2018

MBA

3rd Semester Examination

FINANCIAL ENGINEERING

(Specialisation : Financial Management)

PAPER—F-308

Full Marks : 100

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer all questions.

1. Answer any *eight* questions : 8×5

(a) Briefly explain the scope of Financial Engineering.

(b) Distinguish between Fianancial Engineering and Financial Analysis.

(c) State the steps involved in Financial Product Development.

(d) Show the relationship between a convertible debenture's market value, its investment value and its conversion value.

(e) A BHEL futures contract has a contract size of 375 and on september 1, BHEL shares are selling at INR 2,330. You own 750 shares of BHEL. October BHEL futures with expiry on October 29 are selling at INR 2,352. Assume that the spot price of BHEL shares on October 29 is INR 2,300. You plan to hedge you holding in BHEL shares.

(i) What type of hedging is appropriate ?

(ii) Explain how you would hedge ?

(iii) What is the effective price at which you would sell the shares ?

(f) What do you mean by Prime-lending and Sub-prime lending.

(g) What is the purpose of hedging ? Define long hedges and short hedges.

(h) Discuss the steps in Securitisation.

(i) Write a note on 'Changing Face of Liquidity Management'.

(j) Distinguish between Repo and Reverse Market.

(k) The following data is available for a bond.

Face value : ₹ 2.4 billion

Coupon (interest rate)	:	16 per cent payable annually
Years to maturity	:	6 years
Redemption value	:	₹ 1000
Current market price	:	₹ 964.5

What is the yield to maturity, duration and volatility of this bond ?

(l) Describe the nature of the following :

(i) Bonds with Embedded Options ;

(ii) Inverse Floaters.

2. Answer any *four* questions : 4×10

(a) Discuss how innovative debt instruments add value.

(b) Describe the intra-firm factors that contribute to the growth of Financial Engineering.

(c) Explain the reasons for the housing sector boom in the US prior to 2006.

(d) Write short notes on :

(i) Arbitrage ;

(ii) Speculation.

(e) (i) Under what conditions would a hedger not be able to get a perfect hedge using futures ?

(ii) On November 20, the spot price of jute is INR 2,198 per kg and the price of December jute futures with expiry on December 15 is INR 2,276. The standard deviation of the spot price change is estimated as INR 260 and the standard deviation of the futures price change is estimated as INR 248. The correlation coefficient between the spot price change and the future price change is estimated to be 0.99. What is the hedge ratio and the hedging effectiveness ?

(f) Discuss the modern finance explanations for the popularity of warrants and convertible debentures.

[Internal Assessment : 20 Marks]
