MODEL TEST PAPER 1

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

Grow More Ltd. an NBFC is in the need of funds and hence it sold its receivables to MAC Financial Corporation (MFC) for ₹ 100 million. MFC created a trust for this purpose called General Investment Trust (GIT) through which it issued securities carrying a different level of risk and return to the investors. Further, this structure also permits the GIT to reinvest surplus funds for short term as per their requirement.

MFC also appointed a third party, Safeguard Pvt. Ltd. (SPL) to collect the payment due from obligor(s) and passes it to GIT. It will also follow up with defaulting obligor and if required initiate appropriate legal action against them.

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

1. The securitized instrument issued for ₹ 100 million by the GIT falls under category of ……….
   (a) Pass Through certificate (PTCs)
   (b) Pay Through Security (PTS)
   (c) Stripped Security
   (d) Debt Fund.
2. In the above scenario, the Originator is…………………
   (a) Grow More Ltd.
   (b) MAC Financial Corporation (MFC)

(c) General Investment Trust (GIT)

(d) Safeguard Pvt. Ltd.

3. In the above scenario, the General Investment Trust (GIT) is a/an……………

   (a) Obligor

   (b) Originator

   (c) Special Purpose Vehicle (SPV)

   (d) Receiving and Paying Agent (RPA)

4. In the above scenario, the Safeguard Pvt. Ltd. (SPL) is a/an………………

   (a) Obligor

   (b) Originator

   (c) Special Purpose Vehicle (SPV)

   (d) Receiving and Paying Agent (RPA)

5. Which of the following statement holds true?

   (a) When Yield to Maturity in market rises, prices of Principle Only (PO) Securities tend to rise.

   (b) When Yield to Maturity in market rises, prices of Principle Only (PO) Securities tend to fall.

   (c) When Yield to Maturity in market falls, prices of Principle Only (PO) Securities tend to fall.

   (d) When Yield to Maturity in market falls, prices of Principle Only (PO) Securities remain the same. **(5 x 2 = 10 Marks)**

Case Scenario II

You are a financial analyst at a prominent investment firm and have been tasked with empirically verifying the weak form of Efficient Market Hypothesis (EMH) Theory for the XYZ Stock Index, a collection of diverse stocks. You decided to conduct three different tests to assess whether the stock market follows the principles of the weak form of EMH.

Test 1

For the past five years, you collected daily price changes of the stocks in the XYZ Stock Index. You calculated correlation coefficients for different lag periods and analyzed whether past price changes exhibit any significant correlation with future price changes. You considered price changes to be serially independent. The results indicated that most auto correlation coefficients are close to zero and statistically insignificant, suggesting those past price changes do not predict future price changes.

Test 2

You further investigated the randomness of price changes in the XYZ Stock Index. Analyzing the sequence of daily price changes, you count the number of runs where price changes are consistently positive or negative. Upon comparing the observed number of runs with the expected number based on randomness, you find that they align closely, supporting the idea that price changes follow a random pattern.

Test 3

To examine the efficacy of trading strategies based on historical price trends, you implemented a simple trading rule for the XYZ Stock Index. The rule involves buying when the price crosses a moving average of 5% threshold and selling when it crosses another 7% threshold. Over a period of testing, you computed the returns generated by the trading strategy. The results revealed that the returns are not consistently better than random chance, implying that past price trends do not reliably predict future price movements.

Conclusion:

After conducting the three tests the evidence supports the weak form of Efficient Market Theory for the XYZ Stock Index you concluded that past price trends do not reliably predict future price movements.

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

6. Test 1 is …………………

   (a) Serial Correlation test

   (b) Filter Rules test

   (c) Run test

(d) Variance Ratio test

7. Test 2 is …………………

   (a) Serial Correlation test

   (b) Filter Rules test

   (c) Run test

   (d) Variance Ratio test

8. Test 3 is ………………

   (a) Serial Correlation test

   (b) Filter Rules test

   (c) Run test

   (d) Variance Ratio test.

9. The Filter Rule Test should not be applied for buy and hold strategy if……………

   (a) the behavior of stock price changes is predictable.

