Paper 14 - Advanced Financial Management

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Full Marks: 100 **Time allowed: 3 Hours**

Answer Question No. 1 which is compulsory and carries 20 marks and any five from Question No. 2 to 8.

Section A
[20 marks]

1. (a) Answer all questions each question carries 2 marks [7×2=14]

(i) Mention any three economic functions of Financial markets

(ii) Following information is available regarding a mutual fund:

Return	**13**
Risk (σ)	**16**
Beta (β)	**0.90**
Risk free rate	**10**

Calculate Sharpe ratio and Treynor's ratio.

(iii) Write down the objective of Inter Bank Participation Certificate.

(iv) What is Rolling settlement?

(v) Compute the theoretical forward price of the following security for 6 months.

Spot Price (S_x)	**₹160**
Risk free interest rate	**9%**

[Given: $e^{0.045} = 1.046028$]

(vi) It is given that ₹/£ quote is ₹100.68 – 102.95 and ₹/$ quote is ₹61.86 – 62.87. What would be the $/£ quote?

(vii) A project had an equity beta of 1.3 and was going to be financed by a combination of 30% debt and 70% equity. Assuming debt-beta to be zero, calculate the project beta and return from the project taking risk free rate of return to be 10% and return on market portfolio of 18%.

(b) State if each of the following sentences is T (= True) or F (= False), Each Question carries 1 mark. [6×1=6]

(i) Inter Bank Participation Certificate (IBPC) can be issued by any Scheduled Commercial Bank and its interest rates are freely determined in the market.

(ii) Arbitrageurs are interested in making purchases and sales in different markets at different times to profit from the price discrepancy between the markets.

(iii) At least 60% of the assets of an Infrastructure Debt Fund should be invested in debt securities or securitized debt instruments of infrastructure companies.

(iv) In a yield based auction, successful bidders are those who have bid at or below the cut off yield, whereas in a price based auction, successful bidders are those who have bid at or above the cut-off price.

(v) A straddle is a strategy that is accomplished by holding an equal number of puts and calls with the same strike price and expiration dates.

(vi) Treasury Bills are not eligible for Repo transactions.

Answer: 1 (a)

(i) (1) Price discovery; (2) Liquidity; and (3) reduction of transaction costs.

(ii) Sharpe's ratio = $(R_P - R_F) / \sigma$ = [13 -10] / 16 = 0.19

Treynor's ratio = $(R_P - R_F) / \beta$ = [13 -10] / 0.90 = 3.33

(iii) IBPCs are short-term instruments. The objective is to even out the short-term liquidity within the banking system particularly when there are imbalances affecting the maturity mix of assets in banking book- they thus, provide a degree of flexibility in the credit portfolio of banks.

(iv) Rolling settlement is the settlement cycle of the stock exchange', where all trades outstanding at the end of the day have to be settled, i.e. the buyer has to make payments for securities purchased and the seller has to deliver the securities sold. Here, settlement refers to the process in which traders who have made purchases make payments while those who have sold shares, deliver them.

(v) Forward price of securities = ₹ 160 × $e^{(009)(0.50)}$ = ₹ 160 × $e^{0.045}$ = ₹ 160 × 1.046028 = ₹ 167.3645.

(vi) The synthetic rate for $ / £ is to be calculated. Here, rupee, the price currency (i.e. common currency)is the cheapest among the three currencies involved in the quotes. The formula is :

$ / £ = [(₹ / £$_{bid}$)/ (₹ / $$_{ask}$)]: [(₹/ £$_{ask}$)/(₹/ $$_{bid}$)] = [100.68/ 62.87]: [102.95/61.86]

= 1.6014 :1.6642 ; So, $/£ = $1.6014 - $ 1.6642 (quote).

(vii) B_p is to be ascertained as -

= [β_{equity} + E / (D +E)] + [β_{debt} + E /(D + E)] = (1.30 × 0.70) + (0 × 0.3) =0.91

Computation of return from the project = $R_F + B_p (R_M - R_F)$ = 0.10 + 0.91 × (0.18 - 0.10) = 0.1728 = 17.28 %.

Answer: 1 (b)

i) True.
ii) False.
iii) False.
iv) True.
v) True.
vi) False.

Section-B

Answer any 5 Questions from the following. Each Question carries 16 Marks.

