

Group - III

Paper 11: Capital Market Analysis and Corporate Laws

Section – I: Capital Market Analysis

1. (a) Fill up the blanks with the appropriate answers:

- (i) The fringe market is ----- money market, deemed to include everything that is outside the scope of the money market.
- (ii) The Depositories Act was passed in the year -----.
- (iii) An aggressive portfolio consists of Bond and Stock in the ratio of -----.
- (iv) The external factor that affects the industry as a whole is termed as -----risk, in capital market analysis.
- (v) The entire pre-issue share capital, other than locked in as promoter's contribution, shall be locked-in for a period of -----.
- (vi) Every recognized stock exchange is required to furnish to -----with a copy of the Annual report with prescribed particulars as per the requirements of the Securities Contracts (Regulation) Act, 1956. E-mail, Communication.
- (vii) The Cyber Law of India is contained in-----Act-----.
- (viii) In the context of Capital Adequacy Ratio (CAR) of banks, Tier II Capital-----can / cannot be more than Tier-I Capital.
- (ix) -----is regarded as the father of modern portfolio theory.
- (x) For liquid securities, the VaR margins are based on the -----of the security.
- (xi) The trading members can participate in the Exchange initiated auctions by entering orders as a -----.

(b) Indicate the correct answer and give your working/ reasons briefly.

- (i) The stock of BBA Ltd. (Face Value ₹ 10.00) quotes ₹ 520.00 on NSE and the 3 months future price quotes at ₹ 532. The borrowing rate is given as 15% p.a. What would be the theoretical price of 3 month BBA future if the expected annual dividend yield is 25% p.a. payable before expiry?
 - (A) ₹ 540.00
 - (B) ₹ 539.00
 - (C) ₹ 537.00
 - (D) Insufficient data
- (ii) Ms. Saraogi can earn a return of 20% by investing in equity shares on her own. Now she is considering a recently announced Equity based mutual fund scheme in which initial expenses and annual recurring expenses are 5 per cent and 1.5 per cent respectively. How much should the mutual fund earn to provide Ms. Saraogi, a return of 20%?
 - (A) 18.43%
 - (B) 22.55%
 - (C) 21.50%
 - (D) Insufficient data.

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- (iii) The Beta co-efficient of equity stock of Subham Ltd. is 1.2. The risk free rate of return is 14% and the required rate of return is 20% on the market portfolio. If the dividend expected during the coming year is ₹ 2.50 and the growth rate of dividend and earnings is 8%, at what price the stock of Subham Ltd. can be sold (based on CAPM)?
- (A) ₹ 18.94
(B) ₹ 15.60
(C) ₹ 12.50
(D) ₹ 16.67
- (iv) Mr. Sandeep purchased 100 shares of ITC INDIA Ltd. Futures @ ₹ 2500 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 ITC INDIA Ltd. was closed at ₹ 2000. How much will be the gain / loss on the shares?
- (A) ₹ 25,000
(B) ₹ 50,000
(C) ₹ 35,000
(D) None of the above.
- (v) Mr. Nandi is willing to purchase a 5 years ₹ 1000 par value PSU Bond having a coupon rate of 9%. His required rate of return is 10%. How much Mr. Nandi should pay to purchase the Bond if it matures at par?
[Given PVIFA (10%, 5 Years) = 3.791 and PVIF (10%, 5 Years) = 0.621]
- (A) ₹ 965.49
(B) ₹ 962.19
(C) ₹ 850.47
(D) ₹ 805.30
- (vi) Sulekha Ltd. has both European call and put options traded on NSE. Both options have an expiration date 6 months and exercise price of ₹ 30. The call and put are currently selling for ₹ 10 and ₹ 4 respectively. If the risk-free rate of interest is 6% p.a., what would be the stock price of Sulekha Ltd? [Given PVIF (6%, 0.5 Years) = 0.9709]
- (A) ₹ 35.13
(B) ₹ 40.87
(C) ₹ 45.50
(D) Incomparable information
- (vii) Stock S has an expected return of 18% and a standard deviation of 30%. Stock P has an expected return of 12% and a standard deviation of 36%. The correlation between the two stocks is 0.25. If a portfolio is formed, where anyone puts 40% of the money in stock S and 60% in P, what is the standard deviation for the portfolio?
- (A) 27.206%
(B) 25.416%
(C) 23.312%
(D) 28.913%

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- (viii) Zevy Voltas Ltd. has a beta of 0.865. If the expected market return is 17.50 and the risk free rate of return is 8.50%, what is the appropriate required rate of return of the co.?
(Use the CAPM)
- (A) 16.825%
 - (B) 16.582%
 - (C) 16.285%
 - (D) 16.258%
- (ix) Asian Paints Ltd. issued right shares that increased the market value of the shares of the company by ₹ 150 crore. The existing Base year average (old base year Avg.) is ₹ 850 crore. If the aggregate market value of all the shares included in the index before the right issue is ₹ 1,700 crore, the new Base year average will be;
- (A) ₹ 782.50 crore
 - (B) ₹ 925.00 crore
 - (C) ₹ 911.17 crore
 - (D) None of the above.
- (x) Mr. S Khan is considering the purchase of a stock that has a beta coefficient of 0.75. He estimates the expected market return to be 0.12 while T-Bills yield 0.08. What rate should he expect and require on the stock according to the SML (Security Market Line)
- (A) 0.11
 - (B) 0.12
 - (C) 0.13
 - (D) 0.14

Answer: 1 (a)

- (i) A dis-organized
- (ii) 1996
- (iii) 10:90
- (iv) Systematic
- (v) One year
- (vi) SEBI
- (vii) Information Technology Act, 2000
- (viii) Can not
- (ix) Hary Markowiz
- (x) Volatility
- (xi) Solicitor

Answer: 1 (b).

(i) (C) ₹ 537.00

Theoretical price of 3 month BBA Ltd. Future is;

Spot + Cost of Carry – Dividend

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$$= 520 + 520 \times 0.15 \times 0.25 - 2.50 \text{ (25\% of FV ₹ 10)}$$

$$= 520 + 19.50 - 2.50$$

$$= ₹ 537.$$

(ii) (B) 22.55%

$$R_2 = [1/1 - \text{Initial Expenses (\%)} R_1] + \text{Recurring Expenses (\%)}$$

Where R_2 = Mutual Fund earnings

R_1 = Personal earnings of Ms. Rathore

$$= [(1 / 1 - 0.05) \times 20\%] + 1.5\%$$

$$= 0.2150 + 0.015$$

$$= 22.55\%.$$

(iii) (A) ₹ 18.94

Expected rate of return: (By applying CAPM)

$$R_e = R_f + \beta_i (R_m - R_f)$$

$$= 14\% + 1.2 (20\% - 14\%)$$

$$= 14\% + 7.2\%$$

$$= 21.2\%$$

Price of Stock; (with the use of dividend growth model formulae)

$$R_e = D_1 / P_0 + g$$

$$0.212 = 2.50 / P_0 + 0.08$$

$$\text{So, } P_0 = 2.50 / (0.212 - 0.08)$$

$$= 2.50 / 0.132$$

$$= ₹ 18.94.$$

(iv) (B) ₹ 50,000

Loss to Mr. Sandeep $(2500 - 2000) \times 100 = ₹ 50,000.$

(v) (B) ₹ 962.19

If the bond matures at par; $B_n = ₹ 1000$

Each bond's Interest = ₹ 90 $(1000 \times .09)$, $K_d = 10\%$

$$B_0 = ₹ 90 \times 3.791 + 1000 \times .621 = ₹ 962.19.$$

(Vi) (A) ₹ 35.13

According to call- put parity;

$$C_0 = P_0 + S_0 - PV(E)$$

Where $C = 10$, $P = 4$ and $PV(E) = PV$ of E ;

$$C_0 = P_0 + S_0 - PV(E)$$

Where $C = 10$, $P = 4$ and $PV(E) = PV$ of Exercise Price

Putting the values, we get;

$$10 = 4 + S_0 - 30 \times 0.9709,$$

$$S_0 = 10 - 4 + 29.127$$

$$= 35.127 \text{ or } ₹ 35.13.$$

(Vii) (A) 27.206%

$$S_p^2 = 0.4^2 \times 0.3^2 + 0.6^2 \times 0.36^2 + 2 \times 0.4 \times 0.6 \times 0.3 \times 0.36 \times 0.25$$

$$= 0.0740$$

$$S_p = \sqrt{0.0740} = 27.206\%.$$

(viii) (C) 16.285%

Required rate of return;

$$= 8.50\% + (17.5\% - 8.5\%) \times 0.865$$

$$= 8.50\% + 9.0\% \times 0.865$$

$$= 8.50\% + 7.785\%$$

$$= 16.285\%.$$

(ix) (B) ₹ 925.00 Crore

New Base year Average;

Old Base year Average \times (New Market Value / Old Market Value)

$$= 850 \times (1700 + 150) / 1700$$

$$= 15,72,500 / 1700$$

$$= ₹ 925 \text{ crore.}$$

(x) (A) 0.11

$$E(R) = 0.08 + 0.75(0.12 - 0.08) \\ = 0.11.$$

2. Write Short notes on the following:

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. Looking 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. **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.

c. **Stock invest:**

In case of over subscription of issue, there have been inordinate delay in refund of excess application money and large amounts of investors' funds remain locked up in companies for long periods affecting the liquidity of the investing public. To overcome the said problem a new instrument called 'stock invest' is introduced.

The stock invest is a non-negotiable bank instrument issued by the bank in different denominations. The investor who has a savings or current account with the bank will

obtain the stock invest in required denominations and will have to enclose it with share / debenture application. On the face of the instrument provides for space for the investor to indicate the name of the issues, the number and amount of shares / debentures applied for and the signature of the investor. The stock invests issued by the bank will be signed by it and the date of issue will also be indicated on the instruments. Simultaneously, with the issue of stock invest; the bank will mark a lien for the amounts of stock invest issued in the deposit account of the investor. On full or partial allotment of shares to the investor, the Registrar to issue will fill the columns of stock invest indicating the entitlement for allotment of shares / debentures, in terms of number, amount and application number and send it for clearing.

The investors' bank account would get debited only after the shares / debentures allotted. In respect of unsuccessful applicants, the funds continue to remain in their account and earn interest if the account is a savings or a term deposit. The excess application money of partly successful applicants also, will remain in their accounts.

There will be lien on the funds for a maximum of four months period. The stock invest is intended to be utilized only by the account holders and the stock invest should not be handed over to any third party for use. In case the cancelled / partly utilized stock invest is not received by the issuing branch on expiry of four months from the date of issue against an indemnity bond from the investor.

d. Certificate of deposit:

Certificates of Deposit (CDs) is a negotiable money market instrument issued in dematerialized form or as a Usance Promissory Note, for funds deposited at a bank or other eligible financial institution for a specified time period. Guidelines for issue of CDs are presently governed by various directives issued by the Reserve Bank of India, as amended from time to time. CDs can be issued by;

- scheduled commercial banks excluding Regional Rural Banks (RRBs) and Local Area Banks (LABs); and
- select all-India Financial Institutions that have been permitted by RBI to raise short-term resources within the umbrella limit fixed by RBI. Banks have the freedom to issue CDs depending on their requirements. An FI may issue CDs within the overall umbrella limit fixed by RBI, i.e., issue of CD together with other instruments viz., term money, term deposits, commercial papers and inter-corporate deposits should not exceed 100 per cent of its net owned funds, as per the latest audited balance sheet.

e. Fringe Market:

The fringe market is a disorganized money market, deemed to include everything that is outside the scope of the money market (i.e., the institutional money market). The fringe market includes activities like the Inter-Corporate Deposit (ICD) market, small scale trade financing, financing of investments in the stock market, discounting and lending against IOUs or promissory notes, etc. The ICDs market is the most visible feature of the fringe market. As its name indicates it essentially involves short-term borrowing and lending of funds amongst the corporations. Generally the fringe market exist, wherever the main borrowers and lenders of the funds are based, i.e., at the location of the industrial,

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corporate and trading establishments. The interest rates at which the funds can be lent in the fringe market are generally higher than those operating in the money market. The risk level of the fringe market is higher too - the people who borrow at exorbitant rates are the ones who are most likely to default.

f. Elliot Wave Principle:

One theory that attempts to develop a rationale for a long-term pattern in the stock price movements is the Elliott Wave Principle (EWP), established in the 1930s by R.N. Elliott and later popularized by Hamilton Bolton. The EWP states that major moves take place in five successive steps resembling tidal waves. In a major bull market, the first move is upward, the second downward, the third upward, the fourth downward and the fifth and final phase upward. The waves have a reverse flow in a bear market.

3.

(a) The following are the data on Five mutual funds-

| Fund | Return | Standard Deviation | Beta |
|--------|--------|--------------------|------|
| Laheri | 15 | 7 | 1.25 |
| Mitra | 18 | 10 | 0.75 |
| Vredhi | 14 | 5 | 1.40 |
| Varsha | 12 | 6 | 0.98 |
| Raksha | 16 | 9 | 1.50 |

What is the reward – to – variability ratio and the ranking if the risk – free rate is 6%?

(b) Sandeep Ltd will be receiving ₹ 120 Lakhs by way of interim dividend from its subsidiary in 4 months. At the end of the year it will be receiving ₹ 220 Lakhs by way of final dividend and interest on loans to subsidiaries. What is the present value of such interest and dividends if the weighted average cost of capital for Sandeep Ltd is 13.50% and the Company discounts continuous compounding for income by way of dividends and interests?

Answer: 3. (a)

Formula for computing Reward – to – Volatility / Volatility Ratio is –

- Treynor's Ratio = $[(R_p - R_f) \div \beta_p]$
- Sharpe's Measure = $[(R_p - R_f) \div \sigma_p]$

Ranking based on Sharpe's Ratio and Treynor Method:

| Portfolio | Under Sharpe's Method $[(R_p - R_f) \div \sigma_p]$ | Ranking | Under Treynor Method $[(R_p - R_f) \div \beta_p]$ | Ranking |
|-----------|--|---------|--|---------|
| Laheri | $[(15 - 6) \div 7] = 1.29$ | 2 | $[(15 - 6) \div 1.25] = 7.20$ | 2 |
| Mitra | $[(18 - 6) \div 10] = 1.20$ | 4 | $[(18 - 6) \div 0.75] = 16.00$ | 1 |
| Vredhi | $[(14 - 6) \div 5] = 1.60$ | 1 | $[(14 - 6) \div 1.40] = 5.71$ | 5 |
| Varsha | $[(12 - 6) \div 6] = 1.00$ | 5 | $[(12 - 6) \div 0.98] = 6.12$ | 4 |
| Raksha | $[(16 - 6) \div 8] = 1.25$ | 3 | $[(16 - 6) \div 1.50] = 6.67$ | 3 |

Answer: 3. (b)

Present Value under continuous compounding approach

(Computation of Factors)

Present Value (P) = $A \times e^{-rt}$ or $A \div e^{rt}$

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Where, A = Future Cash Flow
 e = Exponential Value (i.e. 2.71828)
 r = Rate of Interest = 13.50% or 0.135
 t = No. of Years i.e. Period /Year = 4 Months / 12 Months i.e. 1/3 and
 = 12 Months / 12 Months i.e. 1

2. Present Value of Cash Flows

| Time | Nature of Cash Flow | Cash Flow (₹) | PV Factor at 13.50% | Discounted Cash Flow (₹) |
|--------------|-----------------------------|---------------|---|--------------------------|
| (1) | (2) | (3) | (4) = $[1 \div e^{0.135 \times (1)/12}]$ | (5) = (3)X(4) |
| 4 | Interim Dividend | 1,20,00,000 | 0.9560 $[1 \div e^{0.135 \times 4/12}]$ | ₹1,14,72,000 |
| 12 | Final Dividend and Interest | 2,20,00,000 | 0.8737 $[1 \div e^{0.135 \times 12/12}]$ | ₹1,92,21,400 |
| Total | | | | ₹3,06,93400 |

4. Ascertain the Time Weighted Rate of Return and annual Compounded Rupee Weighted Rate of return from the following information given relating to Subham Fund.
- Fund value at the beginning is ₹ 6 Crores.
 - 3 months hence, the value had increased by 15% of the opening value.
 - 3 months hence, the value had increase by 12% of the value three months before. At that time there was an outflow of ₹ 1 Crore by way of dividends.
 - 3 months hence, the value had decreased by 10% of the value three months before.
 - During the last three months of the year, value of the fund had increased by ₹ 1 Crores.

