income instruments available to an investor?

(c) A mutual fund has a NAV of ₹ 8.50 at the beginning of the year. At the end of the year NAV increases to ₹ 9.10. Meanwhile fund distributes ₹ 0.90 as dividend and ₹ 0.75 as capital gains.

(i) What is the fund's return during the year?

(ii) Had these distributions been re-invested at an average NAV of ₹ 8.75, what is the return for 200 units?

Answer:

(a) It is easy to create a portfolio, which will reliably get the same returns as the index. i.e. if the index goes up by 4%, this portfolio will also go up by 4%. Suppose an index is made of two stocks, one with a market cap of ₹ 1000 crore and another with a market cap of ₹ 3000 crore. Then the index portfolio will assign a weight of 25% to the first and 75% weight to the second. If we form a portfolio of the two stocks, with a weight of 25% on the first and 75% on the second, then the portfolio returns will equal the index returns. So, if anybody want to buy ₹ 1 lakh of this two-stock index, the person would buy ₹ 25,000 of the first and ₹ 75,000 of the second; this portfolio would exactly impersonate the two-stock index. A stock market index is hence just like other price indices in showing what is happening on the overall indices, the wholesale price index is a comparable example. Additionally, the stock market index is attainable as a portfolio.

(b) Fixed income instruments can be categorized by type of payments. Most fixed income instruments pay to the holder a periodic interest payment, commonly known as the coupon, and an amount due at maturity, the redemption value. There exists some instruments that do not make periodic interest payments; the principal amount together with the entire outstanding amount of interest on the instrument is paid as a lump sum amount at maturity. These instruments are also known as 'zero coupon' instruments (Treasury Bills provide an example of such an instrument). These are sold at a discount to the redemption value, the discounted value being determined by the interest rate payable (yield) on the instrument.

Fixed income instruments can also be categorized by type of issuer. The rate of interest offered by the issuer depends on its credit-worthiness. Sovereign securities issued by the Government of any country, with minimal default risk, usually offer lower rates of interest than a non-sovereign entity with some default risk. The 'credit spread' that has to be added by a non-sovereign entity with non-zero probability of default risk, over and above the interest rates offered by a sovereign body, is directly related to the default risk of the issuer - higher the default risk, higher is the spread.

(c)

i) Return for the year (all changes on a per unit basis):

Change in price (₹ 9.10 – ₹ 8.50) = ₹ 0.60	
Dividends received	₹ 0.90
Capital gains distributions	₹ 0.75
Total return	₹ 2.25
Holding period return = ₹ 2.25 / ₹ 8.50 = 26.47%	

ii) When all dividends and capital gains distributions are reinvested into additional units of the fund (₹ 8.75/unit):

Dividends and capital gains per unit: ₹ 0.90 + ₹ 0.75 = ₹ 1.65
Total received from 200 units ₹ 1.65 x 200 = ₹ 330.00
Additional units acquired: ₹ 330/₹ 8.75 = 37.7 units
Value of 237.7 units held at end of year = 237.7 units x ₹ 9.10 = ₹ 2,163
Price paid for 200 units at beginning of year 200 units x ₹ 8.50 = ₹ 1,700

Thus, the holding period return would be = (2163 -1700)/1700 = 27.24%

Question 5.

(a) What are the drawbacks of Mutual Funds?

(b) Ram holds a diversified equity portfolio of ₹ 150 Crores with beta 1.5. Shyam holds his entire money in stock X of same value with a beta of 0.9. Both are planning to hedge their holdings using futures. The following futures are available:
(i) Nifty Index Futures @ 4550 (Each lot = 50 units)
(ii) Futures of stock X @ 1520 (Each lot = 100 units)
How Ram & Shyam would perfectly hedge their portfolios using the above futures? Examine all possible options and find the number of contracts required to hedge, gain or loss overall on hedging if it is expected that markets would fall by 10% from the current level. Today spot Nifty is at 4500 and stock X is quoting at ₹ 1500.

(c) Write short on Insider Trading.

Answer:

(a) Mutual funds have their drawbacks and may not be for everyone:

- No Guarantees: No investment is risk free. If the entire stock market declines in value, the value of mutual fund shares will go down as well, no matter how balanced the portfolio. Investors encounter fewer risks when they invest in mutual funds than when they buy and sell stocks on their own. However, anyone who invests through a mutual fund runs the risk of losing money.
- Fees and commissions: All funds charge administrative fees to cover their day-to-day expenses. Some funds also charge sales commissions or "loads" to compensate brokers, financial consultants, or financial planners. Even if you don't use a broker or other financial adviser, you will pay a sales commission if you buy shares in a Load Fund.
- Taxes: During a typical year, most actively managed mutual funds sell anywhere from 20 to 70 percent of the securities in their portfolios. If your fund makes a profit on its sales, you will pay taxes on the income you receive, even if you reinvest the money you made.
- Management risk: When you invest in a mutual fund, you depend on the fund's manager to make the right decisions regarding the fund's portfolio. If the manager does not perform as well as you had hoped, you might not make as much money on your investment as you expected. Of course, if you invest in

Index Funds, you forego management risk, because these funds do not employ managers.

(b) Ram can hedge his diversified equity holding using a diversified market index viz. Nifty. The basic concept in choosing the hedge instrument is the correlation between the asset and the hedge instrument. If the correlation is high then buying one and selling another would more or less offset all gains in one with losses in another and vice versa. Ram is holding a diversified portfolio and hence he can hedge using diversified market index viz. Nifty Index Futures. If the correlation is highly negative, then having both, i.e. buying the underlying and buying the hedge instrument would serve the hedge purpose. Using beta we can say that the stock X more or less behaves like market. Moreover, stock and stock futures are expected to have same beta, meaning high correlation. Hence Shyam can either use Nifty Index futures or stock futures to hedge his stock holdings.

Ram would sell Nifty futures equivalent to beta times value of his portfolio for perfect hedge i.e. he should sell 1.5 × ₹ 150 Crores = ₹ 225 Crores at 4550 levels i.e. ₹ 225 Crores / (4550 × 50) = 9890 contracts approximately.

With markets falling 10%, portfolio value will fall by 1.5 times of 10% i.e. 15% i.e. 15% × ₹ 150 Crores or a loss of ₹ 22.5 Crores. Nifty futures which are sold worth ₹ 225 Crores would give Ram 10% (as futures are expected to fall by 10%, but Ram having sold futures would gain) i.e. ₹ 22.5 Crores, resulting in nil gain or loss.

Shyam may sell Nifty futures equivalent to beta times value of his portfolio for perfect hedge i.e. he should sell 0.9 × 150 Crores = ₹ 135 Crores at 4550 levels i.e. ₹ 135 Crores / (4550 × 50) = 5934 contracts approximately.

With markets falling 10%, stock value will fall by 0.9 times of 10% i.e. 9% i.e. 9% x ₹ 150 Crores or a loss of ₹ 13.5 Crores. Nifty futures which are sold worth ₹ 135 Crores would give Shyam 10% (as futures are expected to fall by 10%, but Shyam having sold futures would gain) i.e. ₹ 13.5 Crores, resulting in nil gains.

Shyam may also sell stock X futures equivalent to value of his portfolio for perfect hedge i.e. he should sell 150 Crores at 4550 levels i.e. ₹ 150 Crores / (4550 × 50) = 6593 contracts approximately.

With markets falling 10%, stock value will fall by 0.9 times of 10% i.e. 9% × ₹ 150 Crores or a loss of ₹ 13.5 Crores. Stock futures which are sold worth ₹ 150 Crores would give Shyam 9% (as stock futures are also expected to fall by 9%, but Shyam having sold futures would gain) i.e. ₹ 13.5 Crores, resulting in nil gains.

(c) **Insider trading** is the trading of a corporation's stock or other securities (e.g. bonds or stock options) by individuals with potential access to non-public information about the company. In most countries, trading by corporate insiders such as officers, key employees, directors, and large shareholders may be legal, if this trading is done in a way that does not take advantage of non-public information. However, the term is frequently used to refer to a practice in which an insider or a related party trades based on material non-public information obtained during the performance of the insider's duties at the corporation, or otherwise in breach of a fiduciary or other relationship of trust and confidence or where the non-public information was misappropriated from the company.

In the United States and several other jurisdictions, trading conducted by corporate officers, key employees, directors, or significant shareholders (in the U.S., defined as beneficial owners of ten percent or more of the firm's equity securities) must be reported to the regulator or publicly disclosed, usually within a few business days of the trade. Many investors follow the summaries of these insider trades in the hope that mimicking these trades will be profitable. While "legal" insider trading cannot be based on material non-public information, some investors believe corporate insiders nonetheless may have better insights into the health of a corporation (broadly speaking) and that their trades otherwise convey important information (e.g., about the pending retirement of an important officer selling shares, greater commitment to the corporation by officers purchasing shares, etc.)

Illegal insider trading is believed to raise the cost of capital for securities issuers, thus decreasing overall economic growth.

However, it is relatively easy for insiders to capture insider-trading like gains through the use of transactions known as "open market repurchases." Such transactions are legal and generally encouraged by regulators through safeharbours against insider trading liability.

Question 6.

(a) Distinguish between:

(i) Forward contract and Future contract,

(ii) Fixed Price vs. Book-building,

(iii) Primary Market vs. Secondary Market.

(b) Is share buyback is a financing decision or an investment decision?

Answer:

(a)

(i) Forward contract and Future contract

Forward contracts are private bilateral contracts and have well established commercial usage. Future contracts are standardised tradable contracts fixed in terms of size, contract date and all other features. The differences between forward and Futures contracts are given below:

Forward contracts	Future contracts
1. The contract price is not publicly disclosed and hence not transparent.	1. The contract price is transparent.
2. The contract is exposed to default risk by counterparty.	2. The contract has effective safeguards against defaults in the form of clearing corporation guarantees for trades and daily mark to market adjustments to the accounts of trading members based on daily price change.
3. Each contract is unique in terms of size, expiration date and asset type/quality	3. The contracts are standardised in terms of size, expiration date and all other features.

4. The contract is exposed to the problem of liquidity.	4. There is no liquidity problem in the contract.
5. Settlement of the contract is done by delivery of the asset on the expiration date.	5. Settlement of the contract is done on cash basis.

(ii) Fixed Price vs. Book-building

Fixed Price	Book-Building
1. Offer price is known to investor in advance.	1. Only the floor price and price range is known.
2. Demand for the securities known after issue closure.	2. Demand for the securities is visible online as the book is built.
3. Application money credited to issuer Account.	3. Application money is credited to an escrow account.