2 (a) Equi – stable is a portfolio model wherein 20% of Fund value is invested in Fixed Income Bearing Instruments. The balance of 80% is divided among old industry stock (iron and steel), Automotive Industry stock, Information Technology stocks, Infrastructure Company stocks and Financial Services Sector in the ratio of 4:2:6:3:5.

Three mutual funds X, Y and Z offer a fund scheme based on the Equi-stable portfolio model. The actual return on Equi-Stable portfolios of each of the three funds for the past 3 years is as follows:

	1	2	3
Portfolio X	**17.35%**	**18.70%**	**21.60%**
Portfolio Y	**17.20%**	**18.25%**	**22.15%**
Portfolio Z	**17.10%**	**18.60%**	**22.00%**

Beta factor of the Equi-Stable portfolio is measured at 1.35. Return on market portfolio indicates that ₹1,000 invested will fetch ₹153 in a year (including capital appreciation and dividend yield). RBI bonds, guaranteed by the Central Government yields 4.50%.

Rate the fund managers of X, Y and Z. [8]

2 (b) A sugar mill in Maharashtra is expected to produce 100 MT of sugar in the month of February. The current market price today (the month of December) is ₹ 22 per kg. February futures contract in sugar due on 20th February is trading at ₹25 per kg. The sugar mill apprehends that the price lesser than ₹25 per kg will prevail in February due to excessive supply then.

How can the sugar mill hedge its position against the anticipated decline in sugar price in February? [8]

Answer: 2 (a)

(i) Computation of expected rate of return under CAPM:

$E(R_x) = R_F + \text{Beta} \times [R_M - R_F]$; Risk free return = R_f = 4.50 %

Return on market portfolio = R_M = 15.30 % [153 /1000]

Beta of Equi-stable = 1.35

So, Expected return of Equi-stable = 4.50 % +[1.35 × (15.30 % - 4.50 %] = 19.08 %

Computation of Alpha factor of 3 Funds						
Year	Mutual Funds X		Mutual Funds Y		Mutual Funds Z	
	Actual return	Abnormal return	Actual return	Abnormal return	Actual return	Abnormal return
1	17.35%	17.35 – 19.08 = (1.73)	17.20%	17.20 – 19.08 = (1.88)	17.10%	17.10- 19.08 = (1.98)
2	18.70%	18.70 – 19.08 = (0.38)	18.25%	18.25-19.08 = (0.83)	18.60%	18.60 – 19.80 = (0.48)
3	21.60%	21.60-19.08 = 2.52	22.15%	22.15-19.08 = 3.07	22.00%	22.00 – 19.08 = 2.92

Alpha factor:

Fund X = 0.41 / 3years = 0.137 %; Fund Y = 0.36 /3 years = 0.120 %; Fund Z = 0.46 / 3years

= 0.153 %

Evaluation: Equitable scheme of mutual fund Z has the highest alpha 0.153 % return more than the market expectations when compared to 0.137 % and 0.120 % of fund X and Y. Therefore, fund manager of Mutual fund Z has performed better.

Ranking: Fund manager Z = 1; Fund manager X = 2 and Fund manager Y= 3.

Answer: 2 (b)

Sugar mill is long on the asset in February. Therefore, it needs to sell the futures contract today. The no. of contracts that needs to be sold is dependent upon the exposure in the physical assets and the value one needs to cover. Assuming each contract for sugar is for 10 M.T. the no. of contracts to be sold is 10.

No. of contracts to be sold = Quantity to be hedged / Quantity in each future contract = 100 M.T./10 M.T. = 10 Contracts.

Sugar mill would go short on futures in December. Prior to February, before the future contract expires, sugar mill buys futures contract to nullify its position in the futures contract. The asset, i.e. sugar is sold in the spot market. Prices realized by sugar mill in two different scenarios of decline or rise in sugar prices, using the principle of convergence of price on the due date of the contract, is worked out as follows:

When the price falls to ₹20 per k.g. in the futures contract

Sold futures in December	+25
Bought futures contract in February	-22
Gain in the futures contract	+3
Price realized in the spot mar	+22
Effective price realize	₹25 per k. g)

Here, the loss of ₹3 (₹25 - 22) in the spot market is made up by an equal gain in the futures market.

When the price rises to₹26 per k.g. in the futures market

Sold futures contract in December	+25
Bought futures contract in February	-26
Loss in futures contract	-1
Price realized in the spot market	+26
Effective price realized	₹25 per k. g)

Here, gain of ₹1 [₹26 –₹25] in the spot market is offset by the equal in the futures market.