Answer:

1. Computation of Closing Value (as at the yearend)

| Time | Opening Value | Additions / Appreciation | Distributions / Depreciation | Closing Value |
|--------------|---------------|-------------------------------|---------------------------------|----------------|
| Months 1-3 | 6.0000 | $[6.00 \times 15\%] = 0.9000$ | - | 6.9000 |
| Months 4-6 | 6.9000 | $[6.90 \times 12\%] = 0.8280$ | 1.0000 | 6.7280 |
| Months 7-9 | 6.7280 | - | $[6.7280 \times 10\%] = 0.6728$ | 6.0552 |
| Months 10-12 | 6.0552 | 1.0000 | - | 552.552 |

2. Time Weighted Rate Return:

a. Computation of Closing Value ignoring cash flows in between

| Particulars | | | ₹ Crores |
|-------------|---|--|---------------|
| Add: | Opening Investment | | 6.0000 |
| | Value Appreciation for first three months | $[\text{₹ } 6 \text{ Crores} \times 15\%]$ | 0.9000 |
| Add: | Value at the end of 3 rd month | | 6.9000 |

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| | | | |
|-------------------------------------|---|-------------------------|--------------------|
| | Appreciation for Months 4 to 6 | [₹ 6.9 Crores × 12%] | 0.8280 |
| Less: | Value at the end of 6 th months Depreciation for Months 7 to 9 | [₹ 7.728 Crores × 10%] | 7.7280 (0.7728) |
| Add: | Value at the end of 9 th month Appreciation for Months 10 to 12 | | 6.9552 1.0000 |
| Value at the end of the year | | | 7.9552 |

b. Computation of Return

Return in Value = Value at the end of the year – Value at the beginning of the year
= ₹ 7.9552 Crores - ₹ 6 Crores = ₹ 1.9552 Crores

Return in % (Annual Compounding)

= Return in Value ÷ Value at the beginning of the year

= ₹ 1.9552 Crores ÷ ₹ 6 Crores = 32.59% (Annual Compounding)

Return in % (Quarterly Compounding) =

Product of each quarter's Closing value (before dividend) ÷ Opening Value for the Quarter) – 1

$$= \frac{6.9000}{6.0000} \times \frac{7.7280}{6.0000} \times \frac{6.0552}{6.7280} \times \frac{7.0552}{6.0552} - 1 = 1.3506 - 1 = 0.3506 \text{ or } 35.06\%$$

3. Rupee Weighted Rate Return:

(Measured from the Investor's Perspective)

It is the rate at which the Net Present Value of Cash Flow will be equal to zero i.e. Internal Rate of Return presuming that the investor will receive equivalent to the closing value.

a. Computation of Return in %

Return (Value) = Dividend + Capital Appreciation

= ₹ 1 Crore + [Closing Value of ₹ 7.0552 Crores **Less** Opening Value of ₹ 6 Crores]

= ₹ 1 Crore + ₹ 1.0552 Crores = ₹ 2.0552 Crores

Return in % = Return in Value ÷ Opening Value = ₹ 2.0552 Crores ÷ ₹ 6 Crores = **34.253**

% Average Quarterly Discount Rate = 34.253 ÷ 4 = 8.56%

b. Computation of Net Present Value

Note: Since cash flows occur on a quarterly basis, Present Value factor is based on quarterly discount rate. The First Discount Rate Chosen 9 % (average quarterly discount rate rounded off to nearest %).

| Time Period (Quarters) | Nature | Cash Flow | Discount Factor @9% | Discounted Cash Flow | Discount Factor @ 8% | Discounted Cash Flow |
|------------------------|--------------------------|-----------|---------------------|----------------------|----------------------|----------------------|
| 0 | Investment (Opening NAV) | (6.000) | 1.000 | (6.000) | 1.000 | (6.000) |
| 1 | - | - | 0.917 | - | 0.926 | - |
| 2 | Dividend Distribution | 1.000 | 0.842 | 0.842 | 0.857 | 0.857 |
| 3 | - | - | 0.772 | - | 0.794 | - |
| 4 | Closing NAV | 7.0552 | 0.708 | 4.993 | 0.735 | 5.186 |
| | | | | (0.165) | | 0.043 |

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Since the NPV using Rate 1 is negative, Rate 2 should be lower than Rate 1 to get a positive NPV.

c. Computation of Internal Rate of Return

Computation of Rupee Weighted Rate of Return (RWRR) = Internal Rate of Return:
Internal Rate of Return [IRR]

$$= R_2 \left[\frac{V_2 - V_M}{V_2 - V_1} \times [R_1 - R_2] \right]$$

$$= 8\% + \frac{0.043 - V_M}{0.043 - 0.165} \times [1\% - 8\%]$$

$$= 8\% + [0.043/0.208] \times 1\% = 8.207 \%$$

= 8.207 % per quarter

Therefore, RWRR per quarter is 8.207 % or 32.828 % p.a.

d. Rupee Weighted Rate of Return

Risk Weighted Rate of Return = Internal Rate of Return = 32.828 %

5.

(a) Mr. Khan established the following spread on the Alpha Corporation's stock:

- (i) Purchased one 3-month call option with a premium of ₹20 and an exercise price of ₹550.
- (ii) Purchased one 3-month put option with a premium of ₹10 and an exercise price of ₹450.

Alpha Corporation's stock is currently selling at ₹500. Determine profit or loss, if the price of Alpha Corporation's:

- (i) remains at ₹500 after 3 months.
- (ii) falls at ₹350 after 3 months.
- (iii) rises to ₹600.

Assume the size option is 100 shares of Alpha Corporation.

(b) A Ltd., and B Ltd., has the following risk and return estimates

| R _A | R _B | σ _A | σ _B | (Correlation coefficient) = r _{AB} |
|----------------|----------------|----------------|----------------|---|
| 20% | 22% | 18% | 15% | -1.50 |

Calculate the proportion of investment in A Ltd., and B Ltd., to minimize the risk of Portfolio.

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Answer: 5. (a)

| 1. Pay off for Call Option | | | | |
|----------------------------|-----------------------|---------------|--------------------------------|---|
| Spot Price (1) | Exercise Price (2) | Action (3) | Gross Value (4) = (2) - (1) | Net Pay-Off (5) = (4) — Premium of ₹30 |
| 350 | 550 | Lapse | Nil | (20) |
| 500 | 550 | Lapse | Nil | (20) |
| 600 | 550 | Exercise | 50 | 30 |

| 2. Pay off for Put Option | | | | |
|---------------------------|-----------------------|---------------|--------------------------------|---|
| Spot Price (1) | Exercise Price (2) | Action (3) | Gross Value (4) = (2) - (1) | Net Pay-Off (5) = (4) — Premium of ₹10 |
| 350 | 450 | Exercise | 100 | 90 |
| 500 | 450 | Lapse | Nil | (10) |
| 600 | 450 | Lapse | Nil | (10) |

| 3. Net Payoff Table | | | | | |
|---------------------|-------------------------------------|------------------------------------|--------------|--------------------------|--------------------------------------|
| Spot Price (1) | Net Payoff in Call Option (2) | Net Payoff in Put Option (3) | Total (4) | No. of Options (5) | Net Profit of Spread (6) = 4X5 |
| 350 | (20) | 90 | 70 | 100 | 7,000 |
| 500 | (20) | (10) | (30) | 100 | (3,000) |
| 600 | 30 | (10) | 20 | 100 | 2,000 |

Answer: 5. (b)

Basic Values of Factors for Determination of Portfolio Risk

| | | |
|--|-------------|------------|
| Standard Deviation of Security A | σ_A | 18% |
| Standard Deviation of Security B | σ_B | 15% |
| Correlation co-efficient of Securities A and B | ρ_{AB} | -1.50 |
| Weight of Security A | W_A | α |
| Weight of Security B | W_B | $1-\alpha$ |

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2. Computation of Investment in Security A (W_A)

$$\text{Proportion of Investment in A Ltd., } W_A = \frac{\sigma_B^2 - \text{Cov}_{AB}}{\sigma_A^2 + \sigma_B^2 - 2\text{Cov}_{AB}}$$

$$\text{Proportion of Investment in B Ltd., } W_B = 1 - W_A$$

i. Computation of Covariance

$$\text{Cov}_{AB} = \rho_{AB} \times \sigma_A \times \sigma_B$$

$$= -1.50 \times 18 \times 15 = -405$$

ii. Proportion of investment in A Ltd.

$$W_A = \frac{\sigma_Y^2 - \text{Cov}_{XY}}{\sigma_X^2 + \sigma_Y^2 - 2\text{Cov}_{XY}}$$

$$W_A = [15^2 - (-405)] \div [18^2 + 15^2 - 2 \times (-405)]$$

$$W_A = [225 + 405] \div [324 + 225 + 810] = 630/1359 = 0.46$$

iii. Proportion of investment in B Ltd.

$$W_B = 1 - 0.46 = 0.54$$

6. The returns on Stock B and Market Portfolio for a period of 6 Years are as follows —

| Year | Return on B (%) | Return on Market Portfolio |
|------|-----------------|----------------------------|
| 1 | 12 | 8 |
| 2 | 15 | 12 |
| 3 | 11 | 11 |
| 4 | 2 | -4 |
| 5 | 19 | 11 |
| 6 | -10 | -2 |

You are required to determine —

- i) Characteristic line for Stock B
- ii) The systematic and unsystematic risk of Stock B.

Answer:

A. Computation of Beta of Security

| | Return of | Deviation from Mean | Variance of | Covariance of |
|--|-----------|---------------------|-------------|---------------|
| | | | | |

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| Period | Mkt. (R_M) | B (R_B) | Mkt. ($R_M - \bar{R}_M$) (D_M) | B ($R_B - \bar{R}_B$) (D_B) | Mkt. (D_M^2) | S (D_B^2) | R_M & R_B [$D_M \times D_B$] |
|--------|-------------------|----------------|--|---|-------------------------|-------------------------|---------------------------------------|
| (1) | (2) | (3) | (4) [(2) - 6.00] | (5) [(3) - 7.00] | (6) (4) ² | (7) (5) ² | (8) (4) × (5) |
| 1 | 8 | 12 | 2 | 5 | 4 | 25 | 10 |
| 2 | 12 | 15 | 4 | 8 | 16 | 64 | 32 |
| 3 | 11 | 11 | 5 | 4 | 25 | 16 | 20 |
| 4 | -4 | 2 | (10) | (5) | 100 | 25 | 50 |
| 5 | 11 | 19 | 5 | 12 | 25 | 144 | 60 |
| 6 | -2 | -10 | (8) | (17) | 64 | 289 | 136 |
| | 36 | 49 | | | 234 | 563 | 308 |

| | Market Portfolio | Shares of Company (B) |
|---------------------------|---|--|
| Mean | $\bar{R}_M = \sum R_M \div n$ $= 36 \div 6$ $= 6$ | $\bar{R}_B = \sum R_B \div n$ $= 49 \div 6$ $= 8.17$ |
| Variance | $\sigma_M^2 = \sum D_M^2 \div n$ $= 234/6 = 39$ | $\sigma_B^2 = \sum D_B^2 \div n$ $= 563/6 = 98.83$ |
| Standard Deviation | $\sigma_M = \sqrt{39} = 6.24$ | $\sigma_B = \sqrt{98.83} = 9.69$ |

Covariance and Correlation:

| Combination | Market and Security B |
|--------------------|---|
| Covariance | $COV_{MB} = \sum [D_M \times D_B] \div n = 308 \div 6 = 51.33$ |
| Beta | $\beta = COV_{MB} \div \sigma_M^2 = 51.33 \div 39 = 1.32$ |
| Correlation | $\rho_{MB} = \frac{COV_{MB}}{\sigma_M \times \sigma_B} = \frac{51.33}{6.24 \times 9.69} = 0.8489$ |

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B. Computation of Characteristic Line for Security B

| Particulars | Value |
|--|-------|
| $\bar{Y} = R_B$ | 8.17 |
| β | 1.32 |
| $\bar{X} = R_M$ (Expected Return on Market Index) | 6 |

Characteristic Line for Security B = $y = \alpha + \beta x$

$$8.17 = \alpha + 1.32 \times 6$$

$$\alpha = 8.17 - 7.92 = 0.25$$

Characteristic line for Security $y = 0.25 + 1.32x$

C. Analysis of Risk into Systematic Risk and Unsystematic Risk

| Particulars | Variance Approach | Standard Deviation Approach |
|--------------------------|--|--|
| Total Risk | 66.75% | 8.17% |
| Systematic Risk | Total risk $\times \rho_{MA}^2$ = $66.75 \times 0.8489^2 = 48.102\%$ | Total risk $\times \rho_{MA}$ = $9.69 \times 0.8489 = 8.23\%$ |
| Unsystematic Risk | Total risk $\times (1 - \rho_{MB}^2)$ = $66.75 \times (1 - 0.8489^2) = 18.6479$ | Total risk $\times (1 - \rho_{MB})$ = $9.69 \times (1 - 0.8489) = 1.4642$ |

7.

(a) The historical rates of return of two securities over the past ten years are given.

Calculate the Covariance and the Correlation coefficient of the two securities;

| Years | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------------------|----|----|----|----|----|----|----|----|----|----|
| Security A: (Return %) | 12 | 8 | 7 | 14 | 16 | 15 | 18 | 20 | 16 | 22 |
| Security B: (Return %) | 20 | 22 | 24 | 18 | 15 | 20 | 24 | | | |

(b) Write down the objectives of portfolio management?

Answer: 7. (a)

i. Computation of Factors

| | Return of | Deviation from Mean | Variance of | Covariance of |
|--|-----------|---------------------|-------------|---------------|
|--|-----------|---------------------|-------------|---------------|

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| Year | Security A (R ₁) | Security B (R ₂) | SA (R ₁ - \bar{R}_1) (D ₁) | SB (R ₂ - \bar{R}_2) (D ₂) | (D ₁ ²) | (D ₂ ²) | R ₁ & R ₂ [D ₁ X D ₂] |
|------|---------------------------------|---------------------------------|--|--|--------------------------------|--------------------------------|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| 1 | 12 | 20 | -2.8 | -1 | 7.84 | 1 | 2.8 |
| 2 | 8 | 22 | -6.8 | 1 | 46.24 | 1 | -6.8 |
| 3 | 7 | 24 | -7.8 | 3 | 60.84 | 9 | -23.4 |
| 4 | 14 | 18 | -0.8 | -3 | 0.64 | 9 | 2.4 |
| 5 | 16 | 15 | 1.2 | -6 | 1.44 | 36 | -7.2 |
| 6 | 15 | 20 | 0.2 | -1 | 0.04 | 1 | -0.2 |
| 7 | 18 | 24 | 3.2 | 3 | 10.24 | 9 | 9.6 |
| 8 | 20 | 25 | 5.2 | 4 | 27.04 | 16 | 20.8 |
| 9 | 16 | 24 | 1.2 | 3 | 1.44 | 9 | 3.6 |
| 10 | 22 | 18 | 7.2 | -3 | 51.84 | 9 | -21.6 |
| | $\sum R_1 = 148$ | $\sum R_2 = 210$ | | | 207.6 | 100 | -20 |

| | Security A | Security B |
|--------------------|---|--|
| Mean | $\bar{R}_1 = \sum R_1 \div n = 148 \div 10 = 14.8$ | $\bar{R}_2 = \sum R_2 \div n = 210 \div 10 = 21$ |
| Variance | $\sigma_1^2 = \sum D_1^2 \div n = 207.6 / 10 = 20.76$ | $\sigma_2^2 = \sum D_2^2 \div n = 100 / 10 = 10$ |
| Standard Deviation | $\sigma_1 = \sqrt{20.76} = 4.55$ | $\sigma_2 = \sqrt{10} = 3.162$ |

ii. Covariance and Correlation:

| Combination | Security A and B |
|-------------|--|
| Covariance | $Cov_{AB} = \sum [D_1 \times D_2] \div n = -20 \div 10 = -2$ |
| Correlation | $\rho_{AB} = COV_{AB} / (\sigma_A \times \sigma_B) = -2 / (4.55 \times 3.162) = -0.1390$ |

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Answer: 7. (b)

The objectives of Portfolio management are —

- i) **Reduce Risk:** To reduce the risk of loss of capital / income, by investing in various types of securities and over a wide range of industries, i.e. diversification.
- ii) **Safety of Principal:** To keep the capital / principal amount intact, in terms of value and in terms of purchasing power. The capital or the principal amount invested should not erode, either in value or in terms of purchasing power. By earning return, principal amount will not erode in nominal terms, by earning returns at a rate not lesser than the inflation rate; principal amount will be intact in present value terms.
- iii) **Stability of Income:** To facilitate a more accurate and systematic re-investment of income, to ensure growth and stability in returns.
- iv) **Capital Growth:** To enable attainment of capital growth by reinvesting in growth securities or through purchase of growth securities.
- v) **Marketability:** To have an easily marketable investment portfolio, so that the investor is able to take advantage of attractive opportunities in the market.
- vi) **Liquidity:** Some investors prefer that the portfolio should be such that whenever they need their money, they may get the same.
- vii) **Maintaining the Purchasing Power:** Inflation eats the value of money, i.e., purchasing power. Hence, one object of the portfolio is that it must ensure maintaining the purchasing power of the investor intact besides providing the return.
- viii) **Tax Savings:** To effectively plan for and reduce the tax burden on income, so that the investor gets maximum from his investment.