   (b) the behavior of stock price changes is dependent on past trends.

   (c) the behavior of stock price changes is correlated.

   (d) the behavior of stock price changes is random.

10. Results of your studies support the……………

   (a) Semi-strong EMH Theory

   (b) Strong EMH Theory

   (c) Random Walk Theory

   (d) Markowitz Theory **(5 x 2 = 10 Marks)**

Case Scenario III

Hari is acquiring the share of XYZ Ltd. The company has also issued 12% Convertible Debenture.

The data related to such convertible debenture is as follows:

Face value	₹ 1000
No. of shares per debenture	20
Market price of per share of XYZ Ltd.	₹ 48
Straight value of debenture	₹ 940
Market price of convertible debenture	₹ 1060

From the above case scenario, choose the most appropriate answer of following MCQs.

11. Stock value of debenture is………………
    (a) ₹ 1000
    (b) ₹ 1060
    (c) ₹ 940
    (d) ₹ 960

12. Considering the basis of Market Price of Debenture percentage of downside risk shall be approximately……………..
    (a) 12%
    (b) 12.77%
    (c) 11.32%
    (d) 10.42%

13. Conversion Premium shall be approximately……………..
    (a) 12%
    (b) 12.77%
    (c) 10.63%
    (d) 10.42%

14. The conversion parity price of the stock shall be approximately……………..
    (a) ₹ 50
    (b) ₹ 53
    (c) ₹ 48
    (d) ₹ 47

15. Premium over Straight Value of Debenture shall be approximately ……………

(a) 12%

(b) 12.77%

(c) 10.63%

(d) 10.42% **(5 x 2 = 10 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) Shashi Co. Ltd has projected the following cash flows from a project under evaluation:

Year	0	1	2	3
₹ (in lakhs)	(72)	30	40	30

The above cash flows have been made at expected prices after recognizing inflation. The firm's cost of capital is 10%. The expected annual rate of inflation is 5%. Show how the viability of the project is to be evaluated. PVF at 10% for 1-3 years are 0.909, 0.826 and 0.751. **(6 Marks)**

(b) You sold Hong Kong Dollar 1,00,00,000 value spot to your customer at ₹ 5.70 & covered yourself in London market on the same day, when the exchange rates were

US$ 1 = H.K.$ 7.5880 7.5920

Local inter bank market rates for US$ were

Spot US$ 1 = ₹ 42.70 42.85

Calculate cover rate and ascertain the profit or loss in the transaction. Ignore brokerage. **(4 Marks)**

(c) “Financial projections include three basic documents that make up a business’s financial statements.” Explain these documents.

(4 Marks)

2. (a) A Ltd. of U.K. has imported some chemical worth of USD 3,64,897 from one of the U.S. suppliers. The amount is payable in six months time. The relevant spot and forward rates are:

Spot rate	USD 1.5617-1.5673
6 months’ forward rate	USD 1.5455 –1.5609

The borrowing rates in U.K. and U.S. are 7% and 6% respectively and the deposit rates are 5.5% and 4.5% respectively.

Currency options are available under which one option contract is for GBP 12,500. The option premium for GBP at a strike price of USD 1.70/GBP is USD 0.037 (call option) and USD 0.096 (put option) for 6 months period.

The company has 3 choices:

(i) Forward cover

(ii) Money market cover, and

(iii) Currency option

Which of the alternatives is preferable by the company? **(10 Marks)**

(b) Explain the main features of Value at Risk (VaR). **(4 Marks)**

3. (a) Mr. FedUp wants to invest an amount of ₹ 520 lakhs and had approached his Portfolio Manager. The Portfolio Manager had advised Mr. FedUp to invest in the following manner:

Security	**Moderate**	**Better**	**Good**	**Very Good**	**Best**
Amount (in ₹ Lakhs)	60	80	100	120	160
Beta	0.5	1.00	0.80	1.20	1.50

You are required to advise Mr. FedUp regarding the following, using Capital Asset Pricing Methodology:

(i) Expected return on the portfolio, if the Government Securities are at 8% and the NIFTY is yielding 10%.

