

Department of MBA

MBA Mid Question Bank (R22 Regulation)

Academic Year: 2024-25

Semester: III

Subject Name: RISK MANAGEMENT FINANCIAL DERIVATIVES (22MB322PE)

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PART-A

Q. No	Questions	Marks	BL	CO	Unit No
1	What is risk management?	2M	L4	CO1	I
2	Differentiate between systematic and unsystematic risk.	2M	L2	CO1	I
3	What is the main objective of the risk management process?	2M	L2	CO1	I
4	What is the purpose of Basel III?	2M	L2	CO1	I
5	A portfolio has an expected daily return of 0.1% and a daily standard deviation of 2%. Assuming a normal distribution, calculate the 1-day VaR at a 95% confidence level.	2M	L4	CO1	I
6	What does Cash Flow at Risk (CaR) measure?	2M	L2	CO1	I
7	What is a derivative market?	2M	L2	CO2	II
8	Name two types of derivatives.	2M	L2	CO2	II
9	What is the main difference between the forward market and the spot market?	2M	L2	CO2	II
10	List two factors that influence the growth of the derivatives market in India.	2M	L2	CO2	II
11	What is a foreign currency forward contract?	2M	L2	CO2	II
12	What is counterparty risk in a forward contract?	2M	L2	CO2	II
13	What is a futures contract?	2M	L2	CO3	III
14	Define physical settlement in a futures contract?	2M	L2	CO3	III
15	What is the difference between cash settlement and physical settlement in futures?	2M	L2	CO3	III
UPTO MID-I					
16	Name two types of futures contracts traded globally.	2M	L2	CO3	III
17	What is a stock index future?	2M	L1	CO3	III
18	What is the Cost of Carry model in futures pricing?	2M	L1	CO3	III
19	What is an options contract?	2 M	L1	CO4	IV
20	What is a call option?	2 M	L1	CO4	IV
21	An investor buys a call option with a strike price of \$50. If the current market price of the underlying asset is \$55, what is the intrinsic value of the call option?	2 M	L3	CO4	IV
22	What is arbitrage in the context of options pricing	2 M	L1	CO4	IV
23	State one use of options strategies in risk management	2M	L2	CO4	IV
24	What is the Black-Scholes Options Pricing Model used for?	2M	L1	CO4	IV
25	What is a swap contract?	2 M	L1	CO5	V
26	Define an interest rate swap.	2 M	L1	CO5	V

27	What is the purpose of a currency swap?	2 M	L1	CO5	V
28	What is the significance of carbon credits in financial markets?	2 M	L1	CO5	V
29	A company enters into an interest rate swap where it pays a fixed rate of 5% and receives a floating rate based on LIBOR. If LIBOR is currently at 4.5%, what is the net payment by the company?	2M	L2	CO5	V
30	When did the interest rate swap market evolve in India?	2M	L2	CO5	V

PART-B

Q. No	Questions	Marks	BL	CO	Unit No
1	Explain the scope of risk management in a business context.	4M	L2	CO1	I
2	Explain currency risk and its impact on businesses.	4M	L2	CO1	I
3	Describe the steps involved in the risk management process.	4M	L2	CO1	I
4	Compared to unsystematic risks, how do systematic risks affect the entire market.	4M	L2	CO1	I
5	You manage a portfolio with a current value of \$500,000. The portfolio has an annual return of 8% and an annual standard deviation of 20%. Assuming normal distribution, calculate the 1-day VaR at a 99% confidence level using the Variance-Covariance method.	4M	L3	CO1	I
6	Differentiate between Value at Risk (VaR) and Cash Flow at Risk (CaR).	4M	L2	CO1	I
7	Explain Basel I, II, and III in detail, highlighting the evolution of these accords and their impact on banking regulations.	8M	L2	CO1	I
8	Elaborate on the various types of financial risks businesses face, including market, liquidity, and credit risks.	8M	L2	CO1	I
9	A portfolio has a value of \$10 million. The expected annual return of the portfolio is 12%, and the annual volatility (standard deviation) is 18%. Using the Variance-Covariance method, calculate the 1-day VaR at a 99% confidence level. How does this result change if the VaR is calculated for 5 days?	8M	L3	CO1	I
10	Explain the key differences between a forward contract and a spot market transaction.	4M	L2	CO2	II
11	Briefly describe the development and growth of the derivative markets in India.	4M	L2	CO2	II
12	What are the key risks involved in a forward contract?	4M	L2	CO2	II
13	Briefly describe the role of regulations in the derivative market in India.	4M	L2	CO2	II
14	Discuss how pricing is determined in forward contracts.	4M	L2	CO2	II
15	What factors have contributed to the growth of the derivatives market in India?	4M	L2	CO2	II
16	Evaluate the role of regulatory bodies in the derivative markets in India. How do these regulations impact market	8M	L2	CO2	II