(iii) Primary Market vs. Secondary Market

In the primary market, securities are offered to public for subscription for the purpose of raising capital or fund. Secondary market is an equity trading avenue in which already existing/pre- issued securities are traded amongst investors. Secondary market could be either auction or dealer market. While stock exchange is the part of an auction market, Over-the-Counter (OTC) is a part of the dealer market.

The SEBI is the regulatory authority established under Section 3 of SEBI Act 1992 to protect the interests of the investors in securities and to promote the development of, and to regulate, the securities market and for matters connected therewith and incidental thereto.

(b) When the shares are undervalued in the market and the firm does not have an alternate business opportunity, then the excess cash is returned to shareholders and thus the management prefers to invest in its own business by buying back their shares. In this case, the management has more faith in its own business. Thus it can be argued as an investment decision even though excess cash with the firm is given to shareholders in a different form.

Again, share buyback reduces the equity portion of the firm, thereby increasing the debt portion in the overall capital structure. Moreover, for further expansion the firm may borrow thereby further increasing the leverage and risk. Thus share repurchase is a kind of financing decision too.

Question 7.

(a) A group of analysis believes that the returns of the portfolios are governed by two vital factors—

1. the rate of economic growth and 2. the sensitivity of stock to the developments in the financial markets. The sensitivities of returns with respect to these two factors are denoted by β_1 and beta β_1 respectively.

Further these analysts believe that returns on three carefully crafted Portfolios A, B and C must be predominantly governed by these two factors alone leaving remaining to some company/ portfolio specific factors. Assume that these three Portfolios A, B, and C are found to have following beta co-efficients:

Portfolio	Expected Return, %	β_1	β_1
A	16.00	1.00	0.80
B	25.00	1.50	1.30
C	32.00	2.00	1.50

Find out the Arbitrage Pricing Theory (APT) equation governing the returns on the portfolios.

(b) Write short note on Rolling Settlement.

(c) State briefly the powers of RBI to control advances made by Banking Companies.

Answer:

(a) Arbitrage Pricing Theory for two factors is

$R_p = \lambda_0 + \lambda_1\beta_1 + \lambda_2\beta_2$

Putting the given values in the APT to solve for three unknown variables:

For Portfolio A: $16 = \lambda_0 + \lambda_1 \times 1.00 + \lambda_2 \times 0.80$ (1)

For Portfolio B: $25 = \lambda_0 + \lambda_1 \times 1.50 + \lambda_2 \times 1.30$ (2)

For Portfolio C: $32 = \lambda_0 + \lambda_1 \times 2.00 + \lambda_2 \times 1.50$ (3)

Subtracting (1) from (2)

$9 = \lambda_1 \times 0.50 + \lambda_2 \times 0.50$ (4)

Subtracting (1) from (3)

$16 = \lambda_1 \times 1.00 + \lambda_2 \times 0.70$ (5)

Multiplying (4) with 2, we get

$18 = \lambda_1 \times 1.00 - \lambda_2 \times 1.00$ (6)

Subtracting (5) from (6), we get

$\lambda_2 = 20/3$

Putting the value in (4)

$9 = 10/3 + \lambda_1 \times 0.50$

gives $\lambda_1 = 34/3$

Putting the values of λ_1 and λ_2 in (3) we get

$32 = \lambda_0 + 2 \times 34/3 + 1.50 \times 20/3$

and $\lambda_0 = -2/3$

APT would then be $R_p = -2/3 + 34/3 \times \beta_1 + 20/3 \times \beta_2$

(b) The rolling settlement was introduced by SEBI on January 10, 2000. Ten stocks were selected initially and SEBI has announced a list of 156 stocks which was included in rolling settlement made by the first fortnight of May 2000. In a rolling settlement of a T+5 period trades are settled 5 days from the date of transaction. If an investor purchases 500 shares of RIL and sells 400 shares on Monday he would be asked to settle the net outstanding of 100 shares on the

following Monday. This means all open positions are squared up on the fifth or sixth day from the trading date.

In the T+2 rolling settlement, trades are settled on the second working day. For example, trades taking place on Monday are settled on Wednesday, etc.

In a Rolling Settlement, trades executed during the day are settled based on the net obligations for the day. Say for example, if the trades pertaining to the rolling settlement are settled on a T+2 day basis where T stands for the trade day. Hence, trades executed on a Monday are typically settled on the following Wednesday (considering 2 working days from the trade day). The funds and securities pay-in and pay-out are carried out on T+2 day.

(c) Where RBI is satisfied that it is necessary or expedient in the public interest or in the interest of depositories or Banking policy so to do, it may determine the policy in relation to advances to be followed by Banking Companies generally or y any Banking Company in particular. The policy so determined is binding upon the Banking Companies concerned.

The RBI may also give directions to Banking Companies, either generally or to any Banking Company or group of Banking Companies in particular, as to –

i. Purposes for which advances may or may not be made.
ii. Margins to be maintained in respect of secured advances.
iii. Maximum amount of advances or other financial accommodation which may be made by a Banking Company to any one Company, Firm, Association of Persons or Individual, having regard to the paid-up capital, reserves and deposits of that Banking Company, and other relevant considerations. [This is called Exposure Norms.]
iv. Maximum amount upto which guarantees may be given by Banking Company on behalf of any one Company, firm, Association of Persons or Individual [with regard to the considerations given above].
v. Rate of interest and other terms and conditions on which advances or other financial accommodation may be made or guarantees may be given.

Question 8.

(a) Shyamal has the following investments :

Stock	Expected return %	Portfolio weight %	Beta
ABC	15.00	40	0.6
BAC	25.40	30	1.4
CAB	20.60	30	1.1

i. What is the expected return and β of Shyamal's portfolio?

ii. Shyamal has now decided to take on some additional risk in order to increase his expected return, by changing his portfolio weights. If Shyamal's new portfolio's expected return is 22.12% and its β is 1.165, what are his new portfolio weights?

(b) Write a short note on Ready Forward Transaction.

(c) What are the provisions in the Insurance Act relating to new place of Business?

Answer:

(a) i. We can calculate the expected return of Shyamal as follows :

E(R) = (0.40)(0.15) + (0.0)(0.254) + (0.30)(0.206) = 0.198 and

β_P = (0.40)(0.60) + (0.30)(1.40) + (0.30)(1.10) = 0.990.

ii. Let X_1 be the new weight on ABC, X_2 be the new weight on BAC and $X_3 = 1 - X_1 - X_2$ be the new weight on CAB. Then, we have:

X_1 (0.15) + X_2 (0.254) + (1 – X_1 – X_2)(0.206) = 0.2212

X_1 (0.0.60) + X_2 (1.40) + (1 – X_1 – X_2)(10.10) = 1.1650

Rearranging these two equations gives:

X_1 (-0.056) + X_2 (0.048) = 0.0152

X_1 (-0.50) + X_2 (0.30) = 0.0650

Solving we get X_1 = 0.20

X_2 = 0.55 and

X_3 = 0.25

Therefore the new weights are 20% on ABC, 55% on BAC and 25% on CAB.

(b) A ready forward transaction, usually known as 'repo'; allows a holder of securities to sell with a commitment to repurchase them at a predetermined price and date. In a reverse repo securities are bought with a commitment to resell them to the original holder. The ingredients of a repo are:

i. There must be a sale or purchase with the commitment to repurchase or resell in future.
ii. The contract must be between two parties.
iii. It must be in respect of some kind of securities, and for the same quantum of securities.
iv. It must be entered into on the same day or contemporaneously and the price of resale or repurchase would be fixed at the stage of first leg itself.

The repo facility is restricted to certain identified players and thus a large number of potential users are denied participation. Such transactions are permitted only in government securities. Other securities such as shares, bonds, commercial paper do not have this facility. The mechanism does not permit players to go short. There is no standard documentation/ master agreement governing a repo transaction. There is no clearing house to take counterparty risk. The securities are not dematerialized.

(c) Place of business includes a branch, a sub-branch, inspectorate, organization office and any other office by whatever name called.

Permission from IRDA:

i. An insurer can open a new place of business in India or change otherwise than within the same city, town or village, the location of an existing place of business situated in India, only after obtaining the prior permission of IRDA.
ii. IRDA may grant permission, subject to such conditions as it may think fir to impose either generally or with reference to any particular case.

Consequences of non-compliance:

i. If IRDA is of the opinion that an insurer has at any time, failed to comply with any of the conditions imposed on him u/s 64VC, it may revoke the permission granted, by making an order in writing.

ii. The insurer shall be provided a reasonable opportunity to show cause against the action proposed to be taken against him.

Question 9.

(a) Bonds (face value ₹ 1,000 each) of an Engineering Company, which carries AA rating, with five years to maturity and 16% coupon rate, payable half-yearly, is being traded at ₹ 1,040. You as a Fund Manager of Trust Fund, a 80% Debt Fund, want to ascertain the intrinsic value and take a decision accordingly. Given $PVIFA_{7\%, 10\ years}$ = 7.024

Your Asset Management Company has laid down the guideline that for AA rated instruments, discount rate to be applied is 364- Day T Bill rate + 4% (T-Bill rate is 10%)
Required –

i. **Intrinsic value of the bond**
ii. **Action on bond**
iii. **Yield to maturity of the bond**

(b) Is the 'term structure' the only factor influencing the price of a bond?

Answer:

(a)

i. **Computation of intrinsic value**

a) Present value of interest cash flow

Particulars	Value
Face value	₹ 1,000
Coupon rate	16%
Interest payable	Half-yearly
Period to maturity	5 years
Half-yearly interest amount [16% x ₹ 1,000 x 6 months/ 12 months]	₹ 80
No. of interest payments for the next five years [5 yrs. X 2 per year]	10
Discount rate	14%
Annuity factor for 10 period at 7% (i.e. half of discount rate)	7.024
Present value of cash flows on account interest flow	₹ 562

b) Present value of maturity proceeds

Particulars	Value
Maturity proceeds + Face Value	₹ 1,000
PV factor at 7% at the end of 10 periods	0.508
Present value of maturity proceeds	₹ 508

c) Intrinsic value

Intrinsic value = PV of Interest flows + PV of Maturity Proceeds
= ₹ 562 + ₹ 508 = ₹ 1,070

ii. Action on bond

Particulars	₹
Value of bond [Expected Price = Intrinsic value]	1,070
Actual market price per bond	1,040

Evaluation [Actual Price vs. Expected Price	Actual price is lower
Inference	Bond is underpriced
Action	BUY

iii. Yield based on Current Market Price

Particulars	Face value	Intrinsic value
Value of bond	₹ 1,000 [V_1]	₹ 1,070 [V_2]
Yield percentage [Annualized]	16% p.a. [R_1]	14% p.a. [R_2]

If the present value is ₹ 1,040 [V_M] i.e. between ₹ 1,000 and ₹ 1,070. Current yield [Y] is between 14% p.a. [R_2] and 16% p.a. [R_1]. Therefore by interpolation, current yield is 14.85% p.a. or 7.43% [Half yearly].