(ii) Advisability of replacing Security 'Better' with NIFTY.

(6 Marks)

(b) Sensex futures are traded at a multiple of 50. Consider the following quotations of Sensex futures in the 10 trading days during February, 2009:

Day	High	Low	Closing
4-2-09	3306.4	3290.00	3296.50
5-2-09	3298.00	3262.50	3294.40
6-2-09	3256.20	3227.00	3230.40
7-2-09	3233.00	3201.50	3212.30
10-2-09	3281.50	3256.00	3267.50
11-2-09	3283.50	3260.00	3263.80
12-2-09	3315.00	3286.30	3292.00
14-2-09	3315.00	3257.10	3309.30
17-2-09	3278.00	3249.50	3257.80
18-2-09	3118.00	3091.40	3102.60

Abshishek 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. **(8 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)

BSE	5000
Value of portfolio	₹ 10,10,000
Risk free interest rate	9% p.a.
Dividend yield on Index	6% p.a.
Beta of portfolio	1.5

We assume that a future contract on the BSE index with four months maturity is used to hedge the value of portfolio over next three months. One future contract is for delivery of 50 times the index.

Based on the above information calculate:

(i) Price of future contract.

(ii) The gain on short futures position if index turns out to be 4,500 in three months. **(4 Marks)**

(c) Either

Explain three basic questions a Corporate level strategy should be able to answer. **(4 Marks)**

(c) **Or**

Explain the purposes for trading in Futures. (**4 Marks)**

5. (a) Abhiman Ltd. is a subsidiary of Janam Ltd. and is acquiring Swabhiman Ltd. which is also a subsidiary of Janam Ltd. The following information is given:

	Abhiman Ltd.	**Swabhiman Ltd.**
% Shareholding of promoter	50%	60%
Share capital	₹ 200 lacs	100 lacs
Free Reserves and surplus	₹ 900 lacs	600 lacs
Paid up value per share	₹ 100	10

Free float market capitalization	₹ 500 lacs	156 lacs
P/E Ratio (times)	10	4

Janam Ltd., is interested in doing justice to both companies. The following parameters have been assigned by the Board of Janam Ltd., for determining the swap ratio:

Book value 25%

Earning per share 50%

Market price 25%

You are required to compute

(i) The swap ratio.

(ii) The Book Value, Earning Per Share and Expected Market Price of Swabhiman Ltd., (assuming P/E Ratio of Abhiman remains the same and all assets and liabilities of Swabhiman Ltd. are taken over at book value.) **(10 Marks)**

(b) Equity share of PQR Ltd. is presently quoted at ₹ 320. The Market Price of the share after 6 months has the following probability distribution:

Market Price ₹	180	260	280	320	400
Probability	0.1	0.2	0.5	0.1	0.1

A put option with a strike price of ₹ 300 can be written.

You are required to find out expected value of option at maturity (i.e. 6 months) **(4 Marks)**

6. (a) ABC Ltd. has ₹ 300 million, 12 per cent bonds outstanding with six years remaining to maturity. Since interest rates are falling, ABC Ltd. is contemplating of refunding these bonds with a ₹ 300 million issue of 6 year bonds carrying a coupon rate of 10 per cent. Issue cost of the new bond will be ₹ 6 million and the call premium is 4 per cent. ₹ 9 million being the unamortized portion of issue cost of old bonds can be written off no sooner the old bonds are called off. Marginal tax rate of ABC Ltd. is 30 per cent. You are required to analyse the bond refunding decision. **(8 Marks)**

(b) M/s. Parker & Co. is contemplating to borrow an amount of ₹60 crores for a Period of 3 months in the coming 6 month's time from now. The current rate of interest is 9% p.a., but it may go up in 6 month's time. The company wants to hedge itself against the likely increase in interest rate.

The Company's Bankers quoted an FRA (Forward Rate Agreement) at 9.30% p.a.

What will be the Final settlement amount, if the actual rate of interest after 6 months happens to be (i) 9.60% p.a. and (ii) 8.80% p.a.? **(6 Marks)**