MODEL TEST PAPER 3

FINAL COURSE: GROUP – I

PAPER – 2: ADVANCED FINANCIAL MANAGEMENT

Time Allowed – 3 Hours **Maximum Marks – 100**

1. *The question paper comprises two parts, Part I and Part II.*
2. *Part I comprises Case Scenario based Multiple Choice Questions (MCQs)*
3. *Part II comprises questions which require descriptive type answers.*

PART I – Case Scenario based MCQs (30 Marks)

Part I is compulsory.

Case Scenario I

During one business meeting at XYZ Ltd., one of the member pointed out that while evaluating the performance of any company one should not only see its Operating Income but should also analyse its Capital structure as well. Weighted Average Cost of Capital changes on the basis of capital structure keeping all other factors unchanged.

He presented data relating to 3 companies Alpha Ltd., Beta Ltd. and Gama Ltd. whose operating Income are equal, but their capital structure is different.

The following information relating to these 3 companies is as follows:

(in ₹ 000)

	Alpha Ltd.	Beta Ltd.	Gama Ltd.
Total invested capital	20,00,000	20,00,000	20,00,000
Debt/Assets ratio	0.8	0.5	0.2
Shares outstanding	61,000	83,000	1,00,000
Pre-tax Cost of Debt	16%	13%	15%
Cost of Equity	26%	22%	20%
Operating Income (EBIT)	5,00,000	5,00,000	5,00,000

The Tax rate is uniform 35% in all cases. The industry PE ratio is 11.

Based on above case scenario, choose the most appropriate answer of the following:

1. The weighted average cost of capital of Alpha Ltd. shall approximately be ………………..

   (a) 13.520%

   (b) 15.225%

   (c) 17.950%

   (d) 18.000%

2. The Economic Valued Added (EVA) for Beta Ltd. is……………

   (a) ₹ 54,600 Thousand

   (b) ₹ 20,500 Thousand

   (c) (-) ₹ 34,000 Thousand

   (d) ₹ 21500 Thousand

3. The price per share of Gama Ltd. shall be ……………..

   (a) ₹ 28.60

   (b) ₹ 31.90

   (c) ₹ 31.46

   (d) ₹ 29.45

4. The estimated market capitalisation for Alpha Ltd. is……………

   (a) ₹ 26,47,700 Thousand

   (b) ₹ 31,46,000 Thousand

   (c) ₹ 17,44,600 Thousand

   (d) ₹ 23,73,800 Thousand

5. Earning per share of Beta Ltd. is……………..

   (a) ₹ 2.60

   (b) ₹ 2.90

   (c) ₹ 2.86

   (d) ₹ 2.15

6. The Economic Valued Added (EVA) for Alpha Ltd. is……………

   (a) ₹ 54,600 Thousand

(b) ₹ 20,500 Thousand

(c) (-) ₹ 34,000 Thousand

(d) ₹ 21,500 Thousand **(6 x 2 = 12 Marks)**

Case Scenario II

Bank A is in need of fund for a period of 14 days. To meet this financial need on 20th September 2013 Bank A enters into an agreement with Bank B under which it will sell 10% Government of India Bonds issued on 1st January 2013 @ 5.65% for ₹ 8 crore (Face value is ₹ 1,00,000 per Bond).

The clean price of same Bond is ₹ 99,420 and the Initial Margin be 2% and the maturity date of Bond is 31st December 2018. Consider 360 days in a year and interest is payable annually.

Based on above Case Scenario, answer the following questions:

7. The arrangement entered between Bank A and Bank B will be called …………

   (a) Call Money Arrangement

   (b) Commercial Bill Arrangement

   (c) Commercial Paper

   (d) Repurchase Option

8. Dirty Price of the Bond will approximately be……………………….

   (a) ₹ 103,530

   (b) ₹ 106,700

   (c) ₹105,000

   (d) ₹ 108,160

9. The start proceeds of the transaction shall be approximately ………………….

   (a) ₹ 8,38,36,604

   (b) ₹ 8,36,52,800

   (c) ₹ 8,58,36,804

   (d) ₹ 8,48,52,585

10. The second leg of the transaction shall be approximately……………….

(a) ₹ 8,38,36,604

(b) ₹ 8,36,52,800

(c) ₹ 8,58,36,804

(d) ₹ 8,48,52,585

11. The amount of Accrued Interest per Bond shall be approximately ……………

(a) ₹ 7280

(b) ₹ 7200

(c) ₹ 7340

(d) ₹ 7140 **(5 x 2 = 10 Marks)**

Case Scenario III

ABC Ltd. is planning to expand its business and therefore raising fund by issuing a convertible bond of ₹ 10 crore. An investor "Mr. X" is interested to invest in the bond of ABC Ltd. Mr. X has following data related to the convertible bond.