8.

(a) Stock P has a Beta of 1.50 and a market expectation of 15% return. For Stock Q, it is 0.80 and 12.5% respectively. If the risk free rate is 6% and the market risk premium is 7%, evaluate whether these two stocks are priced correctly? If these two stocks to be regarded as correctly priced, what should the risk free rate and market risk premium be?

(b) What are the weaknesses of technical analysis? Explain the differences of Security Market Line (SML) and Characteristic Line.

Answer: 8. (a)

a)

A. Expected Return [E(R)] under CAPM

$$\begin{aligned}\text{Expected Return of Stock X } [E(R_x)] &= R_f + \beta_x \times [E(R_M) - R_f] \\ \text{Risk Free Return } [R_f] &= 6\% \\ \text{Risk Premium } [E(R_M) - R_f] &= 7\% \\ \text{Beta of Stock P } [\beta_P] &= 1.50\end{aligned}$$

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$$\begin{aligned}
 \text{Beta of Stock Q } [\beta_Q] &= 0.80 \\
 \text{Stock P } [E(R_P)] &= R_F + \beta_P \times [E(R_M) - R_F] \\
 &= 6\% + 1.50 \times 7\% = 6\% + 10.50\% = 16.50\% \\
 \\
 \text{Stock Q } [E(R_Q)] &= R_F + \beta_Q \times [E(R_M) - R_F] \\
 &= 6\% + 0.80 \times 7\% = 6\% + 5.60\% = 11.30\%
 \end{aligned}$$

B. Evaluation of Market Price

| Particulars | Stock P | Stock Q |
|---|--|--|
| Expected Return (Market) [A] | 15.00% | 12.50% |
| Expected Return under CAPM [B] | 16.50% | 11.30% |
| Market Expectations [A] vs. CAPM Return [B] | [B] is Higher | [B] is Lower |
| Inference | Stock P gives lesser return than what it should give | Stock Q gives higher return than what it should give |
| Conclusion | Stock P is Overvalued | Stock P is Undervalued |
| Recommendation | SELL | BUY |

C. Determination of Risk Free Return

Alternative 1

Let, Risk free return = R_F

Market Risk Premium = RP

For security P, under CAPM

$$15\% = R_F + 1.5 \times RP$$

$$R_F = 15 - 1.5 RP \quad (1)$$

For security Q, Under CAPM

$$12.5 = R_F + 0.80 RP$$

$$R_F = 12.5 - 0.80 RP \quad (2)$$

R_F determined under equation (1) and equation (2) should be equal. Therefore,

$$15 - 1.5 RP = 12.5 - 0.80 RP$$

$$15 - 12.5 = 1.5 RP - 0.80 RP$$

$$2.5 = 0.7 RP$$

$$RP = 2.5/0.7 = 3.57\%$$

Using $RP = 3.57\%$, in equation (1)

$$\begin{aligned}
 R_F &= 15 - 1.5 \times 3.57 \\
 &= 9.64\%
 \end{aligned}$$

Alternative 2:

Rule: If the stocks are correctly priced, then the Risk - Return Ratio should be the same i.e.,

$$(R_P - R_F) \div \beta_P = (R_Q - R_F) \div \beta_Q$$

$$\frac{15 - R_F}{1.5} = \frac{12.5 - R_F}{0.80}$$

$$1.5(12.5 - R_F) = 0.80(15 - R_F)$$

$$18.75 - 1.5 R_F = 12 - 0.80 R_F$$

$$18.75 - 12 = 1.5 R_F - 0.80 R_F$$

$$6.75 = 0.7 R_F$$

$$R_F = 9.64\%$$

$$\begin{aligned} \text{Market Risk Premium} &= (R_P - R_F) \div \beta_P \\ &= (15 - 9.64) \div 1.5 = 3.57\% \end{aligned}$$

Answer: 8. (b)

Weaknesses of Technical Analysis:

Analyst Bias

Just as with fundamental analysis, technical analysis is subjective and our personal biases can be reflected in the analysis. It is important to be aware of these biases when analyzing a chart. If the analyst is a perpetual bull, then a bullish bias will overshadow the analysis. On the other hand, if the analyst is a disgruntled eternal bear, then the analysis will probably have a bearish tilt.

Open to Interpretation

Furthering the bias argument is the fact that technical analysis is open to interpretation. Even though there are standards, many times two technicians will look at the same chart and paint two different scenarios or see different patterns. Both will be able to come up with logical support and resistance levels as well as key breaks to justify their position. While this can be frustrating, it should be pointed out that technical analysis is more like an art than a science, somewhat like economics. Is the cup half-empty or half-full? It is in the eye of the beholder.

Too Late

Technical analysis has been criticized for being too late. By the time the trend is identified, a substantial portion of the move has already taken place. After such a large move, the reward to risk ratio is not great. Lateness is a particular criticism of Dow Theory.

Always another Level

Even after a new trend has been identified, there is always another "important" level close at hand. Technicians have been accused of sitting on the fence and never taking an unqualified stance. Even if they are bullish, there is always some indicator or some level that will qualify their opinion.

Trader's Remorse

Not all technical signals and patterns work. When you begin to study technical analysis, you will come across an array of patterns and indicators with rules to match. For instance: A sell signal is given when the neckline of a head and shoulders pattern is broken. Even though this is a rule, it is not steadfast and can be subject to other factors such as volume and momentum. In that same vein, what works for one particular stock may not work for another. A 50-day moving average may work great to identify support and resistance for IBM, but a 70-day moving average may work better for Yahoo. Even

though many principles of technical analysis are universal, each security will have its own idiosyncrasies.

Technical analysts consider the market to be 80% psychological and 20% logical. Fundamental analysts consider the market to be 20% psychological and 80% logical. Psychological or logical may be open for debate, but there is no questioning the current price of a security. After all, it is available for all to see and nobody doubts its legitimacy. The price set by the market reflects the sum knowledge of all participants, and we are not dealing with lightweights here. These participants have considered (discounted) everything under the sun and settled on a price to buy or sell. These are the forces of supply and demand at work. By examining price action to determine which force is prevailing, technical analysis focuses directly on the bottom line: What is the price? Where has it been? Where is it going?

Even though there are some universal principles and rules that can be applied, it must be remembered that technical analysis is more an art form than a science. As an art form, it is subject to interpretation. However, it is also flexible in its approach and each investor should use only that which suits his or her style. Developing a style takes time, effort and dedication, but the rewards can be significant.

Distinguish between a Security Market Line (SML) and Characteristic Line

| Aspect | Security Market Line | Characteristic Line |
|-----------------|---|--|
| Scheme | It represents the relationship between return and risk (measured in terms of systematic risk) of a security or portfolio. | It represents the relationship between the returns of two securities or a security and the market return, over a period of time. |
| Nature of Graph | Security Market Line is a cross-sectional graph. | Security Characteristic Line is a Time Series Graph. |
| Comparison | Security Market Line graphs beta versus expected return. | Characteristic Line graphs time series of Security Returns versus the Index Returns. |
| Utility | It is used for estimating the expected return for a security relative to its beta risk. | To estimate beta and also to determine how a security return correlates to a market index return. |

9.

(a) What do you mean by global financial system (GFS)? Write down the regulations regarding portfolio investments by NRIs/ PIOs.

(b) Suppose the standard deviations, betas and average rates of return of several managed portfolio are given below, along with the standard deviation and average rate of return of the market index is assumed to be 1. Further assume the T-bills rate averaged 7% during the time period performance measurement. Compare these funds on performance using the Sharpe, Treynor and Jensen measures.

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| Fund | Average Return | Std. Deviation | Beta |
|----------------|----------------|----------------|------|
| A | 0.15 | 0.25 | 1.25 |
| B | 0.12 | 0.30 | 0.75 |
| C | 0.10 | 0.20 | 1.00 |
| R _m | 0.12 | 0.25 | 1.00 |

Answer: 9. (a)

A brief definition of the **global financial system (GFS)** is the financial system consisting of institutions, their customers, and financial regulators that act on a global level.

The term global is often used synonymously with the terms "international" or "multinational". Economists do not have a standard definition for a global versus a multinational company.

Main Players

1. Global or international systemically important financial institutions, e.g., banks, hedge funds whose failure may cause a global financial crisis, the International Monetary Fund and the Bank for International Settlements,
2. Customers of the global financial system, which include multinational corporations, as well as countries, with their economies and government entities, e.g., the central banks of the G20 major economies, finance ministries EU, NAFTA, OPEC, and others.etc.
3. Regulators of the global financial system, many of which play dual roles, in that they are financial organizations at the same time. These include the above mentioned International Monetary Fund and Bank for International Settlements, particularly its "Global Economy Meeting (GEM), in which all systemic emerging economies' Central Bank governors are fully participating, has become the prime group for global governance among central banks" per Jean-Claude Trichet, President of the European Central Bank., as well as the financial regulators of the U.S.A (the US agency quintet of Federal Reserve, Office of Comptroller of the Currency, Federal Deposit Insurance Corporation, Commodity Futures Trading Commission, Federal Reserve Board, Securities and Exchange Commission), Europe (European Central Bank) and the Bank of China, besides others.

Regulations Regarding Portfolio Investments by NRIs/PIOs

- ❖ Non- Resident Indian (NRIs) and Persons of Indian Origin (PIOs) can purchase or sell shares/ fully and mandatorily convertible debentures of Indian companies on the Stock Exchanges under the Portfolio Investment Scheme. For this purpose, the NRI/ PIO have to apply to a designated branch of a bank, which deals in Portfolio Investment. All sale/ purchase transactions are to be routed through the designated branch.
- ❖ An NRI or a PIO can purchase shares up to 5 per cent of the paid up capital of an Indian company. All NRIs/PIOs taken together cannot purchase more than 10 per cent of the paid up value of the company. This limit can be increased by the Indian company to 24 per cent by passing a General Body resolution. The Indian company

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has to intimate the raising of the NR Limit to the Reserve Bank to enable the Bank to notify the same on its website for larger public dissemination.

- ❖ The sale proceeds of the repatriable investments can be credited to the NRE/ NRO, etc. accounts of the NRI/ PIO, whereas the sale proceeds of non-repatriable investment can be credited only to NRO accounts.
- ❖ The sale of shares will be subject to payment of applicable taxes.

Answer: 9. (b)

Fund A has the best Reward-to-Variability Ratio (Sharpe measure), while Fund B has the best Reward- to Volatility Ratio (Treyner measure). Fund C is the worst on all these counts. Fund A has a better Reward-to-Variability ratio than the market: 0.32 compared to $(0.12 - 0.07) / 0.25 = 0.2$. Fund A also has a better reward to volatility ratio than the market; 0.64 compared to $(0.12-0.07) / 1 = 0.05$. Also the alpha (Jensen measure) is positive thus fund A outperformed the market with all measures. Fund B outperformed the market using the Reward-to-Volatility and alpha measures, but not the Reward-to-Variability ratio. Fund C underperformed the market according to all three measures.

| Fund | Reward to Variability | Reward to Volatility | Alpha |
|------|----------------------------|----------------------------|--------------------------------------|
| A | $(0.15-0.07) / 0.25=0.32$ | $(0.15-0.07) / 1.25=0.064$ | $(0.15-0.07)-1.25(0.12-0.07)=0.0175$ |
| B | $(0.12-0.07) / 0.30=0.167$ | $(0.12-0.07) / 0.75=0.067$ | $(0.12-0.07)-0.75(0.12-0.07)=0.0125$ |
| C | $(0.10-0.07) / 0.20=0.150$ | $(0.10-0.07) / 1.00=0.03$ | $(0.10-0.07)-1.00(0.12-0.07)=0.0200$ |

Treynor Ratio Formula; $(\text{Average Return of the Portfolio} - \text{Average Return of the Risk-free rate}) / \text{Beta of the Portfolio}$.

Sharpe Ratio Formula; $r_p - r_f / \sigma_p$,

Where, r_p = Expected Portfolio Return,

r_f = Risk Free Rate

σ_p = Portfolio Standard Deviation.

10. What are the assumptions of modern portfolio theory? What are the factors providing momentum to outward foreign investments?

Answer:

The framework of MPT makes many assumptions about investors and markets. Some are explicit in the equations, such as the use of Normal distributions to model returns. Others are implicit, such as the neglect of taxes and transaction fees. None of these assumptions are entirely true, and each of them compromises MPT to some degree.

- ❖ **Investors are interested in the optimization problem described above (maximizing the mean for a given variance).** In reality, investors have utility functions that may be sensitive to higher moments of the distribution of the returns. For the investors to use the mean-variance optimization, one must suppose that the combination of utility and returns make the optimization of utility problem similar to the mean-variance optimization problem. A quadratic utility without any assumption about returns is

sufficient. Another assumption is to use exponential utility and normal distribution, as discussed below.

- ❖ **Asset returns are (jointly) normally distributed random variables.** In fact, it is frequently observed that returns in equity and other markets are not normally distributed. Large swings (3 to 6 standard deviations from the mean) occur in the market far more frequently than the normal distribution assumption would predict. While the model can also be justified by assuming any return distribution that is jointly elliptical, all the joint elliptical distributions are symmetrical whereas asset returns empirically are not.
- ❖ **Correlations between assets are fixed and constant forever.** Correlations depend on systemic relationships between the underlying assets, and change when these relationships change. Examples include one country declaring war on another, or a general market crash. During times of financial crisis all assets tend to become positively correlated, because they all move (down) together. In other words, MPT breaks down precisely when investors are most in need of protection from risk.
- ❖ **All investors aim to maximize economic utility (in other words, to make as much money as possible, regardless of any other considerations).** This is a key assumption of the efficient market hypothesis, upon which MPT relies.
- ❖ **All investors are rational and risk-averse.** This is another assumption of the efficient market hypothesis. In reality, as proven by behavioral economics, market participants are not always rational or consistently rational. The assumption does not account for emotional decisions, stale market information, "herd behavior", or investors who may seek risk for the sake of risk. Casino gamblers clearly pay for risk, and it is possible that some stock traders will pay for risk as well.
- ❖ **All investors have access to the same information at the same time.** In fact, real markets contain information asymmetry, insider trading, and those who are simply better informed than others. Moreover, estimating the mean (for instance, there is no consistent estimator of the drift of a brownian when sub sampling between 0 and T) and the covariance matrix of the returns (when the number of assets is of the same order of the number of periods) are difficult statistical tasks.
- ❖ **Investors have an accurate conception of possible returns, i.e., the probability beliefs of investors match the true distribution of returns.** A different possibility is those investors' expectations are biased, causing market prices to be informational inefficient.
- ❖ **There are no taxes or transaction costs.** Real financial products are subject both to taxes and transaction costs (such as broker fees), and taking these into account will alter the composition of the optimum portfolio. These assumptions can be relaxed with more complicated versions of the model.
- ❖ **All investors are price takers, i.e., their actions do not influence prices.** In reality, sufficiently large sales or purchases of individual assets can shift market prices for that asset and others (via cross elasticity of demand.) An investor may not even be able

to assemble the theoretically optimal portfolio if the market moves too much while they are buying the required securities.

- ❖ **Any investor can lend and borrow an unlimited amount at the risk free rate of interest.** In reality, every investor has a credit limit.
- ❖ **All securities can be divided into parcels of any size.** In reality, fractional shares usually cannot be bought or sold, and some assets have minimum orders sizes.
- ❖ **Risk/Volatility of an asset is known in advance/is constant.** In fact, markets often misprice risk (e.g. the US mortgage bubble or the European debt crisis) and volatility changes rapidly.

