Code: 17BA4T6FA

PVP 17

II MBA - II Semester-Regular/Supplementary Examinations – September 2020

FINANCIAL DERIVATIVES

Duration: 3 hours Max. Marks: 60

SECTION - A

1. Answer the following: 5 x 2 = 10 M

a) What do you mean by Forward Contracts?
b) Explain option Warrants.
c) What is hedging?
d) Define log normal properties.
e) Explain Currency swaps.

SECTION – B

Answer the following: 5 x 8 = 40 M

2\. a) Explain the various types of derivatives. Differentiate between cash and futures market.

(OR)

b) Explain the functions of OTC derivatives market.

3\. a) Explain the differences between future and option contracts.

(OR)

b) Distinguish between :

i) Call option and put option

ii) Intrinsic value option and time value option

iii) American option and European option

4. a) What do you mean by option? Explain different option trading strategies.

(OR)

b) Under what circumstances are SHORT HEDGE, and a LONG HEDGE appropriate? Use examples.

5. a) The current stock price is 100. The stock can increase or decrease by 10% per period. The risk free rate is 5% per period. Using the BOPM show at each node of binomial tree, the stock price and the value of a European put which expires in two periods, and has a strike price of K =100. Also, calculate the hedge ratio at each node and show that the hedge portfolio has the same value at the two nodes at t=1.

(OR)

b) Define volatility. Explain the Causes of volatility.

6. a) How the valuation of Interest Rate SWAP, Currency SWAP and FRN are made? Explain them.

(OR)

b) Dr .CK .RAGHU a debt mutual fund manager in invested 200 million in long term debt securities. He wants to convert the holding into synthetic floating rate portfolio. The portfolio pays a 9% fixed return. Assume that a swap dealer offers 9%

fixed for MIBOR, what should Raghu do and what will be the net payment of his choice?

SECTION-C

7. Case Study **1x10=10**

Maria Gilbert is a principal in the firm of Orion Financial Management. For twenty years she was chief investment officer with Reliance Investments, the pension management arm of the Second National Bank of South Bend, Indiana. She left the bank in May 1995 in an attempt to turn her expertise into greater personal rewards Two portfolios under management for medium-sized pension funds were on the top of her current agenda. The first portfolio was an index fund representing a cross section of the S & P 500 stocks. This portfolio had been established as a core portfolio for the South Bend Firefighters, currently $10 million. The second portfolio was an actively managed fund for the Ryan Country Public Employees Retirement Fund, which aggregated $2.75 million. The firefighters portfolio was put in a cross section of S & P 500 stocks on December 23, 1995, when the S & P 500 Stock Index was at 500. One year later, on December 20, 1996, the S & P 500 Index closed at 595. On the same day the S & P 500 March/1997 futures contract closed at 600. The March/600 call on the S & P 500 Index carried a premium of 18.75 points, and the March/600 put was at 8.50. The Ryan Country fund was allocated as follows: cash equivalents, 9 percent; fixed income securities, 36 percent; equities, 55 percent, Treasury-bond futures were priced at 95. On December 20,1996, Maria arrived at the office determined to adjust these two portfolios. However, she had mixed feelings about the stock market. On the one hand, she believed the market might continue its advance from an S & P 500 level of 595 to an index level of 640 during the next three months if corporate profits continued there upward surge. On the other hand, she worried that a downward correction could take the market to 545 if interest rates moved sharply higher as some were predicting. After pondering her options she decided to look more closely at alternative strategies for both funds, ignoring taxes and transaction costs for simplification of her task.

Question :

Suppose Gilbert thought the stock market would weaken and she wanted to lighten, but not eliminate, her equity position and increase the fixed income part of the Ryan portfolio. Indicate specific actions she could take in the futures markets to shift the allocation of the Ryan portfolio to Zero cash, $1.6 million fixed-income, and $1.15 million equities.