3 (a) The following information is available for Call option on the stock of MACON LTD:

Current market price	**₹415**
Strike price	**₹400**
Time to expiration (1 year = 360 days)	**90 days**
Standard deviation of return	**22%**
Risk-free rate of interest	**5 %**

You are required to compute the value of call option, using Black- Scholes model.

[Given: $N(d_1) = N (0.5033) = 0.7019$;

$N(d_2) = N (0.3933) = 0.6628$;

Ln (1.0375) = 0.03681; and

E = 2.71828]. **[10]**

3 (b) Write down any six processes for raising equity through ADR **[6]**

Answer: 3 (a)

$d_1 = [L_n (S / x) + (r + 0.5 \sigma^2]/\sigma\sqrt{t}$

$=[L_n (415 /400) + (0.05 + 0.5 \times 0.22^2) \times 0.25] / [0.22 \times\sqrt{0.25}]$

$= [L_n (1.0375) + 0.01855]/ 0.11 = [L_n (0.03681) + 0.01855] / 0.11 = 0.05536 / 0.11= 0.5033$

$d_2 = d_1: - \sigma\sqrt{t} = 0.5033-[0.22 \times/o.25] =0.5033 - 0.1100 = 0.3933$

So, $N(d_1) = N (0.5033) = 0.7019$; AND $N(d_2) = N (0.3933) =0.6628$

Hence, value of call option = $S \times N(d_1)] - [X \times e^{-rt} \times N(d_2)]$

$= [415 \times 0.7019] - [400/(2.71828)^{0.05 \times 0.25} \times 0.6628]$

$= [291.2885] - [400/1.01258 \times 0.6628] = [291.2885] - [261.8266] = 29.46$

Answer: 3 (b)

Process for raising equity:

1. Issue intermediaries: ADRs are issued by the Overseas Depository Bank, who has a Domestic Custodian Bank in India.
2. Deposit of securities: Company willing to raise equity through ADRs should deposit the securities with the DCB in India.
3. Authorisation for issue of ADRs: The Indian company authorizes ODB to issue ADR against the security of the company's equity shares.
4. Issues of ADR: ODB issues ADRs to investors at a predetermined ratio to the company's securities.
5. Redemption of ADR : When redeemed, appropriate no. of underlying equity shares is issued.
6. Dividend / interest: Indian company pays interest to the ODB, which in turn, distributes dividends to the ADR holders, based on the prevailing exchange rate.

4 (a) From the following data for Government Securities:

Face Value ₹	Interest rate %	Maturity Year	Current Price ₹
1,00,400	**0**	**1**	**91,900**
1,00,400	**10**	**2**	**98,900**
1,00,400	**10.5**	**3**	**99,400**

Calculate the forward rates. **[8]**

(b) State any eight RBI Guidelines relating to Infrastructure Debt Fund Schemes (IDF Schemes). **[8]**

Answer: 4 (a)

i) Computation of Zero rates [Implied interstate time zero] [under annual compounding]

Particulars	1 year Bond	2 year Bond	3 year Bond
Current market price (a)	₹ 91,900	₹98,900	₹ 99,400
Redemption price[assumed at par value]	₹ 1,00,400	₹ 1,00,400	₹ 1,00,400
Capital gain (b)	₹8,500	₹ 1,500	₹ 1,000
Rate of interest	0%	10%	10.50 %

Annual interest inflow	-	₹ 10,040	₹ 10,542
Period of bond (c)	1 year	2 year	3 year
Total interest inflow (d)	Nil	₹ 20,080	₹ 31,626
Total income to a Bondholder (e = B + d)	₹ 8,500	₹ 21,580	₹ 32,626
Income per annum (f = e / c)	₹ 8,500	₹ 10,790	₹ 10,875
Implied interest rate (f/a)	9.25 %	10.91 %	10.94%

(ii) Computation of Forward rates

(1) Forward rate for year 1 = Implied interest rate for one year bond = 9.25%

(2) Forward rate for year 2:

Factor	Notation	Value
Zero rate for 1 year bond	R_1	9.25 %
Zero rate for 2 year bond	R_2	10.91 %
Tenor of bond 1	T_1	1
Tenor of bond 2	T_2	2
forward rate for year 2 =$[R_2 T_2 – R_1 T_1]/(T_2 –T_1)$ ={[10.91 × 2] - [9.25 × 1]} /[2-1] = 12.57 %	R_F	12.57%