	stability and growth.				
17	Discuss the evolution and growth of derivative markets globally and in India. What factors have driven this growth.	8M	L2	CO2	II
18	Explain the structure and functioning of foreign currency forward contracts and discuss their importance in international trade.	8M	L2	CO2	II
19	Briefly explain the structure of a futures contract and its key components	4M	L2	CO3	III
20	What are commodity futures, and how are they used in risk management	4M	L2	CO3	III
21	Differentiate between physical settlement and cash settlement in futures contracts	4M	L2	CO3	III
22	Explain the delivery options available in futures contracts and their significance	4M	L2	CO3	III
23	Discuss the role of futures contracts in the global derivatives market	4M	L2	CO3	III
UPTO MID-I					
24	How do stock index futures work, and why are they important for investors?	4M	L2	CO3	III
25	Explain the Cost of Carry model and its relevance to pricing futures and forwards.	4M	L2	CO3	III
26	What are currency futures, and how do they differ from forward contracts?	4M	L2	CO3	III
27	Explain the Cost of Carry model in the context of futures and forwards. Calculate the fair price of a futures contract for an asset currently priced at \$200, with a risk-free rate of 5% per annum and a storage cost of \$2 per year, assuming a time to maturity of 1 year.	4M	L3	CO3	III
28	A company has the following futures positions: <ul style="list-style-type: none"> o Long 5 contracts on crude oil at \$70 per barrel o Short 10 contracts on natural gas at \$3 per MMBtu At expiration, the prices are as follows: crude oil is \$75 per barrel, and natural gas is \$2.80 per MMBtu. Calculate the total profit or loss from these futures contracts.	4M	L3	CO3	III
29	Explain the concept of the put-call parity theorem.	4M	L2	CO4	IV
30	What are the key components of the Black-Scholes Options Pricing Model?	4M	L2	CO4	IV
31	Describe the structure of the options market and its participants.	4M	L2	CO4	IV
32	What is the Binomial Pricing Model, and how is it used to price options?	4M	L2	CO4	IV
33	Discuss one basic options strategy used for risk management.	4M	L2	CO4	IV
34	Explain how arbitrage opportunities arise in options pricing	4M	L2	CO4	IV
35	An investor is considering a covered call strategy on a stock currently priced at \$80. The investor owns 100 shares and sells a call option with a strike price of \$85 for a premium of \$5. Calculate the maximum profit, maximum loss, and breakeven point for this strategy.	8M	L3	CO4	IV
36	Explain the Binomial Pricing Model and the Black-Scholes Options Pricing Model, comparing their approaches to pricing options.	8M	L2	CO4	IV

37	A trader uses the Binomial Pricing Model to price an option. The current stock price is \$50, the strike price is \$55, the risk-free interest rate is 5%, and the up and down factors are 1.2 and 0.8, respectively. Calculate the price of a European call option after one period.	8M	L3	CO4	IV
38	What are the key differences between an interest rate swap and a currency swap?	4M	L2	CO5	V
39	A company enters into a 3-year interest rate swap where it pays a fixed rate of 6% and receives a floating rate based on LIBOR. The notional principal is \$10 million. If LIBOR is 5.5% in year 1, 6.2% in year 2, and 5.8% in year 3, what are the company's net payments over the life of the swap?	4M	L	CO5	V
40	Discuss the pricing and valuation of interest rate swaps.	4M	L2	CO5	V
41	Describe the structure of an equity swap and its application.	4M	L2	CO5	V
42	Explain how weather derivatives are used as risk management tools.	4M	L2	CO5	V
43	Briefly describe carbon credits and their relevance to financial risk management.	4M	L2	CO5	V
44	Evaluate the role of carbon credits and weather derivatives in financial risk management, providing examples of how they are used in modern markets.	8M	L2	CO5	V
45	A company enters into a 5-year interest rate swap with a notional principal of \$50 million. It pays a fixed rate of 4% and receives a floating rate based on LIBOR. The floating rates for the next 5 years are forecasted as: 3.5%, 4.2%, 3.8%, 4.5%, and 4.1%. Calculate the total net payment over the life of the swap.	8M	L3	CO5	V
46	A company enters into a currency swap where it agrees to exchange \$100 million for €85 million. The swap matures in 3 years. Assume the current exchange rate is 1.18 USD/EUR, and the company receives semi-annual interest payments. The fixed interest rates on the USD and EUR are 3% and 2.5% respectively. Calculate the interest payments in both currencies over the 3 years and the final exchange of principal amounts.	8M	L3	CO5	V