

MMS/M-16
FINANCIAL DERIVATIVES
PAPER-FM-403

Time Allowed: 3 Hours

Maximum Marks: 70

Note: Attempt any eight questions from part-A. And any three Questions from part-B.

Part-A

1. Explain why the difference between put and call prices depends upon whether or not the underlying security pays a dividend during the life of the contracts.
2. When comparing futures and forward contracts, it has been said that futures are more liquid but forwards are more flexible. Explain what this statement means.
3. Explain how call and put options can represent a leveraged way of investing in the stock market and also enable investors to hedge their risk completely.
4. It is often stated that a stock index arbitrage trade is easier to implement when the stock index futures contract price is above its theoretical level than when it is below that value. What institutional realities might make statement true?
5. Put- call forward parity and range forward positions both involve the purpose of a call option and the sale of a put option (or vice versa) on the same underlying asset. Describe the relationship between these two trading strategies. is one a special case of the other?
6. Describe condition under which it would be rational to exercise both an American-style put and call stock option before the expiration date. In both cases, comment specifically on the role that dividends play.
7. It has been shown empirically that stock volatility decreases as a stock's price increases. Comment on how this phenomenon would tend to bias the call put option values generated by the Black-scholes model, which assumes that volatility remains constant.
8. Explain why a change in the time to expiration (i.e., T) can have either a positive or negative impact on the value of a European-style put option. In this explanation, also contrast the put's reaction with that of a European-style call, for which an increase in T has an unambiguously positive effect.
9. When yield curve is upward sloping, the fixed rate on a multiyear swap must be higher than the current level of LIBOR. With a down ward-slopping yield curve, the opposite will occur." Explain what is meant by this statement and why it must be true?
10. State and explain the mechanism of the equity linked swaps?

Part-B

1. It has been said that, from an investor's perspective, a long position in a call option represents the "good half" of a long position in a forward contract. Explain what is meant by this statement. Also describe what the "bad half" of the long forward position would have to be for this statement to be true.
2. Discuss the difficulties that having options in a security portfolio create for the measurement of portfolio risk. Specifically, explain why standard is a deficient statistic for capturing the essence of risk in a put-protected portfolio. How could the standard deviation statistic be modified of risk in a put-protected portfolio. How could the standard deviation statistic be modified to account for this concern?
3. Explain why the currency A, whose interest rates are twice as great as those in country B, must trade at a forward discount. If there were no difference between the spot and forward exchange rates in this interest environment, what arbitrage trade could be constructed to take advantage of the situation?
4. In valuing options with Black school model, we saw that the risk-free rate on the foreign currency was equivalent to the dividend when an individual stock or stock index was the underlying asset. Discuss the appropriateness of this analogy. What sort of transaction involving foreign currency would be required to make this parallel exact?
5. Explain how an interest rate swap can be viewed as a series of forward rate agreements, a pair of bond transaction, or a pair of option agreements. To make your description more precise, take the point of view of the fixed rate receiver in the swap.

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Part-A

11. Describe the business research process.
12. What are source of primary data? Explain.
13. What do you mean by data editing? Why is it necessitated?
14. "Scaling is very instrumental in qualitative research". Do you agree? Explain.
15. Describe the role of observation studies in business research.
16. What are sampling errors? How are these controlled in research? Explain.
17. What is multidimensional scaling? How is the same useful in business research? Explain.
18. Develop criteria of judging the goodness of research report.
19. Brief, outline the uses of SPSS in business research.
20. Write a brief note on the 'factor analysis'
21. What is business research? What are major constituents of good research study? Illustrate with suitable examples.
22. What do you understand by research design? Describe research designs in business research.
23. What do you mean by useable hypothesis? What are its sources? Explain.
24. 'Indian businesses are more execution centric than research oriented. In this context, review uses of research in Indian corporate sector.
25. Write a comprehensive note on the application of statistical tools in business research.