(3) Forward rate for year 3:

Factor	Notation	Value
Zero rate for 2 year bond	R_2	10.91 %
Zero rate for 3 year bond	R_3	10.94 %
Tenor of bond 2	T_2	2
Tenor of bond 3	T_3	3
forward rate for year 3 =$[R_3 T_3 – R_2 T_2]/(T_3 –T_2)$ ={[10.94 × 3] - [10.91 × 2]} /[3- 2] = 11.00 %	R_{F3}	11.00%

Answer: 4 (b)

RBI Guidelines relating to Infrastructure Debt Fund Schemes:(**Any eight**)

Any investments by banks and NBFCs in IDF Schemes will require a prior approval from the RBI. The RBI Guidelines prescribe various thresholds for investment in trust based IDFs by banks and NBFCs.

i) Banks acting as sponsors to IDFs-MF will be subject to existing prudential limits on investments in financial services companies and their capital market exposure.
ii) NBFCs will need to have at least $60 million as net-owned funds.
iii) NBFCs are also required to be in existence for five years to invest in IDFs-MF, meaning thereby that start-up NBFCs would not be able to invest in trust based IDFs.
iv) IDFs setting up as NBFC must have net-owned-funds of at least $60 million and issue rupee or dollar denominated bonds of minimum 5 year maturity to investors.
v) NBFCs should be assigned a minimum credit rating 'A' or equivalent of CRISIL, FITCH, etc.
vi) NBFCs are only allowed to invest in Public Private Partnership ('PPP') projects and post-commercial operation date ('COD') infrastructure projects. Such projects should have been in satisfactory commercial operation for at least one year before any investment is made in them.
vii) NBFCs should also be party to a tripartite agreement with the concessionaire and the project authority for ensuring a compulsory buyout with termination payment.
viii) Income of IDFs-NBFC will be exempted from income tax and withholding tax on interest payments on the borrowings has been reduced from 20% to 5%.

ix) Insurance and Pension Funds are one of the key investors as they have long term resources, but would require regulatory approval before investing in IDFs. As per the current norms of Insurance Infrastructure Financing Regulatory and Development Authority ('IRDA'), it is mandatory for insurance companies to direct 15% of their investment towards infrastructure.

5 (a) You are given the middle rates as under:

₹ 80/£ 1 in London,

₹ 47/US $ in Delhi, and

US $ 1.58/£ 1 in New York.

Compute the Arbitrage gain on ₹ 8,00,000. [8]

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E = 2.71828]. [8]

Answer: 5 (a)

The following sequential steps will serve the purpose:

(i) Buy US $ in Delhi and get 17,021.277 US $ for ₹ 8L

(ii) Sell the above US $ in N.Y for £ and get (£ 17,021.277 ÷ 1.58) = £ 10,772.96

(iii) Sell the £ obtained in (ii) for INR in London £ 10,772.96 × 80 = ₹ 8,61,836.80

Arbitrage gain will be ₹ (8,61,836.80 – 8,00,000) = ₹ 61,836.80

Answer: 5 (b)

$d_1 = [L_n (S / x) + (r + 0.5 \sigma^2]/\sigma\sqrt{t}$

$=[L_n (415 /400) + (0.05 + 0.5 \times 0.22^2) \times 0.25] / [0.22 \times\sqrt{0.25}]$

$= [L_n (1.0375) + 0.01855]/ 0.11 = [L_n (0.03681) + 0.01855] / 0.11 = 0.05536 / 0.11 = 0.5033$

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Hence, value of call option = $S \times N(d_1)] - [X \times e^{-rt} \times N(d_2)]$

$= [415 \times 0.7019] - [400/(2.71828)^{0.05 \times 0.25} \times 0.6628]$

$= [291.2885] - [400/1.01258 \times 0.6628] = [291.2885] - [261.8266] = 29.46$

6 (a) Lotus Finance Ltd. is engaged in leasing business. The company wants your advice to structure the lease of a machine costing ₹30 lacs. The machine will have no salvage value.

The life of the machine and the lease period will be 5 years and it has to be fully depreciated in 5 years on straight line basis. The average post-tax cost of funds to Lotus Finance is 10%, but to cover the effects of inflation, they prefer to hike this rate by 2%. Assume tax rate is 50% and that taxes are paid on the last day of the year.