Factors Providing Momentum to Outward Foreign Investments

- i) According to UNCTAD's World Investment Report 2011, the stock of outward FDI from developing economies reached US\$ 3.1 trillion in 2010 (15.3 per cent of global outward FDI stock), up from US\$ 857 billion (10.8 per cent of global outward FDI stock) 10 years ago. On flow basis, outward FDI from developing economies has grown from US\$ 122 billion in 2005 to US\$ 328 billion in 2010 accounting for around a quarter of total outward FDI witnessed at global level.
- ii) FDI is a natural extension of globalisation process that often begins with exports. In the process, countries try to access markets or resources and gradually reduce the cost of production and transaction by expanding overseas manufacturing operations in countries where certain ownership-specific advantages can help them to compete globally. Adoption of such strategies helps them to catch up with competing economies.
- iii) A significant uptrend in outward FDI has also been observed in the case of India in recent years. Since globalisation is a two-way process, integration of the Indian economy with the rest of the world is evident not only in terms of higher level of FDI inflows but also in terms of increasing level of FDI outflows.
- iv) The overseas investment of domestic corporate sector through FDI has provided them better access to global networks and markets, transfer of technology and skills and also enables them to share research and development efforts and outcomes. It can also be seen as a corporate strategy to promote the brand image and utilisation of raw materials available in the host country. In the Indian context, overseas investments have been primarily driven by either resource seeking or market seeking or technology seeking motives. Of late, there has been a surge in resource seeking overseas investments by Indian companies, especially to acquire energy resources in Australia, Indonesia and Africa.
- v) It is against this background that I intend to speak on recent trends and emerging issues in relation to Indian outward FDI. I am thankful to Bombay Chamber of Commerce for choosing this topical subject for today's discussion. In my presentation, I would briefly talk about the evolution of outward FDI policy in India, trends and analysis of outward FDI, funding pattern of outward FDI, measures taken

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by the Reserve Bank of India and Government of India, emerging issues and end with some thoughts on way forward.

11.

(a) What are the principle weaknesses of Indian Stock Market?

(b) Sun Mutual Fund (an approved mutual fund) sponsored an open ended, equity oriented scheme "LT Opportunity Fund". There were three plans namely;

A-Dividend Reinvestment Plan

B-Bonus Plan

C-Growth Plan.

At the time of New Fund Offer on 1.4.2003, Mr. Hari, Mr. Saxena and Mrs. Rawat invested ₹ 1,00,000 each and chosen Plan B, C and A respectively. The face value of the units was ₹ 10 each. The detailed history of the fund is as follows:

| Date | Dividend (%) | Bonus ratio | Net Asset | Value per unit | (F.V. ₹ 10) |
|------------|--------------|-------------|-----------|----------------|-------------|
| 28.07.2007 | 20 | -- | 30.70 | 31.40 | 33.42 |
| 31.03.2008 | 70 | 5:4 | 58.42 | 31.05 | 70.05 |
| 30.10.2011 | 40 | -- | 42.18 | 25.02 | 56.15 |
| 15.01.2012 | 25 | -- | 46.45 | 29.10 | 64.28 |
| 31.01.2012 | -- | 1:3 | 42.18 | 20.05 | 60.12 |
| 24.02.2013 | 40 | 1:4 | 48.10 | 19.95 | 72.40 |
| 31.03.2013 | -- | -- | 53.75 | 22.98 | 82.07 |

On 31.03.2013, all three investors redeemed all the balance units.

You are required to calculate the annual rate return for Mr. Hari, Mr. Saxena and Mrs. Rawat after taking into consideration the following information:

- (i) Long term capital gain is exempt from Income-tax,
- (ii) Short term capital gain is subject to 10% Income tax,
- (iii) Security Transaction Tax @ 0.2% only on sale / redemption of units.

Ignore Education Cess and Service Tax

[You may use the formula $1 / (1 + r)^n$ for determining PVIF (at r -rate of return), n years]

Answer: 11. (a)

The principle weaknesses of Indian Stock Market are enumerated below:

- ❖ **Scarcity of floating stock;** Financial institutions, banks and insurance companies own 80% of the equity capital of the private sector,
- ❖ **Speculation;** 85% of the transactions on the NSE and BSE are speculative in nature,
- ❖ **Price rigging;** Evident in relatively unknown and low quality scripts causes short term fluctuations in the price,
- ❖ **Insider trading;** Obtaining market sensitive information to make money in the markets.

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Ascertain the stock weights for a portfolio made up with investment of ₹ 3000 in X AND ₹ 2000 in Y.

- (b) Explain how a trader who has bought an option can exit the trade.
- (c) What is a load fund? How are Net Asset Values, public offer price and redemption price calculated?
- (d) Raipur Constructions Ltd. had received an e-mail from Haridwar Power Ltd. emanating from the company's official website, accepting the former's offer. Later on, Haridwar Power Ltd. failed to fulfill their promise. Can Raipur Construction Ltd. launch proceedings against Haridwar Power Ltd. on the strength of the e-mail? What precaution should Raipur Constructions Ltd. have taken in this regard?

Answer: 12. (a)

It is given that ₹ 3000 is invested in portfolio X and ₹ 2000 in portfolio Y the investment committed in each will be:

| Particulars | A | B | C | Total |
|---|------------|------------|------------|-------|
| 1 | 2 | 3 | 4 | 5 |
| Portfolio X | 540 | 1890 | 570 | 3000 |
| Portfolio Y | 480 | 1200 | 320 | 2000 |
| Combined Portfolio | 1020 | 3090 | 890 | 5000 |
| Stock weights for combined portfolio of earlier row | Column 2/5 | Column 3/5 | Column 4/5 | |
| i.e. | 0.204 | 0.618 | 0.178 | |

Answer: 12. (b)

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.

Answer: 12. (c)

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;

$$\text{NAV} = (\text{Fair Market Value of scheme's investments} + \text{Receivables} + \text{Accrued Income} + \text{Other assets} - \text{Accrued expenses} - \text{Payable} - \text{Other liabilities}) / \text{Number of units outstanding}$$

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

Answer: 12. (d)

The Information Technology Act would come to the rescue of Raipur Constructions Ltd.

Section 4 and 5 of the said Act may be referred to in this context. Section 4 accords legal recognition of electronic records. As per this section, where any law provides that information or any other matter shall be in writing or in the typewritten or printed form, then, notwithstanding anything contained in such law, such requirement shall be deemed to have been satisfied if such information or matter is;

- (i) Rendered or made available in an electronic form, and
- (ii) Accessible so as to be for a subsequent reference.

Section 5 speaks of legal recognition of digital signatures. Accordingly, where any law provides that information or any other matter shall be authenticated by affixing the signature or any document shall be signed or bear the signature of any person then, notwithstanding anything contained therein in such law, such requirement shall be deemed to have been satisfied, if such information or matter is authenticated by means of digital signature affixed in such manner as may be prescribed by the Central Government. The Explanation to this section states that for the purposes of this section, "signed", with its grammatical variations and cognate expressions, shall, with reference to a person, mean affixing of his hand written Raipur Constructions Ltd. can proceed against Haridwar Power Ltd. on the strength of these provisions.

Raipur Constructions Ltd should ensure that in respect of important e-mails / e-documents / e-records, the sender affixes his digital signature. A digitally signed document is a perfect piece of legal evidence as to its timing, contents, integrity and authenticity.

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13.

- (a) Enumerate the main features of Venture Capital Financing.
(b) A stock that pays no dividend is currently selling at ₹ 100.00. The possible prices for which the stock might sell at the end of one year, with associated probabilities are:

| End-of-year Price | Probability |
|-------------------|-------------|
| ₹ 90.00 | 0.1 |
| ₹100.00 | 0.2 |
| ₹ 110.00 | 0.4 |
| ₹ 120.00 | 0.2 |
| ₹ 130.00 | 0.1 |

- (i) Calculate the expected rate of return by year end,
(ii) Calculate the standard deviations of the expected rate of return.
(c) When does a market-wise circuit breaker system apply?

Answer: 13. (a)

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.

Features of Venture Capital Financing:

Some of the features of Venture Capital Financing are as follows:

- (i) Venture capital is usually 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 high growth potential projects,
- (iii) Venture capital is available only for commercialization of new ideas or new technologies,
- (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 up the firm design its marketing strategy and organize and manage it.
- (viii) Investment is usually made in small and medium scale enterprises.

Answer: 13. (b)

(i).

| | | | | | |
|--------------------|-----|-----|-----|-----|-----|
| Probability | 0.1 | 0.2 | 0.4 | 0.2 | 0.1 |
| Return | -10 | 0 | 10 | 20 | 30 |

$$\begin{aligned} E(R) &= 0.1 (-10) + 0.2 (0) + 0.4 (10) + 0.2 (20) + 0.1 (30) \\ &= -1.0 + 0 + 4.0 + 4 + 3.0 \\ &= 10.0\% \end{aligned}$$

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$$(ii) \sigma = [0.1 (-10 - 10)^2 + 0.2 (0 - 10)^2 + 0.4 (10 - 10)^2 + 0.2 (20 - 10)^2 + 0.1 (30 - 10)^2]^{.5}$$
$$= 10.95\%.$$

Answer: 13. (c)

The index-based market wide circuit breakers were implemented in compulsory rolling settlement with effect from July 02, 2001.

The index-based market-wide system applies at 3 stages of the index movement, either way viz; at 10%, 15% and 20%. These circuit breakers when triggered bring about a coordinated trading halt in all equity and equity derivative markets nationwide.

The market-wide circuit breakers are triggered by movement of either the BSE Sensex or the NSE S & P CNX Nifty, whichever is breached earlier. The percentage movement of the index and the time frame of the trading halt is given below:

10% movement – a one-hour market half if the movement takes place before 1.00 p.m.

- at or after 1.00 p.m. but before 2.30 p.m., a trading halt for ½ hour
- at or after 2.30 p.m. there will be no trading halt and market shall continue trading

15% movement-a two-hour halt if the movement takes place before 1 p.m.

- on or after 1.00 p.m., but before 2.00 p.m., a trading halt of one hour
- on or after 2.00 p.m. the trading shall halt for remainder of the day.

20% movement- trading shall be halted for the remainder of the day.

14.

(a) Explain the term 'Beta' as a systematic risk of a security.

(b) Suppose that a stock now selling for ₹ 100 will either increase in value by 15 % by year end with probability 0.5, or fall in value by 5% with probability 0.5, or fall in value by 5 % with probability 0.5. The stock pays no dividends.

(i) What are the geometric and arithmetic mean returns on the stock?

(ii) What is the expected end of year value of the share?

(iii) Which measure of expected return is superior?

(c) You have invested ₹ 50,000, 30 per cent of which is invested in Star Network Ltd., which has a expected rate of return of 15 per cent and 70 per cent of which is invested in Zee Telefilms Ltd., with an expected return of 12 per cent.

(i) What is the return on your portfolio?

(ii) What is the expected percentage rate of return?

Answer: 14. (a)

(a) "Beta' as a measure of the systematic risk of a security:

Beta is a measure of systematic risk of security that cannot be avoided through diversification. Beta is a relative measure of risk of an individual stock relative to the market portfolio of all stocks. If the security's return move more (less) than the market's return as the latter changes, the security's return's have more (less) volatility (fluctuation

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in price) than those of the market. It is important to note that beta measures a security's volatility or fluctuations in price, relative to a benchmark, the market portfolio of all stocks.

Securities with different slopes have different sensitivities to the returns of the market index. If the slope of this relationship for a particular security is a 45 degree angle, the beta is 1.0. This means that for every one per cent change in the market's return, on average this security's return change 1 per cent. The market portfolio has a beta of 1.0.

A security with beta of 1.5 indicates that, on average, security returns are 1.5 times as volatile as market returns, both up and down. This would be considered an aggressive security because when the overall market return rises or falls 10 per cent, this security, on average, would rise or fall 15 per cent. Stocks having a beta of less than 1.0 would be considered more conservative investments than the overall market.

Beta is useful for comparing the relative systematic risk of different stocks and in practice, is used by investors to judge a stock's riskiness. Stocks can be ranked by their betas. Because the variance of the market is constant across all securities for a particular period, ranking stocks by beta is the same as ranking them by their absolute systematic risk. Stocks with high betas are said to be high-risk securities.

Answer: 14. (b)

- i. Expected geometric return = $[(1.15)(0.95)]^{1/2} - 1 = 0.045$
Expected arithmetic mean return = $[0.15 + (-0.05)]/2 = 0.05$
- ii. The expected stock price is $(115 + 95)/2 = 105$
- iii. The expected rate of return on the stock is 5%, equal to expected arithmetic mean return on the stock.

Answer: 14. (c)

- (i) The rate of return is the percentage of the amount invested in a stock multiplied by its expected rate of return. Thus, of the ₹ 50,000 invested,

For Star Network Ltd; 30 per cent of total with 15 per cent rate of return:

$$0.30 \times ₹ 50,000 \times 0.15 = ₹ 2,250$$

For Zee Tele films Ltd; 70 per cent with a 12 per cent rate of return:

$$0.70 \times ₹ 50,000 \times 0.12 = ₹ 4,200$$

The total return is ₹ 6450 (i.e. ₹ 2250 + ₹ 4200)

- (ii) The expected percentage rate of return is the total return, divided by the amount invested:

$R = \text{Total Return} / \text{Total Amount invested},$

$$R = ₹ 6450 / ₹ 50,000$$

$$= 12.90\%.$$

15.

(a) Mr. Kumar's equity shares currently sell for ₹ 22.50 per share. The finance manager of Mr. Kumar anticipates a constant growth rate of 12 per cent and an end-of-year dividend of ₹ 2.50.

(i) What is your expected rate of return if you buy the stock for ₹ 25?

(ii) If you require an 18 per cent return, should you purchase the stock?

(b) Compute a call option price by applying the Black-Scholes option pricing model on the following values:

| | |
|---|-------------|
| Strike price | = ₹ 45, |
| Time remaining to expiration | = 183 days, |
| Current stock price | = ₹ 47, |
| Expected price volatility= standard deviation | = 25, |
| Risk free rate | = 10%. |

(c) What is the portfolio interpretation of index movements?

Answer: 15. (a)

(i) Expected Rate of Return = Dividend in year 1 / Market price + Growth rate
 = ₹ 2.50 / ₹ 25 + 0.12
 = 0.22 = 22%

(ii) $V_e = ₹ 2.50 / 0.18 - 0.12 = ₹ 41.67$

Yes, purchasing of equity shares will prove worthy.

Answer: 15. (b)

Applying the Black- Scholes formula:

$$V_e = P_s [N(d_1)] - P_x / e^{(RF) (T)} [N(d_2)]$$

$$d_1 = \ln [47 / 45] + [0.10 + 0.5 (0.25)^2] 0.5 / 0.25 \sqrt{0.5}$$

$$= 0.6172$$

$$d_2 = 0.6172 - 0.25 / \sqrt{0.5}$$

$$= 0.4404$$

From a normal distribution table;

$$N (0.6172) = 0.7315 \text{ and}$$

$$N (0.4404) = 0.6702,$$

$$\text{So, } C = 47 (0.7315) - 45 (e^{- (0.10) (0.5)}) (0.6702)$$

$$= ₹ 5.69$$

Answer: 15. (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 ₹

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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 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.

16.

(a) The following table gives an analyst's expected return on two stocks for particular market returns:

| Market Return | Aggressive Stock | Defensive Stock |
|---------------|------------------|-----------------|
| 6% | 2% | 8% |
| 20 | 30 | 16 |

(i) What are the betas of the two stocks?

(ii) What is the expected return on each stock if the market return is equally likely to be 6% or 20%?

(iii) If the risk-free rate is 7% and the market return is equally likely to be 6% or 20% what is the SML?

(iv) What are the alphas of the two stocks?

(b) What should a stock market index be?

(c) Why are indices important?

Answer: 16. (a)

(a)

(i) The betas of the two stocks are:

$$\text{Aggressive stock} = \frac{30\% - 2\%}{20\% - 6\%} = 2$$

$$\text{Defensive stock} = \frac{16\% - 8\%}{20\% - 6\%} = 0.571$$

(ii) The expected return of the two stocks are:

$$\text{Aggressive stock} = 0.5 \times 2\% + 0.5 \times 30\% = 16\%$$

$$\text{Defensive stock} = 0.5 \times 8\% + 0.5 \times 16\% = 12\%$$

(iii) The expected return on the market portfolio is

$$0.5 \times 6\% + 0.5 \times 20\% = 13\%$$

Since the risk-free is 7%, the market risk premium is $13\% - 7\% = 6\%$

So, the SML, is

$$\text{Required return } i = 7\% + \beta_i \times 6\%$$

(iv) The alphas of the two stocks are calculated below

Stock A: Expected return = 16%, Beta = 2

$$\text{Required return} = 7\% + 2 \times 6\% = 19\%$$

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$$\text{Alpha} = 16\% - 19\% = -3\%$$

$$\begin{aligned}\text{Stock B; Expected return} &= 12\%, \text{ Beta} = 0.571, \text{ Required return} = 7\% + 0.571 \times 6\% \\ &= 10.426\%\end{aligned}$$

$$\text{Alpha} = 12\% - 10.426\% = 1.574\%$$

Answer: 16. (b)

A stock market index should capture the behavior of the overall equity market. Returns obtained by distinctive portfolios in the country, will be indicated by the movements of the index. An Index is used to give information about the price movements of products in the financial, commodities or any other markets.

