PAPER – 14 : STRATEGIC FINANCIAL MANAGEMENT

SUGGESTED ANSWERS

SECTION – A

1.

(i)	(C)
(ii)	(B)
(iii)	(C)
(iv)	(C)
(v)	(B)
(vi)	(B)
(vii)	(D)
(viii)	(A)
(ix)	(B)
(x)	(D)

SECTION – B

2. (a)

(i)   Total net equivalent cash out flows p.a. = ₹ 125059

(ii)   Total net equivalent cash out flows p.a. = ₹ 117103

(iii)   **Advice:**

Since, net equivalent cash outflows p.a. for buying a new machine ₹ 117103 is less than net equivalent cash outflows of ₹ 125059 for repairing of an existing machine. Therefore, it is advisable that the company should go for buying a new machine

2. (b)

(i)   Expected net present value of Projects:
            Project - A = ₹ 9000
            Project - B = ₹ 9000

(ii)   Standard Deviation of project:
            Project A = ₹ 4449.72
            Project B = ₹ 3794.73

(iii)   Profitability Index of each project:
            Project A = 1.25
            Project B = 1.30

(iv)   Recommendation:
Measurement of risk is made by the possible variation of outcomes around the expected value and the decision will be taken in view of the variation in the expected value. Where two projects have the same expected value, the decision will be the project which has smaller variation in expected value. In this case, project B is preferable because the possible profit which may occur is subject to less variation (or dispersion). Much higher risk is lying with Project A.

3. (a)

   (i)   **Effective Yield(%p.a.)**
$$A = \quad 3.160\%$$
$$B = \quad 10.544\%$$
$$C = \quad (4.710\%)$$

   (ii)   **Comments:**
Mr. KARUN should try to increase his investment in Scheme B, because it has highest effective yield per annum from the Mutual fund Portfolio.

3. (b)

   (i)   **Rank:**
Growth   = 1st
Balanced = 2nd
Regular = 3rd

   (ii)   **Rank:**
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   (iii) **Conclusion:**
Market has Treynor and Sharpe ratio of 0 times. However, the ratio of other fund is negative we conclude funds are underperformed the market.

4. (a)

   (i)   Increase portfolio beta to 1.6 = 3.125 contracts have to be purchased.
   (ii)   Decrease to 0.8 = 1.042 contracts

Instead of futures, he can buy Govt. securities to decrease his beta or increase his investment in shares to increase the beta. But this will entail more investments, unlike futures, where margins are sufficient.

He cannot merely sell the current shares to increase beta. Even if he invests the entire cash in the current shares, his beta will remain at 1.25. To increase beta, he has to buy riskier shares from the market such that
$$4000000 \times 1.25 + 1000000 \, x = 5000000 \times 1.6$$
$$1000000 \, x = 3000000 \text{ or } x = 3.$$

He must purchase shares for 10 lacs with beta = 3, if he is considering only the 10 lacs is to be altered into purchase of other shares.

Alternatively, he can use the 10 lacs and sell some of the shares and buy shares with higher beta to make the weighted beta = 1.6.

4. (b)

   (i)

Expected Return of Sontex	= 40%
Standard deviation of Returns of Sontex	= 10.95 %
Expected Return of Dentex	= 25.5 %
Standard deviation of Returns of Dentex	= 11.93%
Correlation co-efficient between Sontex and Dentex Stocks	-0.995 or -1

(ii)

	Sontex Stock	Dentex Stock	Portfolio of Two Stocks
Expected Return	40%	25.5%	32.75%
Risk (σ)	10.95%	11.93%	0.49%

Comments:

The portfolio of two Stocks results in risk reduction (0.49%) by the combination of two risky Securities (Sentex and Dentex).

5. (a)
Future Contract For Material X.

Theoretical Forward Price per kg	₹ 78.06
TFP per lot Size of 500 kg	₹ 39.03 Thousand
3 Months Future Contract	₹ 19.25 Thousand
TFP Vs. AFP	AFP is lower
Valuation in Future Market	Undervalued
Recommended Action	Buy Future, Sell Spot

Future Contract For Material Y.

Spot Price	₹ 85 per kg
Storage Cost (Rate) Payable after 2 months	₹ 100 per Quintal per Quarter or ₹ 500 per lot
Tenor / Time period in years	2 months or 0.1667 year
Present value of Storage Cost:	₹ 490.10

Adjusted Current Spot Price of Material Y	₹ 42.99 Thousand
Theoretical Forward Price (TFP)	₹ 44.299 Thousand
3-MonthsFuture Contract	₹ 22.30 Thousand
TFP Vs AFP	AFP is lower
Valuation in Future Market	Undervalued
Recommended Action	Buy Future, Sell Spot

5. (b)

(i) Expected Share Price = ₹ 537

(ii) Value of Call Option = NIL

(iii) If the option is held till maturity the expected Value of Call Option = ₹ 17

(iv) Price to be quoted at the stock exchange to get the value of the call option = ₹ 547.

6. (a)

(i) Rupee requirement if forward cover is taken = ₹ 244993087.50

(ii) Forward Rate as per Interest Rate Parity after 6 Months is expected to be = ₹ 82.1221/US$
The Company should take forward cover because as per Interest Rate Parity, the rate after 6 months is expected to be higher than forward rate.