Calculate the minimum annual lease rent to be charged if

(i) the lease rents are payable on the first day of each year.

(ii) the lease rents are payable on the last day of each year;

What is the type of the above lease? Give reasons for your classification. [5+3+2=10]

6 (b) The co- efficient of correlation between returns of Spark Ltd and Sensex is 1.10. The expected returns on the stock of Spark and Sensex are 18% and 14.37% respectively. The return on 182 day T- Bill is 6.31%. What would be the standard deviation of the returns of Spark if the standard deviation of Sensex's return is 17%? [6]

Answer: 6 (a) (i)

End of Year	**0**	**1**	**2**	**3**	**4**	**5**	**Annuity Factor**
Inflows: Lease rent	x	x	x	x	x		4.0382
Depreciation Tax Shield 50% $\left[\frac{30-0}{5}\right]$		3	3	3	3	3	3.6052
Outflows: Taxes		(x/2)	(x/2)	(x/2)	(x/2)	(x/2)	3.6052
Initial	(30)						1
P/V factor 12%	1	0.893	0.797	0.712	0.636	0.567	

Minimum lease rental if paid on the 1st day of the year.

$-30 \times 1 - 3.605 \times \frac{x}{2} + 3 \times 3.6052 + x \times 4.0382 = 0.$

$x\,(4.0382 - 1.8026) = 30 - 10.8156$

$= 19.1844$

$x = \frac{19.1844}{2.2356} = 8.58132$

Lease rent = ₹ 8,58,132.

(ii) If lease rents are paid on the last day of the years

$-30 \times 1 + 3.6052 \times \frac{x}{2} + 3 \times 3.6052 = 0.$

$\frac{3.6052 \times x}{2} = 19.1844$

$x = \frac{19.1844}{3.6052} \times 2 = 10.6426273$

∴ Lease rent = 10,64,263

(iii) The type of lease is a financial lease

Reason:

- Lessor is only the financier, not interested in the asset.

- ❖ Term of the lease is the same as the life of the assets.
- ❖ Cost of the asset fully amortised during the base period.

Answer: 6 (b)

The return of the Portfolio

$0.18 = RF + (R_M – R_F)\ \beta = 0.0631 + \beta\ (0.1437 – 0.0631)$

Or, $\beta = 0.1169/0.0806 = 1.45$

Again $\beta = (\sigma_i\ P_{im} / \sigma_m)$

Or $\sigma_i = \beta\ \sigma_m / P_{im} = (1.45 \times 0.17) / 1.1 = 0.2241$ i.e. 22.41%.

7 (a) Hindus Ltd. has to make US $ 5 million payment in three months' time. The required amount in dollars is available with Hindus Ltd. The management of the company decides to invest if for three months and the following information is available in this context:

The US $ deposit rate is 7% per annum.

The Sterling-Pound deposit rate is 9% per annum.

The spot exchange rate is $ 1.42 / £.

The three month forward rate is $ 1.40 / £.

Answer the following questions:

(i) Where should the company invest for better returns?

(ii) Assuming that the interest rates and spot exchange rate remain as above, what forward rate would yield an equilibrium situation?

(iii) Assuming that the US interest rate and the spot and forward rates remain as above, where should the company invest if the Sterling-Pound deposit rate were 12% per annum?

(iv) With the originally stated spot and forward rates and same dollar deposit rate, what is the equilibrium Sterling-Pound deposit rate?

[3+3+2+2=10]

(b) Classify the following participants of the commodity market under the appropriate category—Hedgers, Speculators and Arbitrageurs: [1×6=6]

(i) Warehousing Companies

(ii) Brokerage Houses

(iii) Food Processing Companies

(iv) Farmers

(v) Commodity Consumers

Answer: 7 (a)

Here, spot = $1.42/ £ ; 3-m Forward = $1.40/£ ; r_h = 7% ; r_f = 9%.

i) For Interest Rate Parity to hold, $(1 + r_h) = (F/S) \times (1 + r_f)$

Now L.H.S = $(1+ r_h) = (1+7/100\times3/12) = 1.0175$;

R.H.S $= (1 + r_f)(F/S)$ where, F = Future Price, S = Spot Price

$= (1+9/100\times3/12)\times1.40/1.42 = (1.0225)(1.40/1.42) = 1.0080$

Since, LHS ≠ RHS, IRP is not holding exactly.