Yield to maturity [Y] $= R_2 + \frac{[V_2 - V_M]}{[V_2 - V_1]} \times [R_1 - R_2]$

= 14% + [(₹ 1,070 – ₹ 1,040) / (₹ 1,070 – ₹ 1,000)] x [16% - 14%]

= 14% + [₹ 30/₹ 70] x 2%

= 14% + 0.43 x 2%

= 14% + 0.86% = 14.86%.

(b) No, there are other factors besides the term structure that influence the pricing of a bond. These include, for instance, tax regulations (differential tax rates for income and capital gains) that affect the relative valuations of bonds with different cash flows. Again, illiquid bonds trade at a premium relative to liquid bonds of the same residual maturity. Some other characteristics also influence bond valuation. For trades in the same bond conducted on the same day, dispersion in prices could be attributed to transaction costs that vary with the size of the trade, an example of which could be an intra-day effect on account of new developments during the day and expectations about the directionality of the term structure risk, higher is the spread.

Question 10.

(a) Describe the term 'Portfolio rebalancing'.

(b) State the applications of Exchange Traded Funds (EFTs).

(c) Good Luck Ltd. has an excess cash of ₹ 16,00,000 which it wants to invest in short-term marketable securities. Expenses relating to investment will be ₹ 40,000.

The securities invested will have an annual yield of 8%.

(i) the company seeks your advice as to the period of investment so as to earn a pre-tax income of 4%,

(ii) also find the minimum period for the company to break-even its investment expenditure. Ignore time value of money.

Answer:

(a) Portfolio rebalancing is the action of bringing a portfolio of investments that has deviated away from one's target asset allocation back into line. Under-weighted securities can be purchased with newly saved money; alternatively, over-weighted securities can be sold to purchase under-weighted securities. The investments in a portfolio will perform according to

the market. As time goes on, a portfolio's current asset allocation can move away from an investor's original target asset allocation. If left un-adjusted, the portfolio could either become too risky, or too conservative. The goal of rebalancing is to move the current asset allocation back in line to the originally planned asset allocation.

Determining an effective rebalancing strategy is a function of the portfolio's assets: their expected returns, their volatility, and the correlation of their returns. For example, a high correlation among the returns of a portfolio's assets means that they tend to move together, which will tend to reduce the need for rebalancing. In addition, the investment time horizon affects the rebalancing strategy. A portfolio with a short time horizon is less likely to need rebalancing because there is less time for the portfolio to drift from the target asset allocation. In addition, such a portfolio is less likely to recover the trading costs of rebalancing.

(b) Applications of Exchange Traded Funds (ETF) are:

- Managing Cash Flows - Investment and fund managers, who see regular inflows and outflows, may use ETFs because of their liquidity and their capability to represent the market.
- Diversifying Exposure - If an investor is not aware about the market mechanism and does not know which particular stock to buy but likes the overall sector, investing in shares tied to an index or basket of stocks, provides diversified exposure and reduces risk.
- Efficient Trading - ETFs provide investors a convenient way to gain market exposure viz. an index that trades like a stock. In comparison to a stock, an investment in an ETF index product provides a diversified exposure to the market
- Shorting or Hedging - Investors who have a negative view on a market segment or specific sector may want to establish a short position to capitalize on that view. ETFs may be sold short against long stock holdings as a hedge against a decline in the market or specific sector.
- Filling Gaps - ETFs tied to a sector or industry may be used to gain exposure to new and important sectors. Such strategies may also be used to reduce an overweight or increase an underweight sector.
- Investing Cash - Investors having idle cash in their portfolios, may want to invest in a product tied to a market benchmark. An ETF, is a temporary investment before deciding which stocks to buy or waiting for the right price.

(c)

(i) Pre-tax income required on investment of ₹ 16,00,000 Let the period of investment be 'P' = ₹ 16,00,000 x 4% = ₹ 64,000.

(16,00,000 x 8/100 x p/12) – 40,000 = 64,000
10,666.67P – 40,000 =6 4,000
10,666.67P = 40,000 + 64,000
So, P = 9.75
To earn 4% pre tax return of ₹ 16,00,000 should be invested in the shorter marketable securities for a period 9.75 months.

(ii) To break-even its investment expenditure:

(16,00,000 × 8 / 100 × p / 12) – 40,000 = 0
10,666.67P - 40,000 = 0
10,666.67P = 40,000
P = 40,000 / 10,666.67
= 3.75

So, the minimum period to break-even its investment expenditure is 3.75 months.

Question 11.

(a) Write Short notes on Green Shoe Option.

(b) State the main features of Venture Capital Financing.

(c) Define a Portfolio Manager as per SEBI Rules & state the functions of a portfolio manager.

Answer:

(a) Green Shoe Option — Green shoe option denotes an option of allocating shares in excess of the shares included in the public issue. It is an option that allows the underwriting of an IPO to sell additional shares if the demand is high. It can be understood as an option that allows the underwriter for a new issue to buy and resell additional shares up to a certain pre-determined quantity. Lo0king to the exceptional interest of investors in terms of over subscription of the issue, certain provisions are made to issue additional shares or bonds to underwriters for distribution. The issuer authorizes for additional shares or bonds. In common parlance, it is retention of over subscription to a certain extent. It is a special feature of EURO issues. In the Indian context, Green shoe option has a limited connotation. In the SEBI guidelines governing public issue, certain appropriate provisions for accepting over-subscription subject to a ceiling, say 15% of the offer made to public is provided. In certain cases, the Green shoe option can be even more than 15%. The Green shoe option facility would bring in price stability of initial public offering.

(b) Venture capital is long term risk capital to finance high technology project which involves risk but at the same time has strong potential for growth.

Some of the features of venture capital financing are:

(i) Venture capital is usually used in the form of equity participation. It may also take the form of convertible debt or long term loan.
(ii) Investment is made only in high risk but growth potential projects.
(iii) Venture capital is available only in high risk but high growth potential projects.
(iv) Venture capital joins the entrepreneurs as a co-promoter in project and shares the risk and rewards of the enterprise.
(v) There is continuous involvement in business after making an investment by the investor.
(vi) Once the venture has reached the full potential the venture capitalist disinvests his holdings either to the promoters or in the market.
(vii) Venture capital; is not just injection of money but also an input needed to set to the firm design its marketing strategy and organize and manage it.
(viii) Investment is usually made in small and medium scale enterprises.

(c) As defined under SEBI (Portfolio Managers) Rules 1993, a portfolio manager is a person who pursuant to a contract or arrangement with a client, advises or directs or undertakes on behalf of a client the management or administration of a portfolio of securities of the funds of the client as the case may be.

Functions of a Portfolio Manager:

(i) Study Economic Environment
(ii) Study Securities Market
(iii) Maintain complete data of top companies

(iv) Keep track of latest policies and guidelines of GOI
(v) Study problems of Industry affecting securities market
(vi) Study attitude of investors
(vii) Study the financial behaviour of major players in the market
(viii) Counsel prospective investor on share market
(ix) Carry out investment in securities to attain maximum profit at lesser risk.

Question 12.

(a) The equity share of Maruti Ltd. is currently selling at ₹ 100. Find the value of 6 months maturity put option, strike price ₹ 101, risk free rate of interest 12% p.a. Over 3 months period, it is expected to go up by 10% or go down by 10%. Over next 3 months period, it is expected to go up by 8% or go down by 6%.

(b) Write short note on —

(i) Inter-Bank Term Money,

(ii) Repo and Reverse Repo Transactions

Answer:

(a) $P = \frac{103 - 90}{110 - 90} = 0.65$

Probability pricing going up by 10% over 3 months time = 0.65
Probability pricing going down by 10% over 3 months time = 0.35

If at the end of 3 months the price is ₹ 110 :

$P = \frac{113.30 - 103.40}{118.80 - 103.40} = 0.6429$

Probability pricing going up by 8% over 3 months time = 0.6429
Probability pricing going down by 6% over 3 months time = 0.3571

If at the end of 3 months the price is ₹ 90 :

$P = \frac{92.70 - 84.60}{97.20 - 84.60} = 0.6429$

Probability pricing going up by 8% over 3 months time = 0.6429
Probability pricing going down by 6% over 3 months time = 0.3571

Four possibilities regarding possible prices:

Possibilities	Possible price	Probability
Up by 10% in first three months and again up by 8% in next 3 months	₹ 100 x 1.10 x 1.08 = ₹ 118.80	0.65 x 0.6429 = 0.4179
Up by 10% in first six months and down by 6% in next 3 months	₹ 100 x 1.10 x 0.94 = ₹ 103.40	0.65 x 0.3571 = 0.2321
Down by 10% in first three months and up by 8% in next 3 months	₹ 100 x 0.90 x 1.08 = ₹ 97.20	0.35 x 0.6429 = 0.2250
Down by 10% in first three months and	₹ 100 x 0.90 x 0.94 = ₹	0.35 x 0.3571 = 0.1250

again down by 6% in next 3 months	84.60	

Computation of value of European Put Option:

Price on maturity	Gain	Probability	Expected gain
118.80	Not exercised	0.4179	0
103.40	Not exercised	0.2321	0
97.20	3.80	0.2250	0.855
84.60	16.40	0.1250	2.05
			2.905

Expected value of put on the date of maturity = ₹ 2.905
Value of option on the date of its writing = 2.905/1.06 = 2.7406

(b)

(i) Inter-Bank Term Money:

Meaning: Inter Bank Term Market for deposits of maturity beyond 14 days are referred to as Inter-Bank Term Money. Term Money is accepted by the institutions at a discounted value, and on the due date payment will be made equal to the face value.

Participants: Financial Institutions by RBI such as IFCI, SIDBI, NABARD, EXIM Bank, DFHI (Discount & Finance House of India), etc.

Tenor of Instrument: 3 months to 6 months.

Rate of interest: Negotiated between the participants

Other feature: Investment in Term Money is unsecured and the limits are fixed by RBI.

Reason for development of term money market:

1. Declining spread in lending operations.
2. Volatility in the cell money market with accompanying risks in running mismatches.
3. Growing desire for fixed interest rate borrowing by corporate.
4. Fuller integration between Forex and money markets.