(iii) However, if spot rate is 80.4275, the expected rate as per Interest Rate Parity shall be = 82.0201/US$
Thus, still the company should take forward cover.

6. (b)

(i)   Current Profit =   ₹ 1260 Lakhs

       Profit if Rupee depreciates =   ₹ 1284 Lakhs

       So, increase in profit due to depreciation of Rupee = ₹ 24 Lakhs

(ii)   Profit =   ₹ 1283.625 Lakhs

       So, increase in profit due to Economic Exposure = ₹ 23.625 Lakhs

7. (a)

Cash out flows in Purchase Option: ₹ 1780110

Cash out flows in Leasing Option: ₹ 2047140

Since the purchase option is better and economical than that of leasing option the company should choose the purchase option.

7. (b)

(i)   **Expected return under different portfolios :**

         Portfolio (1)   = 20%

         Portfolio (2)   = 22.50%

         Portfolio (3)   = 21.25%

(ii)   **Risk factor associated with different portfolios :**

         Portfolio (1) = 12%

         Portfolio (2) = 10.74%

         Portfolio (3) = 10.42%

(iii)   The best portfolios from the viewpoint of Risk is the one with least risk factor, i.e. 10.42%, i.e. Portfolio (3) = 75% fund in ALFA and 25% fund in GAMA.

(iv)   The best portfolios from the viewpoint of Return is the one which has the best return, i.e. 22.50% i.e. Portfolio (2) = 50 % in ALFA and 50% fund in GAMA.

8. (a)

Call Money Market – Features:

(i)   **Purpose:**

1. Close to Money
2. Provide liquidity for Government and banks
3. Low risk
4. Short term
5. Banks use this for CRR or SLR requirements
6. Bill market, stock Exchange Dealers and high net worth individuals
7. To meet sudden demand for funds arising out of large outflows.

(ii)   Securities: Unsecured; No collateral security.

(iii)   Call rate: Varies as per market demand and supply conditions. It is high during March (even around 25 %) and low in April, October, etc. (even as low as 7 %). It also varies according to place - It is higher in Kolkata and lower in Mumbai.

(iv)   Lenders: RBI, Banks, Primary Dealers, Financial Institutions like LIC, UTI, GIC, IDBI, NABARD, ICICI, Specified All India Financial Institutions, Mutual Funds.

8. (b)

Difference between Financial futures and commodity futures on the following basis:

(i) Valuation: Financial futures are easier to understand as the cost of carry model for its valuation applies. The argument of arbitrage also holds because of the absence of convenience yield in financial futures. Financial futures involve financial instruments which do not have consumption value. The consumption value makes valuation of futures contracts on commodities difficult.

(ii) Delivery and Settlement: The provisions of delivery are applicable equally to commodities and financial futures. In case of financial futures delivery of underlying assets is prompt and hassle free, and so is its settlement. Further, there are no costs of transportation, storage, or insurance, etc. involved in financial futures. For futures on financial assets the price adjustment on account of discrepancy in quality of what was contracted and what is being delivered, is not required. Quality of underlying asset is immaterial in case of financial products, whereas there is ample scope of controversy over quality in case of commodity futures. In case of futures on indices or intangibles the underlying is non-deliverable and futures contracts on them are .necessarily cash settled.

8. (c)

Types of Liquidity Risk:

Market liquidity - An asset cannot be sold due to lack of liquidity in the market - essentially a sub-set of market risk. This can be accounted for by:
- Widening bid / offer spread
- Making explicit liquidity reserves
- Lengthening holding period for VaR calculations

Funding liquidity - Risk that liabilities:
- Cannot be met when they fall due
- Can only be met at an uneconomic price
- Can be name-specific or systematic

8. (d)

Features of Foreign Currency Convertible Bonds (FCCB)
- FCCB can be either unsecured or secured. But, in practice most of the FCCB issued in India are unsecured
- FCCB issues have a 'Call' and 'Put' option to suit the structure of the Bond. Both the options are subject to RBI guidelines.
- Public issue of FCCB shall be through reputed lead managers and Private placement is permitted subject to certain conditions.
- It is also possible to issue zero coupon Foreign Currency Convertible Bonds and in this case, the holders of the bond are generally interested.to convert the bonds into equity.
- The yield to maturity of FCCB normally ranges 2-7%.
- FCCB are generally listed to stock exchange to increase its liquidity. Credit rating of bonds is not mandatory. But, rating can help better marketing of the bonds.
- FCCB Issue related expenses shall not exceed 4% of issue size and in case of private placement, shall not exceed 2% of the issue size.

8. (e)

Main Activities of Reserve Bank of India (RBI)

The Reserve Bank is the umbrella network for numerous activities, all related to the Nation's Financial Sector, encompassing and extending beyond the functions of a typical central bank.

- Monetary Authority
- Issuer of Currency
- Banker and Debt Manager to Government
- Banker to Banks
- Regulator of the Banking System
- Manager of Foreign Exchange
- Maintaining Financial Stability
- Regulator and Supervisor of the Payment and Settlement Systems
- Developmental Role

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