



Third Semester M.Com. Degree Examination, December 2016
(Choice Based Credit System)
COMMERCE
SC 3.5 (B) : Financial Derivatives (New)

Time : 3 Hours

Max. Marks : 70

SECTION – A

Answer **any ten** of the following sub-questions. **Each** sub-question carries **two** marks : **(10×2=20)**

1. a) What is the necessity of derivatives market ?
- b) What are stock index futures ?
- c) Why does the exchange collect the margin ?
- d) How can the counter-party risk be mitigated in futures market ?
- e) Who is an arbitrageur ?
- f) How do derivatives help in discovery of price ?
- g) What is the profit potential of put option writer ?
- h) What do you mean by premium in option contract ?
- i) What is the time value of option ?
- j) When was the derivatives introduced in India ?
- k) How are 'naked' calls different from 'covered' calls ?
- l) What is the maximum gain or loss on the expiry of position if a call option on a share is bought at a strike price of Rs. 160 when market price is Rs. 150, expiry in three months and a premium of Rs. 12 ?

SECTION – B

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

2. Write a comprehensive note on development of derivatives market in India.
3. Identify and explain the kinds of risks involved in forwards market.

P.T.O.



4. State the assumptions of Carry Pricing Model.
5. Explain the features of options contract.
6. Assume that a market-capitalisation weighted index contains only three stocks A, B and C as shown below. The current value of the index is 1056 :

Company	Share Price (Rs.)	Market Capitalisation (Rs. crores)
A	120	12
B	50	30
C	80	24

Calculate the price of futures contract with expiration in 60 days on the index if it is known that 25 days from today, Company A would pay a dividend of Rs. 8 per share. Take the risk-free rate of interest to be 15% per annum. Assume the lot size to be 200 units.

7. Classify the following options into in-the-money, out-of-the-money or at-the-money :

Stock	Options	Stock Price (Rs.)	Exercise Price (Rs.)
Bharti Airtel	Put	450	500
NTPC	Call	411	400
HUL	Call	136	200
L and T	Put	2390	2500
Karnataka Bank	Call	267	260
Hindalco	Call	104	115
SBI	Put	2200	2100



SECTION – C

Answer any three questions. Each question carries ten marks : (3x10=30)

- 8. Distinguish between forwards and futures.
- 9. Explain in detail the trading procedure in futures market.
- 10. Discuss critically the Black-Scholes model.
- 11. Consider an investor who contracts her broker on July 7, 2015 to buy gold futures contracts on XYZ Commodity Exchange. The current futures price is \$ 1,250 per ounce. Since the contract size is 100 ounces, the investor has contracted to buy a total of 200 ounces at this price. The broker will require the investor to deposit \$ 5,000 per contract as Initial Margin. At the end of each trading day, the margin account is adjusted to reflect the investor's gain or loss. The maintenance margin is \$ 3,500 per contract. Show the operation of Margin Account from the following data :

Day	7	8	9	10	13	14	15	16	17
FP (\$)	1245	1249	1243	1245	1241	1236	1240	1237	1332
Day	20	21	22	23	24	27	28	29	30
FP (\$)	1235	1226	1220	1215	1215	1220	1230	1235	1232

- 12. How can a butterfly spread be created by using the following three put options (with same expiration dates) ?

- Option – 1 : Exercise price Rs. 70 Price : Rs. 6
- Option – 2 : Exercise price Rs. 75 Price : Rs. 9
- Option – 3 : Exercise price Rs. 80 Price : Rs. 14

Determine the range of stock prices within which losses would be made by the buyer of the options.

https://www.vskub.com

https://www.vskub.com