(ii) Repo and Reverse Repo Transactions:

1) Repo agreement is the sale of a security with a commitment to re-purchase the same security at a specified price on a specified date.

2) Reverse Repo is a purchase of security with a commitment to sell at a pre-determined price and date.

Participants: Buyer in Repo is usually a Bank which requires approved securities in its investment portfolio to meet the Statutory Liquidity Ratio (SLR).

Interest Computation: Interest for the period of Repo is the difference between Sale Price and Purchase Price.

Recognition: Interest should be recognized on a time-proportion basis, both in the books of the buyer and seller.

RBI Guidelines:

i. Accounting for Repo/ Reverse Repo transactions should reflect their legal form, viz. an outright purchase and outright sale.

ii. Thus securities sold under Repo would not be included in the Investment Account of the seller, instead, these would be included by the Buyer in its Investment Account.

iii. The buyer can consider the approved securities acquired under Reverse Repo Transactions for the purpose of SLR during the period of the Repo.

Sale price of securities: Sale of securities should be recognized by the Seller at prevailing market rate comprising of accrued interest to date and the clean price. Repurchase of securities by the seller, would be at the above market rate plus interest for the period of Repo.

Question 13.

(a) An investor owns the following investments :

i. 1 million equity shares of A Ltd. Price ₹ 40, Beta 1.10

ii. 2 million equity shares of B Ltd. Price ₹ 30, Beta 1.20

iii. 3 million equity shares of C Ltd. Price ₹ 10, Beta 1.30

The investor wants to enhance the beta of his portfolio to 1.50. Suggest.

(b) Explain perfect hedge and imperfect hedge.

(c) Write a short note on Mezzanine Finance.

Answer:

(a) To increase the Beta to 1.50, the investor should borrow some money (Assuming that the investor can borrow money at risk free rate of interest) and invest the same in the equity shares of the three companies (the new investment should be in the ratio of amounts of present investment).

To calculate the overall beta, the borrowing is taken as negative investment, its risk is considered as zero (there is no risk in borrowing, there is risk in investing the amount of borrowing in the shares of the three companies) and its beta is taken as zero.

Existing portfolio beta = [(1.10 x 40/130) + (1.20 x 60/130) + 1.30 x 30/130)] = 1.1923
% required increase in risk = [(1.50 – 1.1923)/1.1923] x 100 = 25.81%
Borrowings = 130 m x 0.2581 = 33.55m. This amount should be invested in the shares of the three companies (the new investment should be in the ratio of amounts of present investments)

Calculation of beta in the changed scenario:

Investment	Beta (X)	Amount of investment	Weight (W)	XW
A Ltd.	1.10	40 m + (33.55 x 4/13)m = 50.32m	50.32/130 = 0.3871	0.4258
B Ltd.	1.20	60m + (33.55 x 6/13)m = 75.48m	75.48/130 = 0.5806	0.6967
C Ltd.	1.30	30m + (33.55 x 3/13)m = 37.75m	37.75/130 = 0.2904	0.3775
Borrowings	0	- 33.55 m	- 33.55/130	0
		130m		1.50

(b) Perfect hedge: Perfect hedge is one which completely eliminates the risk. At the time of taking an opposite position in Derivatives Market, Perfect Hedge would mean covering the risk involved in the Cash Market Position completely, i.e. 100%.

Imperfect hedge: When the position in cash market is not completely hedged or not hedged to 100% then such hedge is called Imperfect Hedge.

Example: A wants to buy 1000 shares of ITC in the Cash Marker. To hedge his position, he should sell Index Futures. If the hedge ratio is 1.6 and Index Futures Contract has 100 units then –

i. **Perfect hedge** would mean covering the risk completely by trading in appropriate number of Futures Contract. Therefore, number of contracts to be bought would be equal to 16 contracts. (i.e. Hedge Ratio 1.6 × 1000 Shares of ITC ÷ Index Futures Contract size 100 units)
ii. **Imperfect hedge** would mean either covering the risk to the extent of less than 100% or greater than 100%. If risk is to be hedged to the extent of 75%, then the number of contracts to be entered into would be 75% x Hedge Ratio × No. of shares to be hedged ÷ Index Futures Contract size = 75% × 1.60 × 1000 shares ÷ 100 units per Index Futures Contract = 12 Contracts.

(c) Mezzanine Finance: Mezzanine finance is unsecured debt (or preference shares) offering a high return with a high risk. This type of debt generally offers interest rates two to five percentage points more than that on senior debt and frequently gives the lenders some right to a share in equity values should the firm perform well. Mezzanine finance tends to be used when bank borrowing limits are reached and the firm cannot or will not issue more equity. The finance it provides is cheaper (in terms of required return) than would be available on the equity market and it allows the owners of a business to raise large sums of money without sacrificing control. It is a form of finance which permits the firm to move beyond what is normally considered acceptable debt/equity ratios (gearing or leverage levels).

Question 14.

(a) Arvind Mills has expected dividend growth of 7% and the average market return is 12% per annum. Dividend expected end-year on Arvind is ₹ 2.50. The company stock has β = 2.00 and the risk free rate us 6%. What is the risk-adjusted rate of return on Arvind assuming the CAPM holds? What is the fair price of the equity share if the current market price is ₹ 20? What are the risks attached to the investment strategy?

(b) Is the 'term structure' the only factor influencing the price of a bond? State with reasons.

(c) Describe the term, "Qualified Institutional Buyers (QIB)".

Answer:

(a) Risk adjusted rate of return on Arvind, using CAPM is :

$ER_i = ER_f + \beta_i (ER_m – ER_f)$

$= 6\% + 2.00(12\% - 6\%) = 18\%$

Fair value of Arvind is:

$V = D/(ER_i – g)$

= ₹ 2.50/ (0.18 - 0.07)

= ₹ 22.73

Since the Arvind's equity is underpriced, the investor should buy the equity shares. But the CAPM measure ER_i may not hold for all future periods. If the market price diverges from the fair value, the demand for the Arvind will shot up till there is equilibrium.

(b) No, there are other factors besides the term structure that influence the pricing of a bond. These include, for instance, tax regulations (differential tax rates for income and capital gains) that affect the relative valuations of bonds with different cash flows. Again, illiquid bonds trade at a premium relative to liquid bonds of the same residual maturity. Some other characteristics also influence bond valuation. For trades in the same bond conducted on the same day, dispersion in prices could be attributed to transaction costs that vary with the size of the trade, an example of which could be an intra-day effect on account of new developments during the day and expectations about the directionality of the term structure risk, higher is the spread.

(c) Qualified Institutional Buyers (QIB): Qualified Institutional Buyers are those institutional investors who are generally perceived to possess expertise and the financial muscle to evaluate and invest in the capital market. As per the SEBI guidelines, QIBs shall mean the following:

- Public Financial Institution as defined in section 4A of the Companies Act of 1956,
- Scheduled Commercial Banks,
- Mutual Funds,
- Foreign Institutional Investors registered with SEBI,
- Multilateral and Bilateral Development Financial Institutions,
- Venture Capital Funds registered with SEBI,
- State Industrial Development Corporations,
- Insurance Companies registered with the Insurance Regulatory and Development Authority (IRDA),
- Provident Funds with minimum corpus of ₹ 25 crores,
- Pension Funds with minimum corpus of ₹ 25 crores.

Question 15.

(a) A call option on Fag Bearing, an dividend paying stock, currently trades for ₹ 4. The expiration date of the option is June 25 of current year. The exercise price of the option is ₹ 45.

(i) If this is an American option, on what dates can the option be exercised?

(ii) If this is European option on what dates can the option be exercised?

(iii) Suppose the current price of Fag Bearings is ₹ 35 per share, is this option worthless?

(b) State the risks which are relevant while investing?

(c) List the important distinction between a futures and option contract.

Answer:

(a) (i) If the option is American, it can be exercised on any date upto and including its expiration on June 25.

(ii) If the option is European, it can only be exercised on its expiration date, June 25.

(iii) The option is not worthless. There is a chance that the stock price of Fag Bearings will rise above ₹ 45 sometime before the option's expiration on June 25. In this case, a call option

with a strike price of ₹ 45 would be valuable at expiration. The probability of such an event happening is built into the current price of the option.

(b) The relevant risks are while investing as follows:

(i) Interest rate risk – Interest rates and prices vary inversely
(ii) Purchasing power risk – Inflation tend to reduce the returns generated.
(iii) Business Risk – Change in business cycles & bull/bear market phase affect
(iv) Financial risk – Decision of company to alter the capital structure etc. affect.

(c) The important distinction between a futures contract and an options contract is that the futures contract is an obligation. When an investor purchases or sells a futures contract, the investor has an obligation to accept or deliver, respectively, the underlying commodity on the expiration date. In contrast, the buyer of an option contract is not obligated to accept or deliver the underlying commodity but instead has the right, or choice, to accept delivery (for call holders) or make delivery (for put holders) of the underlying commodity anytime during the life of the contract.

Futures and options modify a portfolio's risk in different ways. Buying or selling a futures contract affects a portfolio's upside risk and downside risk by a similar magnitude. This is commonly referred to as symmetrical impact. On the other hand, the addition of a call or put option to a portfolio does not affect a portfolio's upside risk and downside risk to a similar magnitude. Unlike futures contracts, the impact of options on the risk profile of a portfolio is asymmetrical.

Question 16.

(a) What is the provision for lock-in period of pre-issue share capital of an unlisted company?

(b) A stock is currently trading for ₹ 28. The riskless interest rate is 6 per cent per annum continuously compounded. Estimate the value of European call option with a strike price of ₹ 30 and a time of expiration of 3 months. The standard deviation of the stock's annual return is 0.44. Apply Black-Scholes model.

Answer:

(a) Lock-in of Pre-issue Share Capital of an Unlisted Company

- The entire pre-issue share capital, other than that locked in as promoters contribution, shall be locked-in for a period of one year from the date of commencement of commercial production or the date of allotment in the public issue, whichever is later.
- The above provision is not applicable to the pre-issue share capital held by venture capital funds and foreign venture capital investors.
- The above provision is also not applicable if shares are held for a period of at least one year at the time of filing draft offer document with SEBI and being offered to the public through offer for sale.

