SSEI
Sanjay Saraf Educational Institute Pvt. Ltd.
A positive NPV Training Center

ADVANCED FINANCIAL MANAGEMENT

CASE SCENARIO BASED MCQ QUESTIONS

CASE STUDY 1

Source: FOD

XYZ stock price = 100.00

100-strike call premium = 8.00

100-strike put premium = 7.50

Options expire in three months

Question 1:

If Meera Sharma, a portfolio manager, buys a straddle on XYZ stock, she is best described as expecting a:

A. higher volatility market.

B. lower volatility market.

C. stable volatility market.

D. No specific expectation on market volatility.

Question 2:

This strategy will break even at expiration stock prices of:

A. 92.50 and 108.50

B. 92.00 and 108.00

C. 84.50 and 115.50

D. 85.20 and 120.20

Question 3:

Reaching an upside breakeven point implies an annualized rate of return on XYZ stock closest to:

A. 16%.

B. 31%.

C. 70%

D. 62%.

CASE STUDY 2

Source: FOD

Ananya is in a training program at a large investment bank. Currently, she is spending three months at her firm's Derivatives Trading desk. One of the traders, CA Aarav Mehra, asks her to compare different option trading strategies. Mehra would like Ananya to pay particular attention to strategy costs and their potential payoffs. Ananya is not very comfortable with option models and must first investigate how to properly price European and American style equity options. Mehra has given her software that provides a variety of analytical information. Ananya has decided to begin her analysis using two different scenarios to evaluate option behavior. Her scenarios are illustrated in Exhibit 1 and Exhibit 2. Note that all of the rates and yields are on a continuous compounding basis.

Exhibit 1	
Stock Price(S)	$100
Call Strike Price(X)	$100
Price	$5.51

Exhibit 2	
Stock Price(S)	$100
Put Strike Price(X)	$100
Price	$5.68

Mehra instructs Ananya to consider using a straddle in which a at-the-money call and put option would be purchased. Assume all other variables remain identical.

Question 1:

Aarav explains to Ananya that the volatility of returns of the underlying stock has the most influence over the price of an option. Following his explanation he queries Ananya on how exactly does volatility affect option values. If the volatility were to increase would the price of the option change?

A. Yes, the option price will increase.

B. Yes, the option price will decrease.

C. It depends whether the option is a call option or a put option.

D. It depends on other factors, and the option doesn't provide sufficient information to determine the specific impact of volatility changes on option prices.

Question 2:

After computing the maximum loss of the straddle Ananya wonders why an investor would want to set up a straddle. Under what circumstances would an investor want to purchase a straddle? When the investor expects:

A. Prices to stay close to the exercise price of the options.

B. Prices to increase.

C. Prices to increase or decrease substantially.

D. Prices to decrease.

Question 3:

Ananya returns her attention to the straddle using the information in Exhibits 1 and 2. She computes the minimum payoff of the straddle at expiration. Which of the following is closest to Ananya's answer?

A. -$4.42.

B. -$11.31.

C. $0.00.

D. None of the above

Question 4:

Ananya now wants to compute the breakeven points for the straddle using the options and underlying stock in Exhibits 1 and 2. Which of the following are the closest to the breakeven points for the straddle?

A. $93.11, $106.89.

B. $88.81, $111.19.

C. $95.58, $104.42.

D. None of the above

CASE STUDY 3

Source: FOD

Current market price of ABC stock = $77

ABC stock price after 30 days = $80

ABC stock price after 45 days = $95

ABC stock price after 60 days = $80

ABC stock price after 75 days = $85

ABC stock price after 90 days = $70

Current price of European call on ABC with exercise price of $93 with 90 days to expiration = $2

Current price of European put on ABC with exercise price of $82 with 60 days to expiration = $6

Risk-free rate = 5% per annum compounded annually

Question 1:

The payoff to the call option holder on Day 90 is closest to:

A. Zero

B. $23

C. $21

Question 2:

The payoff to the put option writer on Day 60 is closest to:

A. Zero

B. −$2

C. $4

Question 3:

The payoff to the call option writer on Day 90 is closest to:

A. Zero

B. $23

C. −$21

Question 4:

The put option holder's profit on his position is closest to:

A. −$6

B. $2

C. −$4

Question 5:

The call option holder's profit on his overall position is closest to:

A. Zero

B. $21

C. −$2

Question 6:

At current prices, the call option is most likely:

A. In-the-money.

B. At-the-money.

C. Out-of-the-money.

Question 7:

At t = 30, the put option is most likely:

A. In-the-money.

B. At-the-money.

C. Out-of-the-money.

Question 8:

Most of the call option premium is most likely composed of:

A. Exercise value.

B. Time value.

C. Cannot be determined.

Question 9:

Most of the put option premium is most likely composed of:

A. Exercise value.

B. Time value.

C. Cannot be determined.

Question 10:

The price of a European call option with an exercise price of $82 and 60 days remaining till expiration would be closest to:

A. $1.33

B. $1.66

C. $1.03

CASE STUDY 4

Source: FOD

A European put option with an exercise price of $100 and 3 months till maturity is trading at $4 when the underlying stock is trading at $97. The risk-free rate equals 5% compounded annually.

Question 1:

All other factors remaining the same, the value of a fiduciary call most likely:

A. Cannot be determined given the information.

B. Equals $101.

C. Equals $1.

Question 2:

All other factors remaining the same, the value of a European call most likely:

A. Cannot be determined given the information.

B. Is $1.

C. Is $2.21.

Question 3:

All other factors remaining the same, the value of an American put option is least likely:

A. $3

B. $4

C. $4.05

CASE STUDY 5

Source: FOD

A stock that is currently trading at $80 can go up 26% or down 20% over the coming year. A call option on the stock that expires in one year and has an exercise price of $87 is currently selling for $9. The risk- free rate is 8%.

Question 1:

If the stock price goes up 26% over the period, the intrinsic value of the call option is closest to:

A. $0

B. $9

C. $13.8

Question 2:

If the stock price goes down 20% over the period, the intrinsic value of the call option is closest to:

A. $0

B. $9

C. $13.80

Question 3:

The risk-neutral probabilities of up and down moves in the binomial model are closest to:

	π	$1 - \pi$
A.	0.4348	0.5652
B.	0.6087	0.3913
C.	0.8302	0.1698

Question 4:

The value of the call option today is closest to:

A. 7.78

B. 9.0

C. 10.61