A stock market index is created by selecting a group of stocks that are representative of the whole market or a specified sector or segment of the market. An Index is calculated with reference to a base period and a base index value. Stock market indexes are useful for a variety of reasons, some of them are:

- It is a lead indicator of the performance of the overall economy or a sector of the economy,
- Stock indexes reflect highly up to date information,
- They provide a historical comparison of returns on money invested in the stock market against other forms of investments such as gold or debt,
- They can be used as a standard against which to compare the performance of an equity fund,
- Modern financial applications such as Index Funds, Index Futures, and Index Options play an important role in financial investments and risk management.

Answer: 16. (c)

By looking at an index we know how the market is faring. The index is a lead indicator of how the overall portfolio will fare. Owing to direct applications in finance, in the form of index funds and index derivatives, in recent years, indices have gained more popularity. Index funds are funds which passively 'invest in the index'. Index derivatives allow people to cheaply alter their risk exposure to an index (which is called hedging) and to implement forecasts about index movements (which are called speculation). Using index derivatives, as hedging, has become a central part of risk management in the modern economy. These applications are now a multi-trillion dollar industry worldwide, and they are critically linked up to market indices. Finally, indices serve as a benchmark for measuring the performance of fund managers. For e.g., an all-equity fund, should obtain returns like the overall stock market index. A 50:50 debt: equity fund should obtain returns close to those obtained by an investment of 50% in the index and 50% in fixed income.

17.

(a) An investor has ₹ 1,00,000 to be invested in a portfolio. He used his funds to acquire shares of Alpha Ltd. for ₹ 80,000 and shares of Beta Ltd. for ₹ 20,000. The proportion of Alpha Ltd. shares in the portfolio is 0.8 (X_1) and that of Beta Ltd. shares is 0.2 (X_2). The rate of return expected from Alpha Ltd. is 20% (R_1). The corresponding figure for Beta Ltd. is 15% (R_2). Find out the rate of return from the portfolio (R_p).

(b) What are the risks relevant while investing?

(c) An investor buys a September put futures option on gold. The contract is for grams and strike price is ₹ 10,000. Show the outcome of contract if the investor exercised the option

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in July when gold futures price is ₹ 9,500 and closes out the short futures position in August when gold futures price is ₹ 9,550.

- (d) You are having ₹ 10,000 to invest and you would like to sell ₹ 5000 in stock of JCT short to invest in TDA. Assuming no correlation between the two securities, compute the expected return and the standard deviation of the portfolio from the following characteristics:

| Security | JCT | TDA |
|----------------|-----|-----|
| E (R) | .12 | .02 |
| σ (R) | .08 | .10 |

Answer: 17. (a)

- (a) Earning from investment in Alpha Ltd. shares = ₹ 80,000 x 20% = ₹ 16,000
 Earning from investment in Beta Ltd. shares = ₹ 20,000 x 15% = ₹ 3,000
 Earnings from portfolio = ₹ 80,000 x 20% + ₹ 20,000 x 15% = ₹ 19,000
 Rate of return from portfolio = $\frac{80,000 \times 20\% + 20,000 \times 15\%}{100,000}$
 $= 0.8 \times 20\% + 0.2 \times 15\%$
 $= 19\%$

$$[R_P = X_1 R_1 + X_2 R_2]$$

Answer: 17. (b)

The relevant risks are as follows :

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

Answer: 17. (c)

On exercise of the put futures option, the investor gets a short futures contract at strike price ₹ 9,500 plus price differential ₹ 500 (₹ 10,000 – ₹ 9,500).
 On closing out of the short futures contract, the investor pays price differential ₹ 50 (₹ 9,550- ₹ 9,500).
 Total gain realized by the investor is ₹ 450 less premium paid.

Answer: 17. (d)

Expected Return:

$$\begin{aligned} E (R) &= W_{JCT} E (R_{JCT}) + W_{TDA} E (R_{TDA}) \\ &= 15,000 / 10,000 \times .12 - 5,000 / 10,000 \times 0.02 = .18 - 0.01 \\ &= 0.17 \end{aligned}$$

Standard deviation:

$$\begin{aligned} [W_{JCT}^2 \sigma^2 (R_{JCT}) + W_{TDA}^2 \sigma^2 (R_{TDA})]^{1/2} &= \sigma_P \\ &= [(1.5)^2 \times (0.8)^2 + (-.5)^2 \times (.10)^2]^{1/2} \\ &= 0.130 \end{aligned}$$

18.

- (a) Mr. Akash holds certain number of shares of X Ltd., the current market value of which is ₹ 1,00,000 . The investor is evaluating the possibility of disposing off ₹ 40,000 worth of X Ltd. shares to buy shares either of Y Ltd. and Z Ltd. The expected rate of return from X Ltd., Y Ltd and Z Ltd. shares are 20%, 18% and 17.5% respectively. The standard deviations of rate of return (also called volatility of rate of return) are 4% for X Ltd. and 2% Y Ltd and Z Ltd. The coefficient of co-relation between rates of return from X Ltd. and Y Ltd is +0.95 and that between rates of return from X Ltd and Y Ltd is - 0.95. Determine the best contender for inclusion in the portfolio.
- (b) What do you mean by ETF (Exchange Traded Funds) State in brief the applications of it.
- (c) What is Investor Protection Fund (IPF) at Stock Exchanges?
- (d) What is Arbitration? What is the process for preferring arbitration?

Answer: 18. (a)

| | Shares of X Ltd. | Shares of Y Ltd. | Shares of Z Ltd |
|-----------------|------------------|------------------|-----------------|
| Rate of return | 20% | 18% | 17.5% |
| Variance (Risk) | 16% | 4% | 4% |

Apparently it seems that the shares of Y Ltd. yields higher rate of return than shares of Z Ltd. and therefore, the investor should prefer Y Ltd. shares.

However, it is seen that the proposed portfolio consists of ₹ 60,000 invested in X Ltd. shares and ₹ 40,000 in either Y Ltd or Z Ltd. shares.

Portfolio Return:

$$\text{Portfolio (XY)} = W_x R_x + W_y R_y = 0.60 \times 20 + 0.40 \times 18 = 19.2\%$$

$$\text{Portfolio (XZ)} = W_x R_x + W_z R_z = 0.60 \times 20 + 0.40 \times 17.5 = 19.0\%$$

Portfolio Variance:

$$\begin{aligned} \text{Portfolio (XY)} &= W_x^2 \sigma_x^2 + W_y^2 \sigma_y^2 + 2 W_x \cdot W_y \cdot \sigma_x \cdot \sigma_y \cdot r \\ &= (0.60)^2 \times 16 + (0.40)^2 \times 4 + 2 (0.60) (0.40) (4) (2) (0.95) \\ &= 10.048. \end{aligned}$$

$$\begin{aligned} \text{Portfolio (XZ)} &= W_x^2 \sigma_x^2 + W_z^2 \sigma_z^2 + 2 W_x \cdot W_z \cdot \sigma_x \cdot \sigma_z \cdot r \\ &= (0.60)^2 \times 16 + (0.40)^2 \times 4 + 2 (0.60) (0.40) (4) (2) (-0.95) \\ &= 2.752 \end{aligned}$$

| | Portfolio (XY) | Portfolio (XZ) |
|-----------------|----------------|----------------|
| Rate of return | 19.2% | 19.0% |
| Variance (Risk) | 10.048 | 2.752 |

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Rate of return from portfolio XZ is marginally lower than that from portfolio XY. The risk of portfolio XZ is however considerably lower than portfolio XY. The investor should therefore prefer to buy Z Ltd. shares.

Answer: 18. (b)

Exchange Traded Funds (ETFs) are just what their name implies, baskets of securities that are traded like individual stocks, on an exchange. Unlike regular open-end mutual funds, ETFs can be bought and sold throughout the trading days, like any stock.

The concept of ETF first came into existence in the USA in 1993. It took several years to attract public interest. But once it was done, the volumes took off with retaliation. Most ETFs charge lower annual expenses than index mutual funds. However, as with stocks, one must pay a brokerage to buy and sell ETF units, which can be a significant drawback for those who trade frequently or invest regular sums of money.

The funds rely on an arbitrage mechanism to keep the prices at which they trade roughly in line with the net asset values of their underlying portfolios. For the mechanism to work, potential arbitragers need to have full and timely knowledge of a fund's holdings.

Applications of 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 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.
- ❖ **Equalizing 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.

Answer: 18. (c)

Investor Protection Fund is the fund set up by the Stock Exchanges to meet the legitimate investment claims of the clients of the defaulting members that are not of speculative nature. SEBI has prescribed guidelines for utilization of IPF at the Stock Exchanges. The Stock Exchanges have been permitted to fix suitable compensation limits, in consultation with the IPF/CPF Trust. It has been provided that the amount of compensation available

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against a single claim of an investor arising out of default by a member broker of a Stock Exchange shall not be less than ₹ 1 lakh in case of major Stock Exchanges viz., BSE and NSE, and ₹ 50,000/- in case of other Stock Exchanges.

Answer: 18. (d)

Arbitration is an alternative dispute resolution mechanism provided by a stock exchange for resolving disputes between the trading members and their clients in respect of trades done on the exchange.

Process for preferring arbitration:

The byelaws of the exchange provide the procedure for Arbitration. One can procure a form for filing arbitration from the concerned stock exchange. The arbitral tribunal has to make the arbitral award within 3 months from the date of entering upon the reference. The time taken to make an award cannot be extended beyond a maximum period of 6 months from the date of entering upon the reference.

Section II – Corporate Laws and Corporate Governance

19.

(a) Choose the most appropriate one from the stated options and write it down (only indicate A, B, C, D as you think correct):

(i) Under the Companies Act, 1956, the first directors shall hold office up to -

- (A)** The end of the statutory meeting
- (B)** The end of the period as prescribed by the articles of the company
- (C)** The end of three years from the date of appointment
- (D)** Till the first Annual General Meeting

(ii) In the context of classification of risk, tax risks will fall under _____.

- (A)** Credit Risks
- (B)** Liquidity Risk
- (C)** Disaster Risks
- (D)** Legal Risks

(iii) The Competition Commission shall consist of a Chairperson and not more than _____ other Members to be appointed by the Central Govt.

- (A)** 5
- (B)** 10
- (C)** 15
- (D)** 20

(iv) In a Public Limited Company there are 10 directors including Managing Director and a nominee of ICICI. How many directors are liable to retire by rotation?

- (A) 4
- (B) 5
- (C) 6
- (D) 7

- (v) If in a general meeting of a Company, a matter could not be resolved because of tie, then -
- (A) Meeting will be adjourned
 - (B) Meeting will be postponed
 - (C) Chairman of the meeting can give his second/casting vote
 - (D) Managing Director can give his casting/second vote

(b) Fill in the Blanks in the following sentences by using appropriate words/phrases:

- (i) The prospectus issued by a financial institution for one or more issues of securities specified therein, is called _____ prospectus.
- (ii) _____ is not a linear process; it is the balancing of a number of interwoven elements.
- (iii) Where the company fails to register the charge, the charge becomes void as against the _____.
- (iv) The provisions relating to dissolution of a company and revival of a dissolved company are contained in _____ respectively.
- (v) As per section 58AA, a small depositor' means a depositor who has deposited in a financial year a sum not exceeding _____ in a company and includes his successors, nominees and legal representatives.

Answer 19(a):

- (i) (D)
- (ii) (B)
- (iii) (B)
- (iv) (C)
- (v) (C)

Answer 19(b):

- (i) Shelf
- (ii) Risk management
- (iii) Creditor as well as the liquidator
- (iv) Sections 481 and 559
- (v) ₹20,000

20.

- (a) The object clause of the Memorandum of a company empowers it to carry on distillery business and any other business that is allied to it. The company wants to alter its Memorandum so as to include the cinema business in its objects clause. Advise the**

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company.

- (b) Pareek Carriers Limited appointed Mr. Rohan as its auditor in the Annual General Meeting held on 30th September, 2012. Initially, he accepted the appointment. But he resigned from his office on 31st October, 2012 for personal reasons. The Board of Directors seeks your advice for filling up the vacancy by appointment of Mr. Albert as auditor. Advise.
- (c) A public company proposes to purchase its own shares. State the source of funds that can be utilized by the Company for purchasing its own shares and the requirements to be complied with, before and after the shares are so purchased.

Answer 20(a):

Section 17(1) of the Companies Act, 1956 permits alteration of Memorandum by passing a special resolution to carry on some business which under existing circumstances may conveniently or advantageously be combined with the business of the company.

Thus section 17(1) does not prohibit a company to diversify in areas other than those specified in the Memorandum. But, the business sought to be added must be such which can conveniently or advantageously be combined with the business of the company. The Punjab High Court in Punjab Distilling Industries Ltd. V. Registrar of Companies [1963] 83 Comp. Cas. 811 held that the cinema business could not be either conveniently or advantageously combined with the distillery business and, therefore, disallowed change of objects. Accordingly, alteration shall not be allowed.

Answer 20(b):

The Board may fill any casual vacancy in the office of an auditor. However, where a casual vacancy is caused by the resignation of an auditor, the vacancy shall be filled by the shareholders in general meeting.

In the present case, Mr. Rohan has resigned from his office after accepting the appointment. This results in a casual vacancy in the office of auditor. Since the reason for casual vacancy is the resignation of the auditor, it can only be filled by the shareholders in general meeting. The Board should call an Extraordinary General Meeting for the purpose of appointing Mr. Albert as an auditor to fill up the resulting casual vacancy. If an ordinary resolution is passed for appointment of Mr. Albert as an auditor, then, Mr. Albert shall be the auditor of the company till the conclusion of the next Annual General Meeting.

In case Mr. Albert is appointed as an auditor in the Extraordinary General Meeting, he may be removed from his office even before the expiry of his term, viz. the conclusion of next Annual General Meeting.

Answer 20(c):

Section 77(1) of the Companies Act provides that a company limited by shares or a company limited by guarantee having a share capital cannot buy its own shares. The restriction is applicable to all companies having share capital, whether public or private. However, the Companies (Amendment) Act, 1999, vide sections 77A, 77AA and 77B and

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the guidelines issued by SEBI and the Deptt. Of Company Affairs, in this regard, allow companies to purchase their own shares or other securities subject to certain conditions:

SOURCES OF FUNDS FOR BUY-BACK [SECTION 77 A (1)]:

A company may purchase its own shares or other specified securities out of:

- (i) its free reserves; or
- (ii) the securities premium account; or
- (iii) the proceeds of any shares or other specified securities;

Provided that no buy-back of any kind of shares or other specified securities shall be made out of the proceeds of an earlier issue of the same kind of shares or same kind of other specified securities.

CONDITIONS FOR BUY-BACK [SECTION 77A (2)]:

1. **Authorised by Articles:** The buy-back must be authorized by the **Articles**.
2. **Special Resolution/Board's Resolution:** The **special resolution** must be passed in the General Meeting of shareholders.

OR

The Board must pass a resolution at its meeting where the buy-back does not exceed 10% of the total equity paid up capital and free reserves of the company.

3. **Minimum Time Interval between two Buy-back:** No offer of buy back must be made within a period of 365 days from the date of preceding offer of buy-back.
4. **Overall Maximum Limit:** The buy-back of the shares must not exceed 25% of total paid-up capital and free reserves.
5. **Maximum Limit of Buy-back in any Financial Year:** The buy-back of equity shares in any financial year must not exceed 25% of its total paid up equity capital.
6. **Maximum Debt-Equity Ratio:** The debt-equity ratio must not be more than 2:1 after such buy-back.

Here Debt = Secured + Unsecured Debt and Equity = Capital + Free Reserves
Free Reserves = Free Reserves as per Sec 372A + Securities Premium as per Sec 78.

7. **Fully Paid Shares:** All the shares for buy-back must be fully paid-up.
8. **Time Limit:** The buy-back must be completed within 12 months from the date of passing the Special Resolution/Board's Resolution.
9. **Solvency Declaration:** The Company must file solvency declaration with the Registrar and SEBI in the form of an affidavit signed by at least two directors of the company. The affidavit must state that the Board has made full inquiry into the affairs of the company as a result of which they have formed an opinion that the company is capable of meeting its liabilities and will not render insolvent within a period of one year from the date of declaration adopted by the Board [77A(6)].
10. **Transfer of Certain Sums to Capital Redemption Reserve Account:** Where a company purchases its own shares out of free reserves, than a sum equal to the nominal value

of the shares so purchased shall be transferred to the capital redemption reserve account referred to in Clause (d) of the proviso to Sub-section (1) of Section 80 and details of such transfer shall be disclosed in the balance sheet.