(b)

Spot price of the share (S)	₹ 28
Exercise price of the call option (E)	₹ 30
Risk-free interest rate (r)	0.06
Time remaining for expiration (t) = 3 months = 3/12 (year)	0.25

Volatility of the stock (σ) 0.44

The value of European call option can be obtained by using Black-scholes option pricing model as follows:

$$C = S\,N(d1) - E_e^{-rt}\,N(d2)$$

Computation of call option essentially requires calculation of three values, viz., d_1, d_2 and present value of the exercise price (E_e^{-rt}).

$$d_1 = \frac{\ln S/E + (r + \sigma^2/2)t}{\sigma\sqrt{t}}$$

Substituting values from the information given above we get —

$$d_1 = \frac{\ln(28/30) + (0.06 + (0.44)^2/2)0.25}{0.44\sqrt{0.25}}$$

$$d_1 = \frac{\ln(0.9333) + (0.06 + 0.968)0.25}{0.44(0.5)}$$

ln (0.9333) = – 0.0691

$$d_1 = \frac{-0.0691 + 0.0392}{0.22} = -0.1359$$

$$d_2 = d_1 - \sigma\sqrt{t}$$

$$= -0.1359 - (0.44)\sqrt{0.25}$$

d_2 = – 0.3559

and $$E_e^{-rt} = 30e^{-(0.06\times0.25)} = 30e^{-0.015}$$

= 30 (0.9802) = 29.406

The equation of call option looks like C = 28 N (– 0.1359) – 29.406 N (– 0.3559)
The next step is to look up the values of a cumulative standardised normal probability distribution at (– 0.1359) and (– 0.3559)

N (– 0.1359) = N (– 0.13) – 0.59 [N (– 0.13) – N (– 0.14)]
= 0.4483 – 0.59 [0.4483 – 0.4443]
= 0.4483 – 0.00236 = 0.4459

N (– 0.3559) = N (– 0.35) – 0.59 [N (– 0.35) – N (– 0.36)]
= 0.3632 – 0.59 [0.3632 – 0.3594]
= 0.3632 – 0.00224 = 0.3610

C = 28 (0.4459) – 29.406 (0.3610)
= 12.4852 – 10.6156 = ₹ 1.87

Thus, the value of European call option is ₹ 1.87

Question 17.

(a) Mr. X on 1.7.2011, during the initial offer of some Mutual Fund invested in 10,000 units having face value of ₹ 10 for each unit. On 31.3.2012 the dividend operated by the MF was 10% and

Mr. X found that his annualized yield was 153.33%. On 31.12.2013, 20% dividend was given. On 31.3.2014 Mr. X redeemed all his balance of 11,296.11 units when his annualized yield was 73.52%. What are the NAVs as on 31.3.2012, 31.12.2013 and 31.3.2014?

(b) What is a load fund? How are Net Asset Values, public offer price and redemption price calculated?

(c) Explain how a trader who has bought an option can exit the trade.

Answer:

(a)

Date of Investment	Action	NAV	Units held	Return
1.7.2011	Original Purchase	₹ 10	10,000	—
31.3.2012	Dividend 10%	?	?	153.33%
31.12.2013	Dividend 20%	?	?	—
31.3.2014	Full Redemption of 11296.11 units	?	0	73.52%

Working Notes:

No information on dividend re-investment is given. We assume that dividends are reinvested, because the number of units at redemption has increased, indicating dividends have been re-invested.

As on 31.3.2012, we have Annualized yield of 153.33%. Therefore we have as follows:

$$\text{Annualized Yield} = \frac{\text{Closing Value - Opening NAV}}{\text{Original NAV}} \times \frac{12}{n} \times 100$$

For 9 months period from the beginning:

$$\text{Annualized Yield} = \frac{(\text{Closing Value - 10})}{10} \times \frac{12}{9} \times 100 = 153.33$$

Solving we get, Closing Value = NAV as on 31.3.2012 = ₹ 21.50 (dividend of 10%)

Now, we have 10% declaration of dividend on 31.3.2012. For 10,000 units @ 10% of FV of ₹ 10, ₹ 1 would be paid i.e. ₹ 10,000. This converted at ₹ 21.50 would allot 465.11 units to Mr. X. His total units would then be 10465.11 units.

Further payment of 20% dividend on 31.12.2013 means ₹ 20,930.22 (10465.11 × ₹ 2) would be used to issue further units to Mr. X in such a way that total units would be equal to 1,1296.11 units (the final balance); i.e. 11,296.11-10,465.11 = 831 units allotment on 31.12.2013. If 831 units were issued for ₹ 20930.22, the NAV as on 31.12.2013 should have been = ₹ 20930.22/831 = ₹ 25.1868.

Now we are given Annualized Yield as on 31.3.2014 = 73.52%. Using the above formula we find the closing NAV as on 31.3.2014.

$$\text{Annualized Yield} = 73.52 = \frac{\text{Closing NAV - 25.1868}}{25.1868} \times \frac{12}{3} \times 100$$

i.e. closing NAV as on 31.3.2014 should be = ₹ 29.8161.

(b) Load Fund: A Load Fund is one that charges from the investor a percentage of NAV for entry or exit. This means that, each time one buys or sells units in the fund, a charge will be payable. This charge is used by the mutual fund for marketing and distribution expenses.

Net Asset Value (NAV):
NAV is calculated as follows;
NAV = (Fair Market Value of scheme's investments + Receivables + Accrued Income + Other assets – Accrued expenses – Payable – Other liabilities) / Number of units outstanding

Calculation of Public Offer Price (POP):
Public Offer Price = Net Asset Value / 1 - Front – End load

Calculation of Redemption price:
Redemption = Net Asset Value /1- Back-end Load.

(c) Liquidating Option Positions:
When a trader buys an option, he can exit the trade in two ways:

- Sell the option and collect whatever the premium is – If the premium is more than what is initially cost plus commission, there's a profit. If the premium is less, it's a loss, but keeping some money is better than losing all the money.
- Exercise the option, covering it into a future position-The broker must be notified before options expire. Not all options have an automatic exercise provision. Therefore, an in-the-money option that expires without any action taken, loses the buyer money (a seller somewhere will be very happy). An option can be exercised if the trader feels the market will continue to move favourable to the trader's position or an option can be exercised if the trading in the option is not very liquid. The trader, in this case feels he can exercise and then liquidate the futures more economically than selling his option position.
- Ride the option into the dust- Let it expire worthless, especially if getting out will cost more than the premium is worth.

When a trader sells an option, he or she can exit the trade by buying the option back. If the premium is higher, the option seller has lost money. The option seller cannot exercise his or her option.

Question 18.

(a) The rates of return on the security of Company P and market portfolio for 10 periods are given below:

Period	Return of Security P (%)	Return on Market Portfolio (%)
1	20	22
2	22	20
3	25	18
4	21	16
5	18	20
6	-5	8
7	17	-6
8	19	5
9	-7	6
10	20	11

(i) What is the beta of Security P?
(ii) What is the characteristic line for Security P?

(b) Write a brief note on Book Building and Reverse Book Building.

(c) "Ratings measure performance and recommend investment." Comment.

Answer:

(a) (i)

Period	R_x	R_m	$(R_x - \bar{R}_x)$	$(R_m - \bar{R}_m)$	$(R_x - \bar{R}_x)(R_m - \bar{R}_m)$	$(R_m - \bar{R}_m)^2$
1	20	22	5	10	50	100
2	22	20	7	8	56	64
3	25	18	10	6	60	36
4	21	16	6	4	24	16
5	18	20	3	8	24	64
6	-5	8	-20	-4	80	16
7	17	-6	2	-18	-36	324
8	19	5	4	-7	-28	49
9	-7	6	-22	-6	132	36
10	20	11	5	-1	-5	1
	150 = $\sum R_x$	120 = $\sum R_m$			357 = $\sum (R_x - \bar{R}_x)(R_m - \bar{R}_m)$	706 = $\sum (R_m - \bar{R}_m)^2$

$$\bar{R}_x = \frac{\sum R_x}{n} = \frac{150}{10} = 15$$

$$\bar{R}_m = \frac{\sum R_m}{n} = \frac{120}{10} = 12$$

$$\sigma_m^2 = \frac{\sum (R_m - \bar{R}_m)^2}{n-1} = \frac{706}{9} = 78.44$$

$$Cov_{xm} = \frac{\sum (R_x - \bar{R}_x)(R_m - \bar{R}_m)}{n-1} = \frac{357}{9} 39.67$$

$$\beta_x = \frac{Cov_{xm}}{\sigma_m^2} = \frac{39.67}{78.44} = 0.506$$

(ii) Y = 15, x = 12

$$Y = \alpha + \beta x$$

$$15 = \alpha + (0.506 \times 12)$$

$$\alpha = 15 - (0.506 \times 12) = 8.928\%$$

Characteristic Line for Security P = $\alpha + (\beta \times R_m)$

Where R_m = Expected return on market index

Then, Characteristic Line for Security $P = 8.928 + 0.506 R_m$

(b) Book Building :

i. It is a method of Initial Public Offer (IPO) to raise capital, whereby the Company offers its shares for subscription at an indicative price range.
ii. The investors are to subscribe at a price within the range offered by the Company.
iii. The price at which shares will finally be allotted will be based on criterion under law.

Reverse Book Building :
i. It is method of buy-back of securities. It is an efficient price discovery process adopted when the Company aims to buy the shares from the public and other shareholders.
ii. This is generally done when the Company wishes to delist itself from the trading exchanges.

(c) Credit rating do not measure the following –

i. Investment recommendation – Credit Rating does not make any recommendation on whether to invest or not.
ii. Investment decision – They do not take into account the aspects that influence an investment decision.
iii. Issue Price – Credit Rating does not evaluate the reasonableness of the issue price, possibilities for capital gains or liquidity in the secondary market.
iv. Risk or Repayment – Ratings do not take into account the risk of prepayment by issuer, or interest or exchange risks.

Statutory Compliance – Credit Rating does not imply that there is absolute compliance of statutory requirements in relation to Audit, Taxation, etc. by the issuing Company.

Section II – Corporate Laws and Corporate Governance

Question 19.
(a) Choose the most appropriate one from the stated options and write it down:
(i) Under Competition Act, 2002, penalty for offences in relation to furnishing of information is —
A. ₹ 5 lakh;
B. ₹ 10 lakh;
C. ₹ 25 lakh;
D. ₹ 50 lakh.

(ii) In the context of Corporate Governance, Narayana Murthy Committee was formed in the year:
A. 2002;
B. 2003;
C. 2004;
D. 1999.

(iii) Buy back of equity shares in a financial year shall not exceed:
A. 25% of authorized capital;
B. 25% of called-up capital;
C. 25% of paid up capital;
D. 25% of subscribed capital.