The data given below relates to a convertible bond:

Face value	₹ 250
Coupon rate	12%
No. of shares per bond	20
Market price of share	₹ 12
Straight value of bond	₹ 235
Market price of convertible bond	₹ 265
Maturity	5 Years

You, being an expert of the matter, are required to answer his questions. Select the most appropriate alternative:

12. The percentage of downside risk of the bond is approximately…………….

(a) 10.42%

(b) 6.38%

(c) 2.13%

(d) 12.77%

13. The conversion premium in percentage term of the bond is……………..

    (a) 12.77%

    (b) 10.42%

    (c) 2.18%

    (d) 13.45%

14. The conversion parity price of the stock is…………….

    (a) ₹ 11.75

    (b) ₹ 12.00

    (c) ₹ 13.25

    (d) ₹ 12.50

15. If he wants a yield of 15% the maximum price he should be ready to pay for is…………….

    (a) 217.41

    (b) 224.81

    (c) 240.00

    (d) 232.32 **(4 x 2 = 8 Marks)**

PART – II DESCRIPTIVE QUESTIONS

Question No.1 is compulsory. Candidates are required to answer any four questions from the remaining five questions.

Working notes should form part of the answers.

Maximum Marks – 70 Marks

1. (a) Red Ltd. is considering a project with the following Cash flows:

₹

Years	Cost of Plant	Recurring Cost	Savings
0	10,000	-	-
1	-	4,000	12,000
2	-	5,000	14,000

The cost of capital is 9%. Measure the sensitivity of the project to changes in the levels of plant value, running cost and savings (considering each factor at a time) such that the NPV becomes zero. The P.V. factor at 9% are as under:

Year	**Factor**
0	1
1	0.917
2	0.842

Which factor (except time period) is the most sensitive to affect the acceptability of the project if they vary adversely by 10%?

(6 Marks)

(b) Following are the details of cash inflows and outflows in foreign currency denominations of MNP Co. an Indian export firm, which have no foreign subsidiaries:

Currency	Inflow	Outflow	Spot rate	Forward rate
US $	4,00,00,000	2,00,00,000	48.01	48.82
French Franc	2,00,00,000	80,00,000	7.45	8.12
U.K. £	3,00,00,000	2,00,00,000	75.57	75.98
Japanese Yen	1,50,00,000	2,50,00,000	3.20	2.40

Determine the net exposure of each foreign currency in terms of Rupees. **(4 Marks)**

(c) List out the various stages of Funding for VC. **(4 Marks)**

2. (a) M/s Omega Electronics Ltd. exports air conditioners to Germany by importing all the components from Singapore. The company is exporting 2,400 units at a price of Euro 500 per unit. The cost of imported components is $ 800 per unit. The fixed cost and other variables cost per unit are ₹ 1,000 and ₹ 1,500 respectively. The cash flows in Foreign currencies are due in six months. The current exchange rates are as follows:

₹/Euro	51.50/55
₹/$	27.20/25

After six months the exchange rates turn out as follows:

₹/Euro	52.00/05
₹/$	27.70/75

(i) You are required to calculate loss/gain due to transaction exposure.

(ii) Based on the following additional information calculate the loss/gain due to transaction and operating exposure if the contracted price of air conditioners is ₹ 25,000:

A. the current exchange rate changes to

₹/Euro	51.75/80
₹/$	27.10/15

B. Price elasticity of demand is estimated to be 1.5

C. Payments and receipts are to be settled at the end of six months. **(10 Marks)**

(b) Explain the areas of the applications of Value at Risk (VAR).

(4 Marks)

3. (a) Consider the following information on two stocks, A and B:

Year	Return on A (%)	Return on B (%)
2006	10	12
2007	16	18

You are required to determine:

(i) The expected return on a portfolio containing A and B in the proportion of 40% and 60% respectively.

(ii) The Standard Deviation of return from each of the two stocks.

(iii) The covariance of returns from the two stocks.

(iv) Correlation coefficient between the returns of the two stocks.