11. As per SEBI Guidelines: Buy-back must be as per SEBI Guidelines.

MODE OF BUY-BACK [SECTION 77A (5)]:

The buy-back may be:

- (a) from the existing security holders on a proportionate basis; or
- (b) from the open market; or
- (c) from odd lots, that is to say, where the lot of securities of a public company, whose shares are listed on a recognised stock exchange, is smaller than such marketable lot, as may be specified by the stock exchange; or
- (d) by purchasing the securities issued to employees of the company pursuant to a scheme of stock option or sweat equity.

POST BUY-BACK:

- 1. Extinguishment of Certificates within 7 days [Sec 77A(7)]:** Where a company buys-back its own shares, it must extinguish and physically destroy the securities so bought back within 7 days of the last date of completion of buy-back in the presence of merchant bankers or Registrar or Statutory auditor.
- 2. No Further issue within a Period of 6 Months [Section 77A(8)]:** Where a company completes a buy-back of its shares or other specified securities under this section, it must not make further issue of same kind of shares (including allotment of further shares under section 81 (1)(a) or other specified securities within a period of 6 months except by way of bonus issue or in the discharge of subsisting obligations such as conversion of warrants, stock option schemes, sweat equity or conversion of preference shares or debentures into equity shares.
- 3. Register of Buy-back Securities [Section 77A(9)]:** Where a company buys back its securities under this section, it must maintain a register of the securities so bought, the consideration paid for the securities bought-back, the date of cancellation of securities, the date of extinguishing and physically destroying of securities and such other particulars as may be prescribed.
- 4. Filing of Buy-back Return [Section 77A(10)]:** A company must, after completion of the buy-back under this section, file with the Registrar and the SEBI, a return containing prescribed particulars.

Provided that no return is to be filed with the SEBI by a company whose shares are not listed on any recognised stock exchange.

- 5. Penalty for Default [Section 77A(11)]:** In case of default the company or its officer in default shall be punishable with imprisonment for a term upto 2 years, or with fine upto ₹ 50,000 or with both.

21.

(a) PQR Limited had taken a loan of ₹2 crores from a bank secured by some of its assets. The company has defaulted in the matter of payment of some installments of loan as per terms of the loan agreement. The bank has filed a petition in the High Court on the ground that the company is unable to pay its debts.

The company opposes the petition for winding up on the ground that it has employed 1,000 workers, paid their salaries regularly and that it has paid all the tax dues to the Government. The company has further contended that if the company is compelled to repay the loan immediately, it will cripple the company causing hardship to employees and other persons having business dealings with the company. The company is also supported by some major creditors.

Explain the circumstances under which a company may be ordered to be wound up by the Court on the ground of inability to pay its debts and whether the bank will succeed in this case.

(b) ACE Automobiles Limited is a company engaged in the manufacture of Cars. The company's investment in the shares of other bodies corporate and the loans made to other bodies corporate exceed 60 percent of its paid up share capital and free reserves and also 100 percent of its free reserves. The company has obtained a term loan from the Industrial Credit and Investment Corporation of India Limited. The company proposes to increase its investment in the equity shares of ACE Forgings Limited from 60 percent to 70 percent of the equity share capital of ACE Forgings Limited purchase of shares from the Foreign Collaborator. State the legal requirements to be complied with by ACE Automobiles Limited under the Companies Act to give effect to the above proposal. Will your answer be different if the company has defaulted in repayment of matured deposits accepted from the public?

(c) Your help is sought in drafting the relevant portion of Directors' Responsibility Statement forming part of Directors' Report.

Answer 21(a):

The Court may order the winding up of a company under any of the circumstances mentioned under section 433(a) to (f). Section 433(e) provides that a company may be wound up by the Court if it is unable to pay its debts. As per section 434, a company shall be deemed to be unable to pay its debts in the following circumstances:

1. When a company fails in paying its debts exceeding ₹500 within 3 weeks from the date of demand by its creditors.
2. When the company fails to satisfy a Court decree, in favour of a creditor, whether whole or in part.
3. When it is proved that the company is unable to pay its debts.

Applying the principles laid down in *Tata Iron and Steel Co. v Micro Forge (India) Ltd.* 2000 CLC 1669 to the given case, it is very unlikely that the Court would order winding up of the company because of the following reasons:

(a) Section 433 is indicative of the fact that even if one or more grounds mentioned in

- section 433 exist, it is not obligatory for the Court to make an order of winding up. The Court has discretionary power. The Court must in each case exercise its discretion in deciding whether in the circumstances of the case, it would be in the interest of justice to wind up the company. The Court would take into consideration the entire status and position of the company in the market, and the element of public policy.
- (b) The company has employed 1,000 workers and is paying their salaries regularly. Winding up the company would mean loss of employment to the existing employees. It would also result in diminishing employment opportunities.
 - (c) The company is paying taxes to the Government regularly. Winding up order would result in loss of revenue to the Government.
 - (d) The other creditors of the company have opposed the winding up petition which means that winding up order would not benefit the company's creditors in general. Therefore, winding up order shall not be made on a creditor's petition.
 - (e) The company seems to be in a temporary cash crisis. The Court would give the company some time to come out of the momentary financial crisis.
 - (f) The company is an ongoing concern having regular business and employment of employees. The effect of winding up would be of putting an end to the business resulting in loss of employment to several employees and loss of production and effect on the larger interest of the society.

Answer 21(b):

As per section 372A(8), any loans, investments etc. made by a holding company in its wholly owned subsidiary are outside the purview of Section 372A. However, ACE Forgings Ltd. is not a wholly owned subsidiary of ACE Automobiles Ltd and hence investment in ACE Forgings Ltd. is not covered by the exemption under section 372(8).

The aggregate of loans and investments already made by ACE Automobiles Ltd. exceeds the two limits of 60% and 100% specified under section 372A. Therefore, the company can make new inter-corporate investments only by passing a special resolution.

The proposed investment can be made as follows:

- (a) A resolution shall be passed at a Board meeting with the consent of all the directors present.
- (b) A special resolution shall be passed in the general meeting. The notice of special resolution must indicate clearly the specific limits, the particulars of the body corporate in which the investment is proposed to be made, the purpose of the investment, specific source of funding and other similar details.
- (c) ICICI Ltd. is a Public Financial Institution within the meaning of section 4A. Since, the aggregate investments exceed the limit of 60%, prior approval of ICICI Limited shall be obtained.
- (d) The company shall enter the prescribed particulars of the investment in the register maintained for this purpose within 7 days of making the investment.
- (e) The company shall ensure that no default in compliance with section 58A (relating to public deposits) is subsisting.

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If the company has defaulted in repayment of public deposits, the company cannot make any investments even if special resolution and resolution of Board is passed. The investments can be made only after the default has been made good.

Answer 21(c):

Pursuant to the requirements of Section 217(2AA) of the Companies Act, 1956, it is hereby confirmed:

- (i) That in preparation of the annual accounts, the applicable accounting standards have been followed and that no material departures have been made from the same.
- (ii) That the Directors has selected such accounting policies and applied them consistently and made judgements and estimates that are reasonable and prudent so as to give a true and fair view of the state of affairs of the company as at 31st March, 2013 and of the profit of the company for the year ended 31st March, 2013.
- (iii) That the Directors had taken proper and sufficient care for the maintenance of adequate accounting records in accordance with the provisions of the Companies Act, 1956, for safeguarding the assets of the company and for preventing and detecting fraud and other irregularities;
- (iv) That the Directors had prepared the annual accounts for the year ended 31st March, 2013 on a going concern basis.

22.

- (a) Board of Directors of M/s. RPP Ltd in its meeting held on 29th May, 2012 declared an interim dividend payable on paid up Equity Share Capital of the Company. In the Board Meeting scheduled for 10th June, 2012, the Board wants to revoke the said declaration. You are required to state with reference to the provisions of the Companies Act, 1956 whether the Board of Directors can do so.
- (b) Poly Ltd., (hereinafter referred to as 'Seller'), manufacturer of footwears entered into an agreement with City Traders (hereinafter referred to as 'Purchaser'), for the sale of its products. The agreement includes, among others, the following clauses:
 - (i) That the Purchaser shall not deal with goods, products, articles by whatever name called, manufactured by any person other than the Seller.
 - (ii) That the Purchaser shall not sell the goods manufactured by the Seller outside the municipal limits of the city of Secunderabad.
 - (iii) That the Purchaser shall sell the goods manufactured by the Seller at the price as embossed on the price label of the footwear. However, the purchaser is allowed to sale the footwear at prices lower than those embossed on the price label.

You are required to examine with relevant provisions of the Competition Act 2002, the validity of the above clauses. Section 3(1) prohibits entering into any agreement in respect of production, supply, distribution, storage, acquisition or control of goods or provision of services, which causes or is likely to cause an appreciable adverse effect on competition within India. Any such agreement, if made, shall be void.

- (c) Ganga Ltd. and Jamuna Ltd. entered into a scheme of amalgamation by which former would transfer its entire undertaking to the later. However, the Central Govt. raised an objection that

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unless the objects clause of the companies are similar and the Memorandum empowers to do so, the scheme of amalgamation cannot be permitted. Is the objection of the Central Govt. tenable?

Answer 22 (a):

As per section 2(14A), dividend includes any interim dividend. Therefore, all the provisions applicable to final dividend shall equally apply to interim dividend.

Thus, interim dividend once declared, like final dividend, is a debt due from the company. Accordingly, once declared, interim dividend cannot be revoked except under the same circumstances in which the final dividend can be revoked.

The amount of interim dividend is to be compulsorily deposited in a separate bank account, within 5 days of passing the Board resolution declaring the interim dividend [Section 205(1A)].

The provisions contained in sections 205, 205A, 205C, 206, 206A and 207 shall, as far as may be, also apply to any interim dividend [Section 205(1C)].

As per section 207, dividend must be paid within 30 days of its declaration. Thus, interim dividend must also be paid within 30 days of its declaration, i.e., within 30 days of date of passing the Board resolution declaring the interim dividend.

In the instant case, on declaration of interim dividend by the Board in a Board Meeting held on 29th May, 2012, the Liability of the company to pay the interim dividend has become certain, and the payment of interim dividend must be made within next 30 days, viz. on or before 28th June 2012.

Therefore, revocation of interim dividend in the Board Meeting held on 10th June is not possible.

Answer 22(b):

The following agreements shall be deemed to be prohibited under section 3(1), if such agreements cause or are likely to cause an appreciable adverse effect on competition:

- (a) Tie-in arrangement, i.e., an agreement requiring a purchaser of goods, as a condition of such purchase, to purchase some other goods.
- (b) Exclusive supply agreement, i.e., an agreement restricting in any manner the purchaser in the course of his trade from acquiring or otherwise dealing in any goods other than those of the seller or any other person.
- (c) Exclusive distribution agreement, i.e., an agreement to limit, restrict or withhold the output or supply of any goods or allocate any area or market for the disposal or sale of the goods.
- (d) Refusal to deal, i.e., an agreement which restricts, or is likely to restrict, by any method the persons or classes of persons to whom goods are sold or from whom goods are bought.
- (e) Resale price maintenance, i.e., an agreement to sell goods on condition that the prices to be charged on the resale by the purchaser shall be the prices stipulated by the seller unless it is clearly stated that prices lower than those prices may be

charged.

The answers to the given problems are given hereunder:

- (i) The Purchaser is prohibited from dealing with goods, products, articles, by whatever name called, manufactured by any person other than the Seller. This clause falls under 'Exclusive Supply Agreement' and is deemed to be prohibited under section 3(1), if it causes or is likely to cause an appreciable adverse effect on competition.
- (ii) The Purchaser is prohibited from selling the goods manufactured by the Seller outside the municipal limits of the city of Secunderabad. This clause falls under 'Exclusive Distribution Agreement' and is deemed to be prohibited under section 3(1), if it causes or is likely to cause an appreciable adverse effect on competition.
- (iii) The Purchaser has been directed by the seller to sell the goods manufactured by the Seller at the price as embossed on the price label of the footwear, or at a price lower than what is embossed on the price label. Since the agreement clearly states that the prices lower than the price stipulated by the Seller can be charged, the agreement does not fall under the clause 'Resale Price Maintenance', and is therefore valid.

Answer 22(c):

The power to amalgamate may be derived from the Memorandum of Association of the company or it may be acquired by resorting to the Companies Act, 1956.

Section 17 of the Companies Act, 1956 lays down that a company which desires to amalgamate with another company will take necessary steps to come before a Court for alteration of its Memorandum authorizing such amalgamation. The Companies Act, 1956 confers a right on a company to alter its Memorandum in aid of amalgamation with another company. The provisions contained in section 391 to 396 and 494, illustrate instances of statutory power of amalgamating a company with another company without any specific power in the Memorandum [Hari Krishna Lohia vs. Hoolungoore Tea Co. Ltd. 1996].

Section 391 is not only a complete code, but it is the nature of a single window clearance system to ensure that parties are not put to avoidable, unnecessary and cumbersome procedure for making repeated applications to court for various alternations and changes. What is to be seen is the over all fairness mid feasibility of scheme of amalgamation and there need not be any 'unison of objects' of both transferor and the transferee company. [R Morarjee Gokuldas Spg. Wrg. Co., 1995].

To amalgamate with another company is the power of the company and not an object of the company. [Re. Hari Krishna Lohia, 1996]. Irrespective of the objects clause, the Court is empowered to sanction scheme of amalgamation provided it does not prejudice the interest of the public. Therefore, based on the above judicial rulings, the contention of the Central Govt. is not tenable in law.

23.

- (a) Under what circumstances can a company reduce its Share Capital? Describe the formalities to be complied with & procedure to be followed in this respect.
- (b) State with reference to the relevant provisions of the Companies Act, 1956 whether the following persons can be appointed as a director of a public company:
- (i) Mr. A, who has huge personal liabilities far in excess of his assets and properties, has applied to the court for adjudicating him as an insolvent and such application is pending.
 - (ii) Mr. B, who was caught red-handed in a shop lifting case two years ago, was convicted by a Court and sentenced to imprisonment for a period of eight weeks.
 - (iii) Mr. C, a former bank executive, was convicted by a Court eight years ago for embezzlement of funds and sentenced to imprisonment for a period of one year.
 - (iv) Mr. D is a director of DLT Limited, which has not filed its annual returns pertaining to the annual general meetings held in the calendar years 2010, 2011 and 2012.
- (c) The Audit Committee of LALOO PHARMA LTD constituted u/s 292A of the Companies Act, 1956 submitted to the Board of Directors a report containing its recommendations. These recommendations were however not accepted by the Board. In this scenario state your views on the following:
- (i) Can the Board adopt the stand of not accepting the Audit Committee's recommendations?
 - (ii) If yes, that the Board does not accept the recommendations what should the Board do?
 - (iii) How should the Chairman of the Audit Committee respond?

Answer 23(a):

1. Meaning of Reduction of Share Capital [Section 100]:

Reduction of share capital may involve reduction in respect of that portion of:

- (a) issued capital which has been subscribed, called up and paid up, or
- (b) issued capital which has been subscribed but not called up.

2. To which Company the Restriction as to Reduction of Share Capital applies:

The restriction as to reduction of share capital applies to the following two companies:

- (a) A company limited by shares
- (b) A company limited by guarantee having share capital.

Thus, such restrictions do not apply to unlimited companies whether having share capital or not and companies limited by guarantee not having share capital.

3. Manner of Capital Reduction:

A company may reduce its share capital in any way and in particular:

- (a) by extinguishing or reducing the liability of members in respect of capital not paid up. e.g. where the shares of ₹100 each with ₹75 paid up are reduced to ₹75 fully paid up shares, the shareholders are relieved from liability on the uncalled capital of ₹ 25 per share.

- (b) by cancelling any paid up share capital which is lost or is unrepresented by available assets, with or without extinguishing or reducing liability of members.
- (c) by paying off any paid up share capital which is in excess of the wants of the company with or without extinguishing or reducing liability.

4. Procedure for Reduction of Capital

The procedure for reducing the capital is given below:

(a) Authorised by Articles The articles must authorise the company to reduce the share capital. If the articles do not so authorise, then these must be altered by a special resolution first.

Note: It is not enough to provide this authority in the Memorandum.

(b) Special Resolution A special resolution must be passed at a general meeting.

(c) Court's Confirmation After passing the special resolution, the company has to apply to the court [now Tribunal vide Companies (Second Amendment) Act, 2002] for an order confirming the reduction.

Answer 23(b):

As per section 274, following persons are disqualified to become a director:

- (a) A person who has been found to be of unsound mind by a Court of competent jurisdiction.
- (b) A person who is an un-discharged insolvent.
- (c) A person who has applied to be adjudicated as an insolvent.
- (d) A person who has been convicted by a Court of any offence involving moral turpitude and sentenced to imprisonment for 6 months or more for such offence, and 5 years have not elapsed from the date of expiry of the sentence.
- (e) A person who has not paid any call on shares and 6 months has elapsed from the last day fixed for the payment of the call.
- (f) A person who is disqualified by an order of the Court under section 203 on the ground of fraud or misfeasance in relation to a company.
- (g) A director of a public company which has committed any of the following two defaults:
 - (i) Failure to file the annual accounts and annual returns for any continuous 3 financial years commencing on and after 1.4.1999.
 - (ii) Failure to repay its deposit or interest thereon on due date or redeem its debentures on due date or pay dividend and such failure continues for 1 year or more.