(iv) Which of the following items requires special resolution in a general meeting under the Companies Act, 1956?
- **A. Issue of shares at discount;**
- **B. Adoption of Statutory Report;**
- **C. Appointment of Managing/ Whole-time Director;**
- **D. Reduction of Share Capital.**

(v) The Board may appoint additional directors only if it is authorized by:
- **A. Articles of Association;**
- **B. Memorandum of Association;**
- **C. Company Law Board;**
- **D. Shareholders in the AGM.**

(b) Fill in the blanks:

(i) According to section 63 of the Companies Act, 1956, where a prospectus contains an untrue statement, every person authorizing its issue shall be punishable with fine upto ₹ _______________.

(ii) The minutes of the Board Meeting should be entered in the minutes book within ________ days from the conclusion of the meeting.

(iii) As per Section 205(1A) of the Companies Act, 1956 the amount of interim dividend shall have to be deposited from the date of declaration of such dividend in a separate bank account within ________ days.

(iv) Section 224(3) of the Companies Act, 1956 provides that where at an Annual General Meeting no auditor (s) are appointed or re-appointed, the auditor can be appointed by the ____________.

(v) Shareholders are empowered to transfer their shares by section _____ of the Companies Act, 1956.

Answer to Question 19(a):

(i) B. ₹ 10 lakh
(ii) B. 2003
(iii) C. 25% of paid up capital
(iv) D. Reduction of Share Capital
(v) A. Articles of Association

Answer to Question 19(b):

(i) 50,000
(ii) 30
(iii) Five
(iv) Central Government
(v) 82

Question 20.

(a) State the distinction between Memorandum & Articles of association.

(b) State the Objectives of the Right to Information Act, 2004.

(c) Can a limited liability company become a partner of a partnership firm?

Answer:

(a) The followings are the differences between the Memorandum of Association and Articles of Association.

Memorandum of Association	Articles of Association
1. It is the charter of the company and indicates various things like name, objects, capital, liability etc.	1. They are the regulations for the internal management of the company.
2. It defines and confines the areas of operations of the company.	2. Articles are the rule for carrying the objects of the company as set out in the Memorandum.
3. As it is a charter of the company, it is the supreme document.	3. They are subordinate to the Memorandum. In case of any conflict between the two, Memorandum shall prevail.
4. Every company must have a Memorandum	4. A limited company by shares may accept Table A as its Articles with or without modifications.
5. Alterations to Memorandum must be according to the laid down in the Act. In some cases approval of National Company Law Tribunal is required.	5. Alterations in Articles are comparatively easy as they can be altered by special resolutions keeping in mind certain limitations.
6. Any act done by the company by going beyond the Memorandum is ultra virus and cannot be ratified even by whole of shareholders.	6. Any act of the company, which is ultra virus the Memorandum can be ratified by the shareholders.

(b) The Objectives of the Right to Information Act, 2004:

(i) give effect to the Fundamental Right to Information, which will contribute to strengthening democracy, improving governance, increasing public participation, promoting transparency and accountability and reducing corruption

(ii) establish voluntary and mandatory mechanisms or procedures to give effect to right to information in a manner which enables persons to obtain access to records of public authorities in a swift, effective, inexpensive and reasonable manner.

(iii) promote transparency, accountability and effective governance of all public authorities by, including but not limited to, empowering and educating all persons to:

- understand their rights in terms of this Act in order to exercise their rights in relation to public authorities;
- understand the functions and operation of public authorities; and effectively participating in decision making by public authorities that affects their rights.

(c) A company being a juristic person is capable of contracting in its own name. Since partnership, as per section 4 of the Partnership Act, 1932, is a contractual relationship between persons, there should be no objection to a partnership being created with or by a company. The only doubt that may arise is that the liability of a partner being unlimited, can a limited liability company become a partner? To this the simple reply shall be that it is the liability of the members of a limited company which is limited and not that of the company itself. Thus, there should be no objection to a limited company becoming a partner of a partnership firm. However, the Department of Company Affairs, in this regard has opined that the objects clause must contain a facilitating provision in this regard. Thus, in the opinion of the Department of Company Affairs, a company may become a partner only if the Memorandum of Association thereof specifically allows it.

Question 21.

(a) Describe the importance of a remuneration committee in the context of Corporate Governance. State the responsibilities normally assigned to such committee?

(b) Define 'Competent Authority' in respect of the Right to Information Act.

(c) A company issues 20 partly-paid equity shares and registered them in the name of the minor describing him as minor. The father of the minor signed the application on the minor's behalf. After some time, the company went into liquidation. The company filed a suit against father of the minor to recover the remaining amount on the shares. Whether the company will succeed? Advice.

Answer:

(a) The importance of remuneration committee:

It is now a universally accepted proposition of corporate governance practice that Boards of Directors of companies appoint appropriately composed remuneration committees to work out executive remuneration on their behalf.

The combined code of the UK says that the remuneration committee will be responsible for working out remuneration package 'to attract, retain and motivate executives of the quality required". The committee should decide where to position their company relative to other companies and take account of comparable remuneration and relative performance. With regard to the composition of the committee, as overwhelming majority of guidelines suggest that it be composed exclusively of independent non-executive directors. The committee would make it well considered recommendations to the board for final decision.

The responsibilities of remuneration committee: The following responsibilities are normally assigned to a remuneration committee, which should have a written term of reference —

(i) Remuneration packages and service contracts of the CEO and others senior executives,

(ii) Remuneration packages for non-executive directors,

(iii) Remuneration policies and practice of the company,
(iv) Any company share and other incentive schemes,
(v) Company superannuation and pension arrangements.

(b) As per the Right to Information Act, "Competent Authority" means—

(i) the Speaker in the case of the House of the People or the Legislative Assembly of a State or a Union territory having such Assembly and the Chairman in the case of the Council of States or Legislative Council of a State;
(ii) the Chief Justice of India in the case of the Supreme Court;
(iii) the Chief Justice of the High Court in the case of a High Court;
(iv) the President or the Governor, as the case may be, in the case of other authorities established or constituted by or under the Constitution;
(v) the administrator appointed under article 239 of the Constitution.

(c) If an application is made by a father as guardian of his minor child and the company registers the shares in the name of the minor child, both the minor and the guardian cannot be placed on the list of contributions at the time of winding – up. The father who signed the application on the minor's behalf could not be treated as having contracted for shares, as such he could not be placed on the list of contributors when the company goes in liquidation.

Question 22.

(a) A private company which is not a subsidiary of any public company, does not furnish the details of its investments in Indian companies as required by note (1) Schedule VI to the Companies Act, 1956. The contention of the company is that Section 372 of the Act is not applicable in it's entirely to all the companies, i.e. public and private. Is the contention of the private company in accordance with law?

(b) Examine with reference to the provisions of the Companies Act, 1956 whether winding up can be ordered by the Court in case the Board of directors of the company decides to discontinue one of its businesses. Would your answer differ in case the company suspends the entire business? Explain.

(c) Before the incorporation of the company, the promoters of the company entered into an agreement with Mr. Thomas to buy an immovable property on behalf of the company. After incorporation, the company refused to buy the said property. Advise Mr. Thomas whether he has any remedy under the provisions of the Companies Act, 1956?

Answer:

(a) Section 211 of the Companies Act, 1956 states that balance sheet of a company shall, subject to the provision of this section, be in the form set out in Part I of Schedule VI or as near thereto or as per central government directions in a particular case.

No exemption is given for private company as such. The exemption from compliance with any of the requirements in Schedule VI can be granted to any company by the central government when it is in the public interest. In the given case the contention of the private company is not in accordance with law.

(b) If a company does not commence its business within 1 year from its incorporation or suspends its business for one year, the Court may order the company to be wounded up. [Section 433(c) of the Companies Act, 1956].

Where a company having many businesses discontinues one of them, it cannot be said to have suspended its business. For invoking section 433 (c), it must be shown that the entire business of the company has been suspended.

In the present case, the company decided to discontinue one of its businesses. Since the discontinuance of business relates only to a part of the business of the company, it cannot be a ground for winding up by the court.

In case the company suspends the entire business and such suspension continues for one year, the conditions prescribed under section 433 (c) will be satisfied and the court shall have the jurisdiction to order winding up of the company. However, the court may examine whether it will be possible for the company to resume its business. The court shall have the discretion to order the winding up since section 433 does not confer on any person a right to seek a winding up order.

(c) Mr. Thomas has no remedy against the company, since a pre-incorporation contract is not binding on the company, as the company was not in existence when such contract was entered into, unless the company, after incorporation, adopts the pre-incorporation contract in accordance with the provisions of Sec. 15 and 19 of Specific Relief Act, 1963.

Mr. Thomas may hold the promoters liable for any loss incurred by him, since if a pre-incorporation contract is not adopted by the company after incorporation, the promoters are personally liable.

Question 23.

(a) The scheme of amalgamation was approved by overwhelming majority of the members of the merging companies, viz., ABC Ltd. and XYZ Ltd., at meeting called as per directions of the Court. When the scheme of amalgamation was awaiting sanction of the Court, the exchange ratio was questioned by a small group of dissenting shareholders of ABC Ltd. The exchange ratio was fixed by a firm of reputed Chartered Accountants. Examine with reference to court rulings, whether the dissenting shareholders will succeed.

(b) What are the transactions to which Section 372A does not apply?

(c) A Ltd. & B Ltd. both dealing in Fertilisers have entered into an agreement to jointly promote the sale of their products. A complaint has been received by the Competition Commission of India (CCI) stating that the agreement between the two is anti-competitive and against the interest of other in the trade. Examine what are factors the CCI will take into account to determine whether the agreement in question will have any appreciable adverse effect on competition in the market.

Answer:

(a) The exchange ratio was fixed by a reputed firm of Chartered Accountants and the scheme of amalgamation was approved by overwhelming majority of members of both the merging companies i.e. ABC Ltd. and XYZ Ltd.

Courts leave the aspect of share valuation to Expert Valuers and shareholders. Unless the person, who challenges the valuation, satisfies the court that the valuation is grossly unfair, the court will not disturb the scheme. **[In Re Piramal Spinning & Weaving Mills Ltd. 50 CC 514].**

In view of the above Court rulings, the dissenting shareholders are not likely to succeed unless they are able to satisfy the Court that the valuation is grossly unfair, particularly when the exchange ratio is fixed by a reputed firm of chartered accountants. Even in case of representations by Central Government, unless that Government establishes that the exchange ratio was unfair or inequitable and not in public interest, the court will refuse to interfere.