Since LHS > RHS, the Company needs to invest in US $ for better return.

ii) For equilibrium, the interest rate parity equation should match i.e.

$F/S = (1 + r_h) \div (1 + r_f)$

i.e. $F = S \times [(1+ r_h) \div (1 + r_f) = 1.42 \times (1.0175 / 1.0225) = 1.4130$

Only if the forward rate F = 1.4130, we have an equilibrium situation.

iii) Now, if spot = \$1.42/£; 3m Forward = \$1.40/£; r_h = 7%; r_f = 12%; we again check whether Interest Rate Party holds.

Now, LHS = 1.0175; RHS = $(1+ r_f)$ (F/S) = (1.0300) (1.40/1.42) = 1.0155

Since, LHS $\neq$ RHS, IRP is not holding exactly.

Now since LHS > RHS, the Company needs to invest here also in US $ for better returns.

iv) For equilibrium, the interest rate party equation should match

i.e. $F/S = (1+ r_h) \div (1+ r_f)$.

i.e. $(1+ r_f) = S/F \times (1+ r_h) = (1.42 /1.40) \times 1.0175 = 1.0320$

or r_f = 3.20% (for 3 months)

Only if the annual pound rate is 12.80% (i.e., 3.20 × 4),

we have a equilibrium situation.

Alternative Solution:

(i) Invest in US $ now at 7% × 3 months = 50,00,000 × 7% × 3/12 = 87500.

Total amount in US $ after 3 month =	50,87,500
Convert at current rate into GB £ = 50,00,000/1.42 =	35,21,126.76
Invest pounds for 3 month at 9 %	
= 35,21,126.76 × 9% × 3/12 =	79225.35
Total pounds at the end of 3 month = 35, 21,126.76 + 79,225.35 =	36,00,352.11
Equivalent $ after 3 month at forward rate = 36, 00,352.11 × 1.4 =	50,40,492.95

Benefit = \$ (50,87,500 - \$ 50,40,492.95) = \$ 47,007.05

Hence it is better to invest in US $.

(ii) Forward rate for equilibrium = 50,87,500/36,00,352.11 = 1.41

(iii) If sterling is additional 3 %, i.e. 12 %, 35,21,126.76 × 3% × 3/12 = pounds 26408.45
= 1.4 × 26408.45 = \$36971.83
It is still better to invest in US $.

(iv) Equilibrium sterling pound deposit rate is when at 1.40 forward rate, US $ 50,87,500 is achieved.
i.e. (35,21,126.76 + x/100 × 35,21,126.76 × 3/12) × 1.4 = 50,87,500
i.e., x = 12.8%

Answer: 7 (b)

(i)	Warehousing Companies	-	Arbitrageurs

(ii)	Brokerage Hours	-	Speculators/Arbitrageurs
(iii)	Food Processing Companies	-	Hedgers
(iv)	Farmers	-	Hedgers
(v)	Commodity Consumers	-	Hedgers
(vi)	Retail Investors	-	Speculators

8) Answer any four questions: [4×4=16]

(a) What do you understand by credit rating? What aspects credit rating do not measure? [4]

(b) Discuss unique features of National Level Commodity Exchanges. [4]

(c) Write short note types of credit risks. [4]

(d) Write short note on NBFC-MFI [4]

(e) Write short note on FCCBs. [4]

Answer: 8 (a)

Credit rating is the assessment of a borrower's credit quality. it is the assessment carried out from the viewpoint of credit-risk evaluation on a specific date, on the quality of a-

- Specific debt-security issued, or
- Obligation undertaken by an enterprise (Term Loans, etc.)

Credit Rating do not measure the following-

1) Investment Recommendation: credit rating does not make any recommendation on whether to invest or not.
2) Investment Decision: They do not take into account the aspects that influence an investment decision.
3) Issue Price: credit rating does not evaluate the reasonableness of the issue price, possibilities for capital gains or liquidity in the secondary market.
4) Risk of Prepayment: ratings do not take into account the risk of prepayment by issuer, or interest or exchange risks.
5) Statutory Compliance: credit rating does not imply that there is absolute compliance of statutory requirements in relation to audit, taxation, etc. by-the issuing company

Answer: 8 (b)

The unique features of national level commodity exchanges are:

- They are demutualized, meaning thereby that they are run professionally and there is separation of management from ownership. the independent management does not have any trading interest in the commodities dealt with on the exchange.
- They provide online platforms or screen based trading as distinct from the open-out-cry systems (ring trading) seen on conventional exchanges. this ensures transparency in operations as everyone has access to the same information.
- They allow trading in a number of commodities and are hence multi-commodity exchanges.
- They are national level exchanges which facilitate trading from anywhere in the country. This corollary of being an online exchange.