However, the disqualification specified under section 274(1)(g) shall remain in force for a period of 5 years only. Also, such disqualification shall apply only in respect of an appointment in a public company, i.e., even if a director has incurred such disqualification, he can be appointed as a director in a private company.

The given problems are discussed as under:

- (i) A person is disqualified if he himself applies to the Court for adjudicating him as an insolvent [Section 274(1)(c)]. Since, Mr. A has himself applied to the court for

adjudicating him as an insolvent; he is disqualified for directorship even if his application is pending.

- (ii) A person is disqualified only if he is convicted by a Court of any offence involving moral turpitude and sentenced to imprisonment for 6 months or more [Section 274(1)(d)]. In the present case Mr. B was caught red-handed in a shop lifting case and was sentenced to imprisonment for a period of 8 weeks, i.e., less than 6 months. Since the requirements of section 274(1)(d) are not satisfied, he is not disqualified for directorship.
- (iii) A person is disqualified if he is convicted by a Court of any offence involving moral turpitude and sentenced to imprisonment for 6 months or more. However, such disqualification shall remain in force for a period of 5 years only [Section 274(1)(d)]. In the present case Mr. C was convicted 8 years ago. Since the requirements of section 274(1)(d) are not satisfied, he is, at present, eligible to become a director.
- (iv) Disqualification specified under section 274(1)(g) applies only if the default is in filing of annual accounts as well as annual returns for 3 continuous financial years commencing on and after 01.4.1999. In the present case the public company, in which Mr. D is a director, has not filed its annual returns for three continuous financial years. However, the information relating to filing of annual accounts for these 3 financial years has not been provided. Assuming that the company has filed annual accounts in respect of at least one financial year out of the given 3 financial years, the requirements of section 274(1)(g) are not satisfied. Therefore, Mr. D is not disqualified for directorship.

Comment: The articles of a private company may provide additional grounds for disqualification of a director.

Therefore, in cases (i), (ii) and (iii) above, the concerned person shall be disqualified for directorship if:

- (a) the company is a private company; and
- (b) it has inserted in its articles, additional grounds for disqualification of a director, and such additional ground covers the situation given in case (i), (ii) or (iii) above.

Answer 23(c):

- (i) As per Section 292A (6) the recommendations of the Audit Committee shall be binding on the Board of Directors, in so far as relating to the Financial Management including audit report. In respect of other matters, the recommendations are not binding on the board.
- (ii) Section 292A (7) enjoins that if the Board does not accept the recommendations of the Audit Committee, it shall record the reasons therefore and communicate such reasons to the shareholders.
- (iii) As per Section 292A (10) of the Companies Act 1956, the Chairman of the Audit Committee shall attend the Annual General Meeting(s) of the company to provide any clarifications on matters relating to audit. Beyond this, the Chairman of the Audit Committee cannot do anything in the case of non-listed companies. It may be noted

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that in case of listed companies, clause 49 of the Listing Agreement gives more power to the Audit Committee in this context.

24.

- (a) ABC Private Limited is a company in which there are eight shareholders. Can a member holding less than 1/10th of the share capital of the company apply to the Company Law Board for the relief against oppression and mismanagement? It is alleged by the said member that the directors of the company have misused their position in making certain inter-corporate deposits which are against the interests of the company. Will the Company Law Board entertain application containing such allegation in the case of private company?
- (b) The United Traders Association was constituted by two joint Hindu Families consisting of 21 major and 5 minor members. The Association was carrying the business of trading as Retailers, with the object for acquisitions of gain. The Association was not registered as a Company under the Companies Act, 1956 or other law. State whether United Traders Association is having any legal status? Will there be any change in the status of the Association if the members of the United Traders Association subsequently reduced to 15?
- (c) The Articles of Association of a Private Limited Company contain provisions restricting the right to transfer shares and limiting the number of member to 50. What restrictions are generally incorporated in the AOA in restricting the right to transfer shares?

Answer 24(a):

As per section 399, in the case of a company having a share capital, members eligible to apply for oppression and mismanagement shall be lowest of the following:

- (a) 100 members; or
- (b) 1/10th of the total number of members; or
- (c) Members holding not less than 1/10th of the issued share capital of the company.

In the given case, there are eight shareholders. Thus, 1/10th of 8 comes to 1 member. Therefore a single member can present a petition to the Company Law Board, regardless of the fact that he holds less than 1/10th of the share capital of the company, provided he must have paid all the calls and other sums due on his shares.

As regards the propriety rights in inter-corporate loans by a private limited company, they are not closely regulated by the Company Law Board as in the case of public companies. Although the Board of directors is the best to judge and to take a commercial decision in this regard yet the matter should be looked into if the Board has acted mala fide. Therefore, the Company Law Board may look into the allegation lodged by the member.

Answer 24(b):

Since two HUFs carry on business, Sec.11 is applicable. United Traders Association will be regarded as illegal since the number of members is 21 (i.e., exceeds 20) (Minor members excluded) and not registered under Companies Act or any other Indian Law.

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The illegality of an Illegal Association cannot be cured by a subsequent reduction in the number of its members.

Answer 24(c):

The right of transfer of shares and limiting the number of members to 50 is generally restricted in the following manner –

1. Authorizing the Directors to refuse transfer of Shares to persons whom they do not approve or by compelling the Shareholder to offer the shareholding to the existing Shareholders first. The Company can only restrict the right of sale to a Member. So, the Articles usually provide that before selling or transferring his share by the Shareholder, the Directors must be communicated in writing of such intention of the Shareholder.
2. By specifying the method for calculating the price at which the Share may be sold by one member to another. Generally it is left to be determined either by the Auditor of the Company or by the Company at General Meeting.
3. By providing that the Shareholders who are the Employees of the Company, shall offer the shares to specified persons or class of persons when they leave the Company's service.

25.

- (a) **"Good corporates are not born, but are made by the combined efforts of all stakeholders, board of directors, government and the society at large." In the light of this statement, bring out the elements of good Corporate Governance in India.**

Or

"Corporate governance extends beyond corporate law. Its fundamental objective is not mere fulfillment of the requirements of law, but in ensuring commitment of the Board of directors in managing the company in a transparent manner for maximizing stakeholders' value."

In the light of this statement, discuss the various factors which add greater value through good governance.

- (b) **What is Demerger?**

- (c) **A scheme of amalgamation was approved by overwhelming majority of members of both the merging companies. The exchange ratio was fixed by a firm of reputed Chartered Accountants. When the scheme of amalgamation awaiting sanction of the Court, the exchange ratio was questioned by a small group of dissenting shareholders of the merging companies. Examine with reference to decided case law whether the objection is likely to be sustained. What would be your answer in case similar objection was raised by the Central Government and not by the members of the merging companies?**

Answer 25(a):

Yes, Corporate Governance extends beyond corporate law. Its fundamental objective is not mere fulfillment of the requirements of law, but in ensuring commitment of the Board

of Directors in managing the company in a transparent manner for maximizing stakeholders' value.

In the light of the above statement, the following factors add greater value through good governance:

(i) Role and powers of Board

Good governance is decisively the manifestation of personal beliefs and values which configure the organizational values, beliefs and actions of its Board. The Board as a main functionary is primary responsible to ensure value creation for its stakeholders. The absence of clearly designated role and powers of Board weakens accountability mechanism and threatens the achievement of organizational goals. Therefore, the foremost requirement of good governance is the clear identification of powers, roles, responsibilities and accountability of the Board, CEO, and the Chairman of the Board. The role of the Board should be clearly documented in a Board Charter.

(ii) Legislation:

Clear and unambiguous legislation and regulations are fundamental to effective corporate governance. Legislation that requires continuing legal interpretation or is difficult to interpret on a day-to-day basis can be subject to deliberate manipulation or inadvertent misinterpretation.

(iii) Management environment

Management environment includes setting-up of clear objectives and appropriate ethical framework, establishing due processes, providing for transparency and clear enunciation of responsibility and accountability, implementing sound business planning, encouraging business risk assessment, having right people and right skill for the jobs, establishing clear boundaries for acceptable behaviour, establishing performance evaluation measures and evaluating performance and sufficiently recognizing individual and group contribution.

(iv) Board skills

To be able to undertake its functions efficiently and effectively, the Board must possess the necessary blend of qualities, skills, knowledge and experience. Each of the directors should make quality contribution. A Board should have a mix of the following skills, knowledge and experience:

- Operational or technical expertise, commitment to establish leadership;
- Financial skills;
- Legal skills; and
- Knowledge of Government and Regulatory requirement.

(v) Board appointments

To ensure that the most competent people are appointed in the Board, the Board positions should be filled through the process of extensive search. A well-defined and open procedure must be in place for reappointments as well as for appointment of new directors. Appointment mechanism should satisfy all statutory and administrative requirements. High on the priority should be an understanding of skill requirements of the Board particularly at the time of making a choice for appointing a new director. All new directors should be provided with a letter of appointment setting out in detail their duties and responsibilities.

(vi) Board induction and training

Directors must have a broad understanding of the area of operation of the company's business, corporate strategy and challenges being faced by the Board. Attendance at continuing education and professional development programmes is essential to ensure that directors remain abreast of all developments, which are or may impact on their corporate governance and other related duties.

(vii) Board independence

Independent Board is essential for sound corporate governance. This goal may be achieved by associating sufficient number of independent directors with the Board. Independence of directors would ensure that there are no actual or perceived conflicts of interest. It also ensures that the Board is effective in supervising and, where necessary, challenging the activities of management. The Board needs to be capable of assessing the performance of managers with an objective perspective. Accordingly, the majority of Board members should be independent of both the management team and any commercial dealings with the company.

(viii) Board meetings

Directors must devote sufficient time and give due attention to meet their obligations. Attending Board meetings regularly and preparing thoroughly before entering the Boardroom increases the quality of interaction at Board meetings. Board meetings are the forums for Board decision-making. These meetings enable directors to discharge their responsibilities. The effectiveness of Board meetings is dependent on carefully planned agendas and providing relevant papers and materials to directors sufficiently prior to Board meetings.

(ix) Code of conduct

It is essential that the organization's explicitly prescribed norms of ethical practices and code of conduct are communicated to all stakeholders and are clearly understood and followed by each member of the organization. Systems should be in place to periodically measure, evaluate and if possible recognise the adherence to code of conduct.

(x) Strategy setting

The objectives of the company must be clearly documented in a long-term corporate strategy including an annual business plan together with achievable and measurable performance targets and milestones.

(xi) Business and community obligations

Though basic activity of a business entity is inherently commercial yet it must also take care of community's obligations. Commercial objectives and community service obligations should be clearly documented after approval by the Board. The stakeholders must be informed about the proposed and ongoing initiatives taken to meet the community obligations.

(xii) Financial and operational reporting

The Board requires comprehensive, regular, reliable, timely, correct and relevant information in a form and of a quality that is appropriate to discharge its function of monitoring corporate performance. For this purpose, clearly defined performance measures - financial and non-financial should be prescribed which would add to the efficiency and effectiveness of the organisation.

The reports and information provided by the management must be comprehensive but not so extensive and detailed as to hamper comprehension of the key issues. The reports should be available to Board members well in advance to allow informed decision-

making. Reporting should include status report about the state of implementation to facilitate the monitoring of the progress of all significant Board approved initiatives.

(xiii) Monitoring the Board performance

The Board must monitor and evaluate its combined performance and also that of individual directors at periodic intervals, using key performance indicators besides peer review. The Board should establish an appropriate mechanism for reporting the results of Board's performance evaluation results.

(xiv) Audit Committees

The Audit Committee is inter alia responsible for liaison with the management; internal and statutory auditors, reviewing the adequacy of internal control and compliance with significant policies and procedures, reporting to the Board on the key issues. The quality of Audit Committee significantly contributes to the governance of the company.

(xv) Risk management

Risk is an important element of corporate functioning and governance. There should be a clearly established process of identifying, analyzing and treating risks, which could prevent the company from effectively achieving its objectives. It also involves establishing a link between risk-return and resourcing priorities. Appropriate control procedures in the form of a risk management plan must be put in place to manage risk throughout the organization. The plan should cover activities as diverse as review of operating performance, effective use of information technology, contracting out and outsourcing.

Answer 25(b):

Demerger is the converse of a merger or acquisition. It describes a form of restructure in which shareholders or unit holders in the parent company gain direct ownership in a subsidiary (the 'demerged entity'). Underlying ownership of the companies and/or trusts that formed part of the group does not change. The company or trust that ceases to own the entity is known as the 'demerging entity'. If the parent company holds a majority stake in the demerged entity, the resulting company is referred to as the subsidiary.

In a market of falling prices, mergers and IPOs are less popular, and the merchant banks who earn their fees from corporate activity will start to look at demerger possibilities for their clients.

Answer 25(c):

On an application made to the court for sanctioning a scheme of amalgamation or reconstruction, the court may make an order sanctioning it. Once statutory formalities are complied with, the onus lies on those opposing the scheme to satisfy the court that the scheme is unfair or unreasonable or fraudulent [**Re. Hindustan General Electric Corporation Ltd. (1959); Re. Sussex Brick Co Ltd. (1960)**].

Where, the valuation is confirmed to be fair by eminent firm of Chartered Accountants and is also approved by overwhelming majority, the court will not find fault with the exchange ratio [**Re. Tata Oil Mills Co. Ltd., Re. Hindustan Lever Ltd.**].

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Where the exchange ratio was fixed by two reputed firms of Chartered Accountants who had examined the accounts, annual reports, working results and financial positions of the two companies and certified on that basis that the share exchange ratio of 5:2 was fair and reasonable, and the scheme was widely advertised, unanimously approved and no objection was raised by any of the affected quarters, and the Central Government had not affirmatively established that the valuation of assets was unfair or inequitable, the court refused to interfere [**M . G. Investment & Industrial Co. Ltd. vs. New Shorrock Spg. & Mfg. Co. Ltd.**].

Thus, if an overall consideration the court is satisfied as to feasibility of the scheme, it should not hesitate to grant sanction [**Re. Ucal Fuel Systems Ltd.**].

Applying the above court rulings, the given problems are answered as under:

- (i) The dissenting shareholders shall not succeed unless they satisfy the court that the valuation is grossly unfair [**Re. Piramal Spg. & Wvg. Mills Ltd.**].
- (ii) Even if exchange ratio is objected by the Central Government, the court may sanction the scheme, since the representation or opinion made by the Central Government to the court under section 394A is not binding on the court.

26.

- (a) Six out of seven signatures to the MOA were forged. The Company was registered and the Certificate of Incorporation was issued. Can the registration of the Company be challenged subsequently on the ground of forgery?
- (b) A Managing Director of a Company borrowed a sum of money by executing a document in which he forged the signature of two other Directors who are required to sign as per the requirements of Articles. Can the Company deny liability to Creditors?
- (c) What is Abridged Form of Prospectus? Under what circumstances such Abridged Prospectus is not required to be accompanied with the Share Application Form?

Answer 26(a):

As per Sec. 35,

Certificate of Incorporation given by ROC in respect of any association shall be conclusive evidence that –

- (a) All requirements of the Act have been complied with as to Registration, and matters precedent and incidental thereto, &
- (b) The Association is a Company authorized to be registered and duly registered under the Act.

Note: If MOA is found to be – (i) materially altered after signature but before registration, or (ii) is signed by only 1 person for all the 7 subscribers, or (iii) signatories are all infants (minors), the Certificate would be conclusive and would not affect the status and existence of Company as a legal person.

Registration cannot be challenged subsequently on the ground of forgery. Sec. 35 prevents the re-opening of matters prior and contemporary to the registration and essential thereto, and it places the existence of the Company as a legal person, beyond

doubt. Challenging the formation / registration of the Company is irrelevant, since the Certificate of Incorporation is conclusive, once it is issued. However, where the object of a Company is unlawful, the Certificate of Incorporation is not conclusive proof that the Company is sanctioned to carry out its illegal objects.

Answer 26(b):

The Doctrine of Indoor Management cannot be extended to cases of forgery. Transaction effected by forgery is void ab initio.

The Secretary of a Company forged signatures of two of Directors whose signatures were required under the AOA on a Share Certificate and issued Certificate without authority. Applicants were refused registration as members of the Company. The Certificate was held to be a nullity and holder of certificate was not allowed to take advantage of the Doctrine of Indoor Management - **Ruben vs Great Fingall Consolidated**.