(b) Transactions excluded: Section 372A is not applicable to –

1. Loan/Guarantee/ Security/ Investment made/ given by -
   i. A Banking Company, or
   ii. An Insurance Company, or
   iii. A Housing Finance Company, or
   iv. A Company established with the object of financing industrial enterprises or providing infrastructural facilities,
   v. A Company whose principal business is the acquisition of shares, stock, debentures or other securities
   vi. A Private Company, unless it is a subsidiary of a Public Company.
2. Investment made in shares allotted u/s 81(1)(a), i.e. Right Shares
3. Loan made by a Holding Company to its wholly-owned subsidiary.
4. Guarantee given or security provided by a Holding Company, in respect of loan made to its wholly owned subsidiary, or
5. Acquisition by a Holding Company by way of subscription, purchase or otherwise, the securities of its wholly-owned subsidiary.

(c) For determining whether a Combination would have the effect of or is likely to have an appreciable adverse effect on competition in the relevant market, the CCI shall have due regard to all or any of the following factors –

i. Actual and potential level of competition through imports in the market.
ii. Extent of barriers to entry into the market.
iii. Level of combination in the market.
iv. Degree of countervailing power in the market.
v. Likelihood that the combination would result in the parties to the combination being able to significantly and sustainably increase prices or profit margins.
vi. Extent of effective competition likely to sustain in market.
vii. Extent to which substitute are available or are likely to be available in the market.
viii. Market share, in the relevant market, of the persons or enterprise in a combination individually and as a combination.
ix. Likelihood that the combination would result in the removal of a vigorous and effective competitors (s) in the market.
x. Nature and extent of vertical integration in the market.
xi. Possibility of a failing business.
xii. Nature and extent of innovation.
xiii. Relative advantage, by way of the contribution to the economic development, by any combination having or likely to have appreciable adverse effect on competition.
xiv. Whether the benefits of the combination outweigh the adverse impact of the combination, if any.

Question 24.

(a) A company is not authorized by its memorandum of association to run a canteen but it is obliged to do so under Section 46 of the Factories Act, 1948. Under the facts and circumstances, should the company undergo the formalities of changing its objective clause?

(b) X, Y and Z hold jointly 100 shares in a company. They want the order of names changed in the share certificates as Y, X and Z and make an application for change and lodge the original share certificate. The company directed them to execute a proper instrument of transfer to effect the change. Is the company justified?

(c) Whether grant of shares by Company to its whole time Director free of cost or at a discount to market price under a duly sanctioned ESOP scheme of the company amount to increase in the remuneration of the whole time Director?

Answer:

(a) If the running of the canteen is incidental to the main object of the company, there is no necessity to amend the object clause, but if the purpose is to earn profit, then the objects clause should contain enabling provision to carry on such business by suitably amending the memorandum in accordance with the law.

(b) As per the Companies Act, it is possible for two or more than two persons to hold shares jointly in a company. In that case all of them are not the individual members of the company. Instead, they are said to hold the shares jointly.

In case of joint shareholdings one or more of them may require the company to alter or rearrange the serial order of their names in the register of members of the company. In this process, there will be need for effecting consequential changes in the share certificates issued to them. Since no transfer of any interest in the shares takes place on such transposition, the question of insisting on filling transfer deed with the company may not arise.

A request signed by all the holders (in the existing order and also proposed order) is sufficient which the Board of directors can consider and effect transposition of names.

So, in the given case, the stand of the company is not justified.

(c) The grant of shares under Employees Stock Options Scheme does not entail any cash outgo from the Company. Hence, such shares cannot be deemed to have increased the remuneration of a whole time director. Since the company does not incur an expenditure in allotting the shares it will not come within Explanation (b) of Section 198 of the Companies Act, 1956, and will not be a perquisite or remuneration.

Question 25.

(a) Examine the extent to which the legal representatives of a deceased director against whom misfeasance proceedings were initiated by the liquidator of the company, under the Companies Act, 1956, can be held liable.

(b) Write Short notes on the following:

(i) Shelf prospectus;

(ii) Secured Debenture.

Answer:

(a) Under section 543, the court has the power to initiate misfeasance proceedings against any delinquent director or any other officer of the company.

The Supreme Court has held that misfeasance proceedings initiated under section 543 against a director of a company in winding up can be continued on his death against his legal heirs for the purpose of determining and declaring the loss or damage caused to the company. The amount declared to be due in the misfeasance proceedings shall be realized from the estate of the deceased in the hands of his legal representatives [Official Liquidator v. Parthasarathi Sinha (1983) 53 Comp Cas 163 (SC)]. However, such liability shall not extend to any sum beyond the value of the estate of the deceased in their hands.

(b) (i) Shelf prospectus:

'Shelf prospectus' means a prospectus issued by any financial institution or bank for one or more issues of the securities or class or securities specified in that prospectus.

Any public financial institution, public sector bank or scheduled bank whose main object is financing, shall file a self prospectus. 'Financing' means making loans to or subscribing in the capital of a private industrial enterprise engaged in infrastructural financing or, such other company as the Central Government may notify in this behalf.

A company filing a self prospectus with the Registrar shall not be required to file prospectus afresh at every stage of offer of securities by it within a period of validity of such shelf prospectus. It shall be required to file an information memorandum on all material facts relating to new charges created, changes in the financial position as have occurred between the first offer of securities, previous offer of securities and the succeeding offer of securities within the time prescribed by the Central Government, prior to making of a second or subsequent offer of securities under the shelf prospectus.

An information memorandum shall be issued to the public along with shelf prospectus filed at the stage of the first offer of securities and such prospectus shall be valid for a period of one year from the date of opening of the first issue of securities under that prospectus.

(ii) Secured Debenture:

When any particular or specified property of the company is offered as security to the debenture holders and when the company can deal with it only subject to the prior right of the debenture holders, fixed charge is said to have been created. On the other hand, when the debenture holders have a charge on the undertaking of the company i.e., on the whole of the property of the company, both present and future, and when it can deal with the property in the ordinary course of business until the charge crystallises i.e., when the company goes into liquidation or when a receiver is appointed, the charge is said to be a floating charge. When the floating charge crystallises, the debenture holders have a right to be paid out of the sale proceeds of the assets subject to the right of the preferential creditor but prior to making any payment to unsecured creditors.

Question 26.

(a) Can a company hold two AGMs (Annual General Meetings) on the same day? State with reasons.

(b) Which persons cannot be appointed as Cost Auditors?

(c) Can a general meeting properly convened be cancelled or its holding deferred? Explain.

Answer:

(a) There is no provision in the Companies Act prohibiting the holding of two AGMs (Annual General Meetings) on the same day. If the Articles do not contain any provision to the contrary, AGM for the current year as also for the previous year can be held on the same day. There should, however, be separate notices for each meeting and they should be held at different timings.

(b) A person cannot be appointed as a cost auditor of a company if he attracts any of this disqualifications listed in sub-sections (3) and (4) of section 226 of the Act. Thus, the following cannot be appointed as cost auditors :

(i) A body corporate;

(ii) An officer or employee of the company;

(iii) A person who is a partner or who is in the employment of an officer or employee of the company;

(iv) A person who is indebted to the company for an amount exceeding ₹ 1,000 or who has given any guarantee or provided any security in connection with the indebtedness of any third person to the company for an amount exceeding ₹ 1,000;

(v) A person holding any vote carrying security of the company;

(vi) A person who is disqualified to be the cost auditor of its subsidiary or holding company or of another subsidiary of its holding company;

A person appointed under section 224 as an auditor of a company [Section 233B(5)(b)].

(c) The Act is silent on these issues. However, the Secretarial Standard issued by the Institute of Company Secretaries of India contains a view on these. The Standard states that, if, for reasons beyond the control of the Board, a meeting cannot be held on the date originally fixed, the Board may defer the meeting. The meeting should be reconvened after giving not less than seven days fresh notice published in a newspaper having a wide circulation within such State/ States of India where more than one thousand members reside. This sufficiently implies that a meeting duly convened cannot be cancelled but can be deferred for overriding reasons. It may be preferable that the Board fixes a fresh date not far from the date originally fixed and issues to the members and others eligible to receive notice, a fresh notice for holding the meeting. This notice shall also accompany information that the originally fixed meeting had to be deferred for reason(s) beyond the control of the Board. A listed company should also inform SEBI about the deferment and the fresh date.

Question 27.

(c) The directors of a company held more than 75% shares in the company. The company was carrying on business of construction of roads. The directors acquired certain contracts in their own name in breach of trust and made profits for themselves. In the annual general meeting, they passed a resolution that the company had no interest in the contract. The minority shareholders filed a case against directors asking them to account for the profits. Discuss.

(d) State the role of stakeholders in corporate governance.

(c) The paid –up share capital of ABC Ltd. is ₹ 5 lakhs consisting of 50,000 equity shares of ₹ 10 each fully paid-up. Certain members of the company holding the following shares requisitioned an extraordinary general meeting on 1.2.2014:

A - 2,250 shares
B - 2,000 shares including 500 bonus shares
C - 1,000 shares including 500 right shares

The directors have failed to call the meeting on the pretext that the articles have not permitted the same. What is the course of action open to the aforesaid members?

Answer:

(a) The majority rule governs the internal management of the company. As such if any wrong is done to the company, the proper plaintiff to institute a suit is the company itself and the court would not interfere at the instance of the individual shareholders [Foss v. Harbottle (1843) 2 Hare 461]. However, if the majority misuses its powers to defraud or oppress the minority, an action can be brought by an individual member.

Three directors holding 75% of the share capital of the company used their positions as directors and obtained a contract in their own names. As it amounted to breach of duty towards the company, they called a general meeting in which a resolution was passed to the effect that the company had no interest in the contract. It was held that directors utilized the contract belonging to the company for their personal gain and it amounted to a fraud on the minority. The company could claim profits realized by the directors [Cook Deeks (1916) 1 AC 554].

The facts of the given case are identical to the facts specified in the above case and so it can be said that the minority shareholders will succeed.

(b) The corporate governance framework should recognize the rights of stakeholders as established by law and encourage active co-operation between corporations and stakeholders in creating wealth, jobs and the sustainability of financially sound enterprises as follows:

i. The corporate governance framework should assure that the rights of stakeholders that are protected by law are respected.
ii. Where stakeholder interests are protected by law, stakeholders should have the opportunity to obtain effective redress for violation of their rights.
iii. The corporate governance framework should permit performance-enhancing mechanisms for stakeholder participation.
iv. Where stakeholders participate in the corporate governance process, they should have access to relevant information.

(c) Section 169 of the Companies Act, 1956 provides that the Board of directors of a company must call an extraordinary general meeting if required to do so by members holding, on the date of deposit of the requisition, not less than one tenth of such of the paid up share capital as carries the right to vote in regard to the matter proposed for consideration.

