

**FINAL EXAMINATION**

December 2015

**P-14(AFM)  
Syllabus 2012**

**Advanced Financial Management**

Time Allowed: 3 Hours

Full Marks: 100

*The figures in the margin on the right side indicate full marks.*

*All workings must form part of your answer.*

*Wherever necessary, suitable assumptions may be made and clearly stated in the answer.*

*No present value table or other statistical table will be provided in addition to this question paper.*

*Candidates may use relevant information given at the end of the question paper for computation of answers.*

*This paper contains five questions. All questions are compulsory, subject to instruction provided against each question.*

**1. All sub-divisions are compulsory:**

2×10=20

- (a) List two direct instruments and two indirect instruments used by RBI in the implementation of its monetary policy.
- (b) Differentiate between open-end and closed-end mutual funds.
- (c) Given that the strike price is ₹ 240, the current stock price is ₹ 225, and risk-free interest rate is 5% p.a., calculate the theoretical minimum price of a put option after 6 months. Which action is advantageous?
- (d) An investor holds two equity shares A and B in equal proportion with the following risk and return:

$$E(R_A) = 26\%$$

$$\sigma_A = 20\%$$

$$E(R_B) = 22\%$$

$$\sigma_B = 24\%$$

The returns of these securities have a positive correlation of 0.7. Calculate the portfolio return and risk.

**Please Turn Over**

(e) The following information is provided:

	Investment	
	X	Y
Principal ₹	20 lacs	20 lacs
Rate of yield p.a.	12%	12%
Tenor (years)	3	3
Compounding	monthly	continuous
Compounding charges payable at the end of the period	Nil	₹ m per lac

For what minimum value of 'm' will an investor prefer X to Y?

- (f) A project has an equity beta of 1.2 and is to be financed by 30% debt and 70% equity. Assume debt beta as zero, risk-free rate of return as 12% and return on market portfolio as 20%. Calculate the project beta and the return from the project.
- (g) What is marginal cost of capital? When will this be equal to the average cost of capital?
- (h) Securities A and B have a standard deviation of 10% and 15% respectively. The respective average returns are 12% and 20%.

Investor X has limited funds. He wants to compare A and B and choose the safer security. Advise X.

- (i) The foreign exchange market prices for US dollar (\$) against Indian rupees (₹) are quoted as under:

	Buying	Selling
Spot	65.30	65.50
Three months' forward	66.35	67.20

Calculate the cost of the forward cover.

- (j) S invested in a mutual fund when the NAV was ₹ 13.50 per unit. 90 days later, the NAV was ₹ 12.45 per unit. During the period S got a cash dividend of ₹ 1.25 per unit and capital gain distribution of ₹ 0.25. Calculate the annualized return.

2. Answer any three sub-divisions from (a) to (d):

8×3=24

- (a) A mutual fund made an issue of 800000 units of ₹ 10 each on 01.04.2014. No entry load was charged. It made the following investments after meeting its issue expenses.

	₹
40,000 Equity Shares of ₹ 100 @ ₹ 160	64,00,000
At par:	
8% Government Securities	6,40,000
9% Debentures (unlisted)	4,00,000
10% Debentures (listed)	4,00,000
	<u>78,40,000</u>

During the year, dividend of ₹ 9,60,000 was received on equity shares. Interest on all types of debt securities was received as and when due. At the end of the year on 31.03.2015, equity shares and 10% debentures were quoted at 175% and 90% of the respective par values. Other investments were at par. The operating expenses during the year amounted to ₹ 4,00,000.

- (i) Find out the Net Assets Value (NAV) per unit at the end of the year.
- (ii) Find out the NAV if the Mutual Fund had distributed a dividend of ₹ 0.90 per unit during the year to the unit holders. 8

(b) (I) The data pertaining to 5 mutual funds is given below:

Fund	Return	Standard deviation ( $\sigma$ )	Beta ( $\beta$ )
J	13	6	1.50
K	9	2	0.90
L	11	3	1.20
M	15	5	0.80
N	12	4	1.10

Compute the reward-to-variability/volatility ratios and rank the funds, if the risk-free rate is 6%. 5

(II) What is the principal business of the following entities? 3

- (i) Asset Finance Company (AFC)
- (ii) Investment Company (IC)
- (iii) Infrastructure Debt Fund-NBFC (IDF-NBFC)

(c) The current price (in Dec 2015) of sugar is ₹ 40 per kg. Sugar Mill SM expects to produce 200 MT of sugar in February 2016. February futures contract due on 20th February is trading at ₹ 45 per kg. SM wants to hedge itself against a price decline to below ₹ 45 kg in February. 100% cover is required and each contract is for 10 MT.

(i) Explain SM's appropriate hedging measure showing cash flows for full value if the price falls to ₹ 42 per kg in February 2016.

(ii) What is the position of SM in the futures and in the spot market? (6+2)=8

(1 MT = 1000 kg.)

(d) Explain four measures taken by the Central Government in the field of infrastructure financing. 8

**Please Turn Over**