But, a Company may be held liable for any fraudulent acts of its Officers acting under ostensible authority - **Sri Krishnan vs Modal Bros. & Co.**

Hence, in the given case, the Company will not be allowed to deny liability in order to defeat the bonafide claims of the Creditor.

Answer 26(c):

Abridged Form of Prospectus is a memorandum containing the salient features of a Prospectus. The Provisions relating to Abridged Form of Prospectus are:

1. **Need** – Abridged Form of Prospectus should be part of every application form issued for subscription to Shares in or Debentures of a Company. [Sec. 56(3)]
2. **Purpose** – For greater disclosure of information to prospective investors to enable them take informed decisions regarding investment in Shares and Debentures.
3. **Form** – Abridged Prospectus should be in Form 2A.
4. **Conditions** –
 - (a) Abridged Prospectus and Share Application Form should bear same printed number.
 - (b) The two should be separated by a perforated line, to enable the investor to detach the Application Form before submitting it to the Company or designated Bankers.
5. **Abridged Prospectus not required** – Proviso to Sec. 56(3): Where the Application Form is issued either –
 - (a) In connection with a invitation to a person to enter into an Underwriting Agreement with respect to the Shares or Debentures, or
 - (b) In relation to Shares or Debentures which are not offered to Public.

27.

- (a) Kari had subscribed for 1,000 Shares of a Company on the basis of a Prospectus which contained certain misleading statements. Kari was allotted these shares, but after 2 months, he transferred them to Avi. Avi wants to avoid the further liability on the Calls in respect of these shares on the grounds of misleading statements in Prospectus. Is Avi's

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action valid?

- (b) Under what situations an existing Company can offer new Shares to outsiders?
- (c) Mr. X had applied for the allotment of 1,000 Shares in a Company. No allotment of Shares was made to him by the Company. Later on, without any further application from Mr. X, the Company transferred 1,000 Partly – Paid Shares to him and placed his name in the Register of Members. Mr. X, knowing that his name was placed in the Register of Members, took no steps to get his name removed from the Register of Members. The Company later on made the Final Call. Mr. X refuses to pay for this call. Examine whether his (Mr. X's) refusal to pay for the call is tenable and whether he can escape himself from the liability as a Member of the Company.

Answer 27(a):

- (i) When there is a mis-statement of material information in a Prospectus and if it has induced any Shareholder to purchase Shares, he can rescind the contract and claim damages from the Company.
- (ii) For rescission of contract the Shareholder must have relied on the statement in the Prospectus while applying for Shares, and is not bound to verify the statement before relying upon it.
- (iii) In the given case, Avi acquired the shares only by transfer and not on the basis of the Prospectus. Hence, Avi cannot bring any action for rescission, on grounds of mis-statement in Prospectus.

Answer 27(b):

An existing Company can offer its shares on a Further Issue of Capital, to persons other than the existing Shareholders, in the following situations –

- (i) If Shares are offered by way of Private Placement, by a Private Company. [Sec. 81(3)]
- (ii) If Subscribed Capital is increased by way of conversion of Debentures / Loans based on option attached or Central Govt. direction. [Sec. 81(3)]
- (iii) If a Special Resolution is passed to that effect by the Company in General Meeting. [Sec. 81(1A)]
- (iv) If an Ordinary Resolution is passed at a General Meeting, and approval of Central Govt. is obtained, that the proposal is most beneficial to the Company. [Sec. 81(1A)]
- (v) If any Shareholder to whom Rights Shares are offered, declines to accept the Shares, the Board of Directors may dispose them off in a manner most beneficial to the company, i.e., allotment to other persons also. [Sec. 81(1)(d)]
- (vi) If the Offer is made within – (a) 2 years from the formation of the company, or (b) 1 year of the first allotment of Shares. [Sec. 81(1)(a)]

| Equity Shares to be issued to - | | |
|--|---|--|
| Existing Shareholders | Outsiders (other than Existing Shareholders) | |
| Based on Time limit | Before Time limit | After time Limit |
| After expiry of – (a) 2 years from formation, | Before expiry of – (a) 2 years from formation, | (a) Special Resolution at General Meeting |

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| | | |
|--|--|---|
| or (b) 1 year from Share allotment made for first time after formation whichever is earlier | or (b) 1 year from Share allotment made for first time after formation whichever is earlier | (b) Ordinary Resolution and approval of Central Govt. (c) Decline of offer by Shareholders |
|--|--|---|

Answer 27(c):

Mr. X is a Member of a Company by the principle of Estoppel, since his name is included in the Register of Members, and inspite of knowing this, he has not taken any steps to get his name removed from the Register.

In the event of winding-up, a Member by estoppels will be liable, like other genuine Members, as a Contributory [**Hans Raj vs Asthana**].

Therefore, Mr. X is liable to pay the Call Money due, and cannot escape from the liability of a Member. Mr. X's refusal to pay the Call Money is not tenable.

28.

- (a) **40 out of 100 Members of a Company submitted a requisition for holding of an EGM in order to remove Managing Director from Office. On the failure of the Company to call the meeting, the requisitionists themselves called the meeting at the Registered Office of the Company. On the appointed day, they could not hold the meeting at the Registered Office as it was kept under lock and key by the Managing Director himself. The Members held the meeting elsewhere and adopted a resolution removing the Managing Director from office. Is the resolution valid?**
- (b) **Explain clearly the meaning of 'Modification of Charge'.**
- (c) **When is a Debenture Certificate required to be issued? Are there any penal provisions for not issuing the Certificate within the stipulated period?**

Answer 28(a):

- ❖ The Requisition is made by Members holding 40% of the Voting Power. Hence, the minimum requirements as to Number of Requisitionists (atleast 1/10th Voting Power) is satisfied.
- ❖ When the EGM is not convened by the Company, the Requisitionists can themselves convene a General Meeting by themselves within 3 months from the date of requisition, at the Registered Office.
- ❖ Where the Registered Office is not made available (in this case by the deliberate act of the Managing Director), the Requisitionists can hold such meeting anywhere else. Hence, the above Meeting and Resolution is valid.

Answer 28(b):

- I. **Meaning:** It is the registration of the modification i.e., variation in the terms of agreement, either by mutual agreement or by operation of law. Assigning rights of the charge holder to a Third Party also constitutes modification of Charge. Modification of Charge should also be registered with the ROC in prescribed form.

II. Instances of Modification:

- (a) Varying any terms and conditions of the existing charge by agreement.
- (b) Modification pursuant to an agreement for enhancing or decreasing the limits.
- (c) Cessation of Pari Passu clause/charge.
- (d) Change in rate of interest (other than Bank Rate).
- (e) Change in Repayment Schedule of Loan (not applicable for Loans repayable on demand, e.g., Working Capital Loans like Cash Credit, Overdraft etc.) and
- (f) Partial release of the charge on a particular Asset or Property.

Answer 28(c):

I. Debenture Certificate: It shall be issued –

- (a) **In case of allotment** – within 3 months of allotment.
- (b) **In case of transfer** – within 2 months after the application for transfer.

II. Extension of Time Period: The Company can make an application to the Central Govt. for extension of the above time periods. The central Govt. may extend to a further period not exceeding 9 months, if it is satisfied that it is not possible for the Company to deliver the certificate within the specified periods.

III. Penalty: Non-compliance with the above will render the Company and its every Officer liable to a fine of upto ₹5,000 for every day of default.

IV. Power of Central Govt. to make order [Sec. 113(3)]:

- (a) **Application:** The person entitled to the Debenture Certificates may apply to Central Govt. if – (i) A notice has been served on the Company to make good any default [as to compliance with Sec. 113(1)], and (ii) the Company fails to do so within 10 days after service of Notice.
- (b) **Order:** Upon such application, the Central Govt. can direct the Company and any Officer to make good the default, within such time as may be specified by it in its order.
- (c) **Costs:** The Order may also provide for costs, which has to be borne by the Company or any Officer responsible for the default.

29.

- (a) **“Corporate governance is merely the set of processes, customs, policies, laws and institutions affecting the way a corporation is directed, administered or controlled”.** Critically examine this statement.
- (b) In the context of management audit, what is meant by “control risk” vis-a-vis detection of material misstatements in the financial statements? In this regard, what is “Control Risk at the maximum” and “Control Risk at less than the maximum”?
- (c) SHIKSHA TELECOM LTD., a private mobile operator had furnished confidential information relating to customer complaints lodged with the company during the quarter ended 31.3.2012 to a public authority. On an application under the Right to Information Act, 2005, the public authority wants to furnish the said information. The authority seeks the objections of SHIKSHA TELECOM LTD.
Can SHIKSHA TELECOM LTD. ask the public authority not to furnish the same on the grounds that the said information is confidential and that it may endanger its image in the market?

What decision should the public authority take?

Answer 29(a):

To say that Corporate Governance is merely the set of processes, customs, policies, laws and institutions affecting the way a corporation is directed, administered or controlled, depicts a narrow view. It is much more than this. Corporate Governance also includes the relationships among the many stakeholders involved and the goals for which the corporation is governed. The principal stakeholders are the shareholders, management and the board of directors. Other stakeholders include employees, suppliers, customers, banks and other lenders, regulators, the environment and the community at large.

The stakeholders may be internal stakeholders (promoters, members, employees, management and the board of directors) and external stakeholders (suppliers, customers, lenders, banks, the environment and the community at large, government and regulators.)

Corporate governance is a voluntary ethical code of business of companies. According to Cadbury Committee on financial aspects of corporate governance, "It is the system by which companies are directed and controlled. The Board of directors are responsible for the governance of their companies. The shareholders role in the governance is to appoint the directors and the auditors and to satisfy themselves that an appropriate governance structure is in place".

Answer 29(b):

Control Risk: The risk that the client's internal control policy and procedures are not effective in preventing or detecting material misstatements in the financial statements.

1. Control risk at the maximum

Conclusion based upon the auditor's judgement that the client's internal control policies and procedures do not reduce to a low level the potential that the financial statements are free of material errors and / or irregularities.

After reaching this assessment the auditor would only be required to document in his/her work papers the fact that control risk is at the maximum and not the basis for reaching this conclusion.

The auditor may decide control risk is at the maximum based upon management accounting technique called cost benefit decisions.

2. Control risk at less than the maximum

Based upon his / her initial understanding of the internal control components, the auditor may conclude that control risk may be less than the maximum.

The auditors in this situation must evaluate the cost/benefit of existing his/her understanding of internal controls to make a final decision concerning control risk.

The cost / benefit decision is based upon the audit time involved in extending the auditor's understanding of internal controls, including tests of control versus the time that may be saved with the possible reduction of substantive audit tests.

Answer 29(c):

Disclosure of Information treated as confidential by third party:

As per section 11 (1) of the Right to Information Act, 2005 where a public authority intends to disclose any information or record, or part thereof on a request made under this Act which relates to, or has been supplied by a third party and has been treated as confidential by that third party, the Public Information Officer shall, within five days from the receipt of a request, give written notice to such third party of the request and of the fact that the public authority intends to disclose the information or record, or part thereof and invite the third party to make a submission, in writing or orally, regarding whether the information should be disclosed, which submission shall be taken into account when determining whether to disclose the information.

Provided that except in the case of trade or commercial secrets protected by law, disclosure may be allowed if the public interest in disclosure outweighs in importance any possible harm or injury to the interests of such party.

SHIKSHA TELECOM LTD. cannot ask the public authority not to furnish the same on the grounds that the said information is confidential and that it may spoil its image in the market. This is not trade or commercial secrets protected by law. Hence the public authority should overrule the objections of SHIKSHA TELECOM LTD and furnish the information to the applicant under the RTI Act.

30.

- (a) **What is the role of SEBI in promoting Corporate Governance?**
- (b) **Discuss the role of Nomination Committee in the context of the principle of Corporate Governance. What are the principal functions and responsibilities of the Governance and the Nomination Committee in this regard?**
- (c) **Can it be said that management audit incorporates in itself, an efficiency audit? What are the main objects of efficiency audit?**

Answer 30(a):

Good Governance in capital market has always been high on the agenda of SEBI. This is evident from the continuous updation of guidelines, rules and regulations by SEBI for ensuring transparency and accountability. In the process, SEBI had constituted a Committee on Corporate Governance under the Chairmanship of Shri Kumar Mangalam Birla.

Based on the recommendations of the Committee, the SEBI had specified principles of Corporate Governance and introduced a new clause 49 in the Listing agreement of the Stock Exchanges in the year 2000. These principles of Corporate Governance were made applicable in a phased manner and all the listed companies with the paid up capital of ₹3 crores and above or net worth of ₹25 crores or more at any time in the history of the company, were covered as of March 31, 2003.

SEBI, as part of its endeavour to improve the standards of corporate governance in line with the needs of a dynamic market, constituted another Committee on Corporate

Governance under the Chairmanship of Shri N. R. Narayana Murthy to review the performance of Corporate Governance and to determine the role of companies in responding to rumour and other price sensitive information circulating in the market in order to enhance the transparency and integrity of the market.

With a view to promote and raise the standard of Corporate Governance, SEBI on the basis of recommendations of the Committee and public comments received on the report and in exercise of power conferred by Section 11(1) of the Securities and Exchange Board of India Act, 1992 read with section 10 of the Securities Contracts (Regulation) Act 1956, revised the existing clause 49 of the Listing agreement vide its circular SEBI/MRD/SE/31/2003/26/08 dated August 26, 2003. It clarified that some of the sub-clauses of the revised clause 49 shall be suitably modified or new clauses shall be added following the amendments to the Companies Act 1956 by the Companies (Amendment) Bill / Act 2003, so that the relevant provisions of the clauses on Corporate Governance in the Listing Agreement and the Companies Act remain harmonious with one another.

Answer 30(b):

Nominating Committee: Role

The governance and Nominating Committee's role is to determine the slate of director nominees for election to the Company's Board of Directors to identify and recommended candidates to fill vacancies occurring between annual shareholder meetings, to review, evaluate and recommend changes to the Company's Corporate Governance Guidelines, and to review the company's policies and programs that relate to matter of corporate responsibility, including public issues of significance to the company and its stakeholder.

Responsibilities and functions of the Governance and Nominating Committee

Subject to the provisions of the corporate Governance Guidelines, the principal responsibilities and functions of the governance and Nominating Committee are as follows:

- (i) Annually evaluate and report to the Board of the performance and effectiveness of the Board to facilitate the directors fulfilling their responsibilities in a manner that serves the interests of Corporation shareholders.
- (ii) Annually present to the Board a list of individuals recommended for nomination for election to the Board at the annual meeting of shareholders, and for appointment to the committees of the Board (including this committee). Review and consider shareholder recommended candidates for nomination to the Board.
- (iii) Before recommending an incumbent, replacement or additional director, review his or her qualifications, including capability, availability to serve, conflicts of interest, and other relevant factors.
- (iv) Assist in identifying, Interviewing and recruiting and candidates for the Board.
- (v) Annually review the composition of each committee and present recommendations for committee memberships to the Board as needed.
- (vi) Develop and periodically review and recommend to the Board appropriate revisions to the Company's Corporate Governance Guidelines.

- (vii) Monitor compliance with the Corporate Governance Guidelines.
- (viii) Regularly review and make recommendation about changes to the charter of Governance and Nominating Committee.
- (ix) Regularly review and make recommendation about changes to the charter of other Board Committees after consultation with the respective committee chairs.
- (x) Obtain or perform an annual evaluation of the Committee's performance and make applicable recommendations.
- (xi) Assist the Chairman of the 'Board, if the Chairman is a non-management director, or otherwise the Chairman of the Committee acting as Lead Independent Director, in leading the Board's annual review of the Chief Executive Officer's performance.
- (xii) Annually review the Company's policies and programs that relate to corporate responsibility.

Answer 30(c):

Management Audit incorporates in itself an efficiency audit. Efficiency audit ensures "application of the basic economic principle so that resources flow into the most remunerative channels." The main object of efficiency audit is to ensure that:

- (i) Every rupee invested in capital or in other fields give the optimum returns and
- (ii) The planning of investment between the different functions and aspects is designed to give optimum results.

The parameters for measuring efficiency with its concomitant details are:

- (i) Overall rate of return on capital employed
- (ii) Better capacity utilization
- (iii) Better utilization of raw material, power, labor, equipments, and finance
- (iv) Effective incentive system
- (v) Better export performance and import substitution
- (vi) Cost control

It is necessary to make study activity wise so as to identify areas of deficiency in particulars activity.

To conclude we can infer saying that Investor in order to protect his investment in any company expects proper exhibition of corporate governance which is taken care by Management Audit as management Audit would encompass compliance audit, efficiency audit, propriety audit and systems audit as well as management audit is concerned with the overall objectives of an organization.