Here the total share capital held by the requisitionists amounts to ₹ 52,500 and exceeds one tenth of the total of ₹ 5 lakhs as on the date of requisition on 1.2.2014. Bonus and rights shares are at par with ordinary shares and are to be included in arriving at the eligible value. Therefore, the requisition is a valid one.

When the requisition is deposited at the registered office of the company, the director should within 21 days, move to call a meeting to be held within 45 days from the date of lodgement of the requisition. If the directors fail to do so, the requisitionists representing either a majority in value of the paid-up share capital held by all of them or not less than one tenth of the paid up share capital carrying voting power in regard to the matter proposed, whichever is less, may themselves proceed to call the meeting within 3 months from the date of the requisition, and claim the necessary expenses from the company. It should be noted that the Articles of Association cannot take away from members this right of requisitioning.

Question 28.

(a) A public limited company forfeited 90 equity shares and re-issued the same which resulted in earning a surplus of ₹ 5,000. The company did not file return of allotment with the Registrar of Companies in respect of re-issued shares. Explain whether the company has contravened any provision of the Companies Act, 1956 by non-filing of the return.

(b) Examine with reference to the relevant provisions to the Competition Act, 2002 whether a person purchasing goods not for personal use, but for resale can be considered as a 'consumer'.

(c) State the differences between a Public company and a Private company.

Answer:

(a) No, the public company has not contravened any provisions of the Companies Act, 1956. No return of allotment of the shares re-issued to be filed with the Registrar. Such re-issue in fact cannot be called allotment. According to the provisions of section 75(5) of the Act, forfeited shares can be further re-issued at a premium without any legal formalities. The issue of forfeited shares is treated as a sale and not as allotment of shares.

(b) The given problem relates to section 2 (f) of the Competition Act, 2002.
As per section 2 (f) 'consumer' means any person who –

i. Buys any goods for a consideration which has been paid or promised or partly paid and partly promised, or under any system of deferred payment and includes any user of such goods other than the person who buys such goods for consideration paid or promised or partly paid or partly promised, or under any system of deferred payment when such use is made with the approval of such person, whether such purchase of goods is for resale or for any commercial purpose or for personal use ;

ii. Hires or avails of any services for a consideration which has been paid or promised or partly paid and partly promised, or under any system of deferred payment and includes any beneficiary of such services other than the person who hires or avails of the services for consideration paid or promised, or partly paid and partly promised, or under any system of deferred payment, when such services are availed of with the approval of the first-mentioned person whether such hiring or availing of services is for any commercial purpose or for personal use.

Thus, a person who purchases goods for resale or for any commercial purpose (and not for personal use) is also a 'consumer'.

(c) The differences between a Public company and a Private company are as follows:

1. **Minimum number:** The minimum number of persons required to form a public company is 7. It is 2 in case of private company.
2. **Maximum number**: There is no restriction on maximum number of members in a public company, whereas the maximum number cannot exceed 50 in a private company.
3. **Number of directors:** A public company must have at least 3 directors whereas a private company must have at least 2 directors (Sec. 252).
4. **Restriction on appointment of directors:** In the case of a public company, the directors must file with the Registrar a consent to act as directors or sign undertaking for their qualification shares. The directors of a private company need not do so (Sec. 266).
5. **Restriction on invitation to subscribe for shares:** A public company invites the general public to subscribe for the shares in, or the debentures of, the company. A private company by its Articles prohibits any such invitation to the public.
6. **Transferability of shares/debentures**: In a public company, the shares and debentures are freely transferable (Sec. 82). In a private company the right to transfer shares and debentures is restricted by the Articles.
7. **Special privileges**: A private company enjoys some special privileges. A public company enjoys no such privileges.
8. **Quorum**: If the Articles of a company do not provide for a larger quorum, 5 members personally present in the case of a public company are quorum for a meeting of the company. It is 2 in the case of a private company (Sec. 174).
9. **Managerial remuneration**: Total managerial remuneration in a public company cannot exceed 11 per cent of the net profits (Sec. 198). No such restriction applies to a private company.

Question 29.

(a) What are the additional requirements stipulated in section 292 A of the Companies Act, 1956, which are silent in clause 49 of the Listing Agreement?

(b) "A good Corporate Governance should have certain basic principles", Enumerate them.

(c) What is the statutory limitation to the borrowing power of the directors of a company?

Answer:

(a) Additional requirements stipulated as per Section 292 A: The following additional requirements are stipulated as per Section 292 A of the Companies Act, 1956 which are silent in Clause 49 of the Listing Agreement:

(i) The audit committee constituted shall act in accordance with terms of reference to be specified in writing by the Board.

(ii) The recommendations of the audit committee on any matter relating to financial management including the audit report, shall be binding on the board.

(iii) If the Board does not accept the recommendation of the audit committee, it shall record the reasons therefore and communicate such reasons to the shareholders.

(b) Principles of corporate governance: A good corporate governance should include the following principles:

(i) Review of Operation—There should be review of operations of the company at a regular interval. It may include comparison of monthly/quarterly production and sales targets with actual, cash flow analysis, etc.

(ii) Compliance with Statutory and Regulatory Requirements— The Board should ensure compliance with various statutory and regulatory requirements. It may include clearance of statutory dues, compliance with FERA regulations, following suitable accounting policies and standards, etc.

(iii) Appointment of various committees—There should be appointment of various committee to look after different matters. There can be following committees—(a) Audit Committee, (b) Grievance Committees, (c) Remuneration Committee and (d) Investment Committee, etc.

1. Audit committee—It should meet periodically to review the effectiveness of the system of internal controls and reports to shareholders.
2. Grievance committee—It should look after the grievances from customers, suppliers, creditors in respect of price, quality, discount, etc. It should also look after the problems of executives/employees of the organization.
3. Remuneration committee—Its role should be to fix remuneration of non-executive directors. It may be fixed in relation to company performance.
4. Investment committee—It should look after the investment decisions. It should be in accordance with the guidelines approved by the Board. Shareholders expect that investment decisions are judicious and do not incur any losses, which affect shareholder's interest.

(iv) Contribution of employees' Union—Employees or worker's union should also contribute significantly to good corporate behaviour by promoting work culture. In this case, inclusion of employees or worker's representative on the board may be thought of.

(v) Contribution to Community Development—A good corporate governance should help community development programme by active participation. It should adopt measures for pollution control, and follow fair and ethical business practices. Good corporate governance calls for accountability for all concerned. The Shareholders, directors, auditors, executives, advisers and other staff who are associated with the working of the corporate should combine their efforts to improve the system and ensure good management practices.

It can, thus, be stated that a joint stock company is of the shareholders, and has to be controlled by the shareholders and run by Boards and managers for the shareholders. The process of corporate governance has to be consistent with this, and nothing else.

(c) Every trading company, unless prohibited by its Memorandum or Articles, has implied power to borrow money for the purposes of its business. It has also the power to give security for the loan by creating a mortgage or charge on its property. The ground for the rule is that "the exigencies of commerce render such a power necessary." A non-trading company has no implied power to borrow. It requires express power to do so. This power, in case of such a company, must be taken in the Memorandum or the Articles.

When a company has express or implied power to borrow, it can borrow subject to the limits set by the Memorandum or the Articles.

A public company having a share capital cannot exercise borrowing power unless certificate of commencement of business is obtained by it [Sec. 149 (1) of the Companies Act].

If the borrowing is in excess merely of the powers of the directors but not of the company, it can be ratified and rendered valid by the company. In such a case the loan binds both the lender and the company as if it had been made with the company's authority in the first place. If the company refuses to ratify the directors' act, the normal principles of agency apply. A third party who deals with an agent knowing that the agent is exceeding his authority has no right of action against the principal.

Question 30.

(a) Can there be more than one or two main objects in the case of a new company to be formed, and if so, whether the Registrar could ask the subscribers to show him some material evidence to satisfy his as to whether the company on incorporation would be carrying on the objects stated as the main objects?

(b) Write a short note on lifting the corporate veil.

(c) What are the conditions to be satisfied to issue shares at discount?

Answer:

(a) The meaning of the words "to be pursued by the company on incorporation" is pertinent. These words mean that the objects stated as the main objects are to be pursued by the company immediately after incorporation or within a reasonable time thereafter. The Registrar of Companies will be entitled to satisfy himself while registering a company that the objects intended to be the main objects clause were really the objects intended to be pursued by the company either immediately or within a reasonable time after its incorporation. For this purpose he might ask for certain documents, information or explanations, for example, correspondence or industrial licenses, or permissions or agreements with collaborators, vendors etc. This is important also because the Registrar appears to have no power after the incorporation of a company to question as to why the company has not pursued any particular objects stated to be one of the main objects.

(b) **Lifting the corporate veil**: From the juristic point of view, a company is a legal person distinct from its members [Salomon v. Salomon & Co. Ltd., (1897) A. C. 22]. This principle may be referred to as 'the veil of incorporation'. The Courts in general consider themselves bound by this principle. The effect of this principle is that there is a frictional veil (and not a wall) between the company and its members. That is, the company has a corporate personality which is distinct from its members.

The human ingenuity, however, started using this veil of corporate personality blatantly as a cloak for fraud or improper conduct. This it became necessary for the Courts to break through or lift the corporate veil or crack the shell of corporate personality and look at the persons behind the company who are the real beneficiaries of the corporate fiction.

(c) **Conditions for issue of shares at a discount:** A company may issue shares at a discount if the following conditions are fulfilled, namely;

1. Shares to be of a class already issued — the shares to be issued at a discount must be of a class already issued.
2. Resolution of company and sanction by Company Law Board — the issue of shares at a discount must have been authorised by a resolution passed by the company in general meeting and sanctioned by the Company Law Board.
3. Maximum rate of discount — the resolution must specify the maximum rate of discount at which the shares are to be issued. If the maximum rate of discount specified in the

resolution exceeds 10 per cent, the Company Law Board shall not sanction it unless it is of opinion that a higher percentage of discount may be allowed in the special circumstances of the case.

4. Company working for a year — the company must have been working for at least a year from the date it was entitled to commence business before it can issue shares at a discount.
5. Shares to be issued within two months of sanction of Company Law Board — the shares to be issued at a discount must be issued within two months after the date on which the issue is sanctioned by the Company Law Board.

These conditions are intended to ensure that the discount is not unreasonable. Thus under condition (a) the shares must be similar to those already issued so that the market value can be ascertained, and under condition (d) the company must have been trading for some time to give the market value a chance to settle down. Moreover, once the Company Law Board has approved the discount, the issue must under condition (e) be made very soon for, if the market value falls further the issue will not be successful.