JP – 323

III Semester M.Com. (FA) Degree Examination, May/June 2023
(CBCS Scheme) (2021 – 22)
COMMERCE (Financial Analysis)
Paper – 3.5 : Financial Derivatives

Time : 3 Hours

Max. Marks : 70

SECTION – A

1. Answer **any seven** questions out of ten. **Each** question carries **two** marks. **(7×2=14)**

   a) What do you mean by delta hedging ?

   b) State the different types of derivatives.

   c) What is plain vanilla swap ?

   d) What is bid-ask spread ?

   e) Distinguish between arbitrageur and speculator.

   f) What are caps and floors ?

   g) What do you mean by cross hedge ?

   h) State the critiques of derivatives.

   i) "A hedger enters the market with an intention to make profit". True/False. Explain.

   j) There are more speculators than hedgers in the World. Elaborate.

SECTION – B

Answer **any four** questions out of six. **Each** question carries **five** marks. **(4×5=20)**

2. Discuss the determinants of currency options.

3. How does forward contacts are different from future contacts ? Explain.

P.T.O.

4. Given the following information :

   Stock Price 805

   Strike Price 800

   Option Maturity 6 months

   Risk-free rate of return 8% p.a.

   Stock's price after 6 months can be either 950 or 700

   Calculate the price of the call option using the Binomial model.

5. How does derivatives trading take place on NSE in India ?

6. The price of crude oil is highly volatile, and on September 1, the price of Brent Crude Oil is at INR 3,278 per barrel.

   You believe that the Organization of the Petroleum-Exporting Countries (OPEC) is going to meet on September 5 and the Countries are likely to cut down the supply of oil ; hence, you expect the crude oil price to increase on September 6 and want to speculate using futures. Currently, crude oil futures are available with expiry in October, and the contract delivery unit is 50,000 barrels. The futures price is at INR 3,295 per barrel on September 1.

   i) How would you use futures to speculate on the price of crude oil ?

   ii) If the crude oil spot price on September 5 is INR 3,400 per barrel and the October futures price on September 5 is INR 3,468 per barrel, what will be your gain from the speculation ?

   iii) If the crude oil spot price on September 5 is INR 2,860 per barrel and the October futures price on September 5 is INR 2,904 per barrel, what will be your gain from the speculation ?

7. Discuss the recent trends in derivatives market.

SECTION – C

Answer **any two** questions out of four. **Each** question carries **twelve** marks. **(2×12=24)**

8. "Covered interest arbitrage" is a hedging instrument. Explain.

9. Consider the following information with regard to a call option on the stocks of Ashrith Ltd.

Current Market price (Sc)	Rs. 230
Time period to expiration	6 months
Standard deviation	0.60
Continuously compounded risk free interest rate (r)	0.10

Find the value of call option using Black and Scholes Model.

10. Write a note on the subprime crisis. What derivative instruments were used that led to the crash of markets globally ?

11. On September 1, gold is trading at INR 13,500 per 10 grams. Lotus Jewellers requires 3,000 g of gold on January 1 for preparing new jewellery for the marriage season next year. The gold price has been highly volatile in the past 3 months, and experts differ in their opinion as to whether the gold price would increase or decrease in the future. Lotus Jewellers believes that the gold price would decrease to about INR 12,600 by September 12 and would like to speculate using futures. There is a futures contract available with expiry on December 20 and the futures price is INR 14,100.

    i) Explain how Lotus Jewellers can use futures to speculate on the gold price.

    ii) On September 12, the spot price of gold is INR 12,900 per 10 g and the futures price is INR 13,150. What would be the speculative gain for Lotus Jewellers ?

SECTION – D

Compulsory skill based question on subject. **(1×12=12)**

12. An investor is willing to take an options strategy for event BREXIT (Britain Exit). As an investment consultant, you are required to construct two strategies with hypothetical value. Also, show the payoff diagram.