Answer: 8 (c)

Credit risk can be classified in the following way:

- Credit default risk - The risk of loss arising from a debtor being unlikely to pay its loan obligations in full or the debtor is more than 90 days past due on any material credit obligation; default risk may impact all credit sensitive transactions, including loans, securities and derivatives.
- Counterparty risk – The risk of loss arising from non performance of counterparty in trading activities such as buying and selling of commodities, securities, derivatives and foreign exchange transactions. If inability to perform contractual obligations in such trading activities is communicated before the settlement date of the transaction, then counterparty risk is in the form of pre-settlement risk, while if one of the counterparty defaults on its obligations on the settlement date, the counterparty risk is in the form of settlement risk.
- Concentration risk - The risk associated with any single exposure or group of exposures with the potential to produce large enough losses to threaten a lender's core operations. It may arise in the form of single name concentration or industry concentration.
- Country risk - The risk of loss arising from sovereign state freezing foreign currency payments (transfer/conversion risk) or when it defaults on its obligations (sovereign risk).

Answer: 8 (d)

NBFC-MFI is a non-deposit taking NBFC having not less than 85% of its assets in the nature of qualifying assets which satisfy the following criteria:

(i) loan disbursed by an NBFC-MFI to a borrower with a rural household annual income not exceeding ₹ 60,000 or urban and semi-urban household income not exceeding ₹ 1,20,000;

(ii) loan amount does not exceed ₹ 35,000 in the first cycle and ₹ 50,000 in subsequent cycles;

(iii) total indebtedness of the borrower does not exceed ₹ 50,000;

(iv) tenure of the loan not to be less than 24 months for loan amount in excess of ₹ 15,000 with prepayment without penalty; (e) loan to be extended without collateral;

(v) aggregate amount of loans, given for income generation, is not less than 75 per cent of the total loans given by the MFIs;

(vi) loan is repayable on weekly, fortnightly or monthly installments at the choice of the borrower

Answer: 8 (e)

Foreign Currency Convertible Bonds (FCCBs): They mean bonds issued in accordance with relevant scheme and subscribed by a non-resident in foreign currency and convertible into depository receipts or ordinary shares of the issuing company in any manner, either in whole or in part, on the basis of any equity-related warrants attached to debt instruments. A company seeking to issue FCCBs should have consistent track record of good performance for 3 years.

FCCBs are unsecured; carry a fixed rate of interest and an option for conversion into as fixed number of equity shares of the issuer company. Interest on redemption price (if conversion option is not exercised) is payable in Dollars. Interest rates are very low by Indian domestic standards.

FCCB has been popular with issuers. Local debt markets can be restrictive with comparatively short maturities and high interest rates. On the other hand, a straight equity may cause a dilution in earnings, and certainly dilutions in control, which many shareholders, especially major family shareholders, would find unacceptable. Foreign investors also prefer FCCBs because of dollar-denominated servicing, the conversion option and the arbitrage opportunities presented by conversion of FCCBs into equity at discount on prevailing market-price in India. The major drawbacks are that the issuing company cannot plan capital structure as it is not assured of conversion of FCCBs. In addition, FCCBs would result in creation of external debt for the country, as there would be foreign exchange outflow from the country, if conversion option is not exercised by the investors.

Some other regulations are: (i) Interest payment on bond, until the conversion option is exercised, shall be subjected to TDS; (ii) Conversion of FCCBs into shares shall not give rise to capital gain in India; and (iii) Transfer of FCCBs shall not give rise to capital gain in India.

Present value factors $\left(\frac{1}{1+x}\right)^n$

End of year (n) / Rate (x)	1	2	3	4	5	6	7
7%	0.9346	0.8734	0.8163	0.7629	0.7130	0.6663	0.6227
10%	0.9091	0.8264	0.7513	0.6830	0.6209	0.5645	0.5132
12%	0.8929	0.7972	0.7118	0.6355	0.5674	0.5066	0.4523
20%	0.8333	0.6944	0.5787	0.4823	0.4019	0.3349	0.2791