(v) The risk of a portfolio containing A and B in the proportion of 40% and 60%. **(10 Marks)**

(b) Who are the secondary Participants involved in Securitisation process. **(4 Marks)**

4. (a) The valuation of Hansel Limited has been done by an investment analyst. Based on an expected free cash flow of ₹ 54 lakhs for the following year and an expected growth rate of 9 percent, the analyst has estimated the value of Hansel Limited to be ₹ 1800 lakhs. However, he committed a mistake of using the book values of debt and equity.

The book value weights employed by the analyst are not known, but you know that Hansel Limited has a cost of equity of 20 percent and post tax cost of debt of 10 percent. The value of equity is thrice its book value, whereas the market value of its debt is nine-tenths of its book value.

What is the correct value of Hansel Ltd? **(6 Marks)**

(b) According to Eugene Fama, there exist three levels of market efficiency. Explain. **(4 Marks)**

Either

(c) Traditionally, the main role of CFOs was focused on maximizing wealth for shareholders by maintaining the financial health of an organization. In recent times, the role of CFOs has expanded drastically into several areas. Explain these areas.

Or

Stock index futures is most popular financial derivatives over stock future.

Present your logical arguments to support the statement. (**4 Marks)**

5. (a) XYZ Ltd., a company based in India, manufactures very high quality modem furniture and sells to a small number of retail outlets in India and Nepal. It is facing tough competition. Recent studies on marketability of products have clearly indicated that the customers are now more interested in variety and choice rather than exclusivity and exceptional quality. Since the cost of quality wood in India is very high, the company is reviewing the proposal for import of woods in bulk from Nepalese supplier.

The estimate of net Indian (₹) and Nepalese Currency (NC) cash flows in Nominal terms for this proposal is shown below:

	Net Cash Flow (in millions)			
Year	**0**	**1**	**2**	**3**
NC	-25.000	2.600	3.800	4.100
Indian (₹)	0	2.869	4.200	4.600

The following information is relevant:

(i) XYZ Ltd. evaluates all investments by using a discount rate of 9% p.a. All Nepalese customers are invoiced in NC. NC cash flows are converted to Indian (₹) at the forward rate and discounted at the Indian rate.

(ii) Inflation rates in Nepal and India are expected to be 9% and 8% p.a. respectively. The current exchange rate is ₹ 1= NC 1.6

Assuming that you are the finance manager of XYZ Ltd., calculate the net present value (NPV) and modified internal rate of return (MIRR) of the proposal.

You may use following values with respect to discount factor for ₹ 1 @9%.

	Present Value	**Future Value**
Year 1	0.917	1.188
Year 2	0.842	1.090
Year 3	0.772	1

(10 Marks)

(b) A trader is having in its portfolio shares worth ₹ 85 lakhs at current price and cash ₹ 15 lakhs. The beta of share portfolio is 1.6. After 3 months the price of shares dropped by 3.2%.

Determine:

(i) Current portfolio beta

(ii) Portfolio beta after 3 months if the trader on current date goes for long position on ₹ 100 lakhs Nifty futures. **(4 Marks)**

6. (a) Consider the following quotations of Sensex futures in the 10 trading days during February, 2009:

Day	High	Low	Closing
04-02-09	3306.4	3290.00	3296.50
05-02-09	3298.00	3262.50	3294.40
06-02-09	3256.20	3227.00	3230.40
07-02-09	3233.00	3201.50	3212.30
10-02-09	3281.50	3256.00	3267.50
11-02-09	3283.50	3260.00	3263.80
12-02-09	3315.00	3286.30	3292.00
14-02-09	3315.00	3257.10	3309.30
17-02-09	3278.00	3249.50	3257.80
18-02-09	3118.00	3091.40	3102.60

Mr. A bought one Sensex Futures contract on February, 04. The average daily absolute change in the value of contract is ₹ 10,000 and standard deviation of these changes is ₹ 2,000. The maintenance margin is 75% of initial margin.

You are required to determine the daily balances in the margin account and payment on margin calls, if any. Sensex futures are traded at a multiple of 50. **(8 Marks)**

(b) XYZ Limited borrows £ 15 Million of six months LIBOR + 10.00% for a period of 24 months. The company anticipates a rise in LIBOR, hence it proposes to buy a Cap Option from its Bankers at the strike rate of 8.00%. The lump sum premium is 1.00% for the entire reset periods and the fixed rate of interest is 7.00% per annum. The actual position of LIBOR during the forthcoming reset period is as under:

Reset Period	LIBOR
1	9.00%
2	9.50%
3	10.00%

You are required to show how far interest rate risk is hedged through Cap Option.

For calculation, work out figures at each stage up to three decimal points and amount nearest to £. It should be part of working notes.

(6 Marks)