Question 1 of 100

Which of the following most likely explains why the implied volatility of a long deep-out-of-the money put option on the S&P 500 index is considerably larger than the implied volatility of a comparable long in-the-money put option?

- **A.** risk premium required by the put option writers
- **B.** positive skew of the S&P 500 index's returns
- **C.** high volatility of the S&P 500 index's returns
- ✓ **D.** negative skew of the S&P 500 index's returns

EXPLANATION • Learning Objective 7.1.5 **ID:** L2-7.1.5-003

Potential reasons that implied volatilities (IVs) of long deep OTM puts on a broad equity index (e.g., S&P 500) are much higher than the IVs of puts with different moneyness -

1. Negative skewness of equity index's returns
2. Risk premium required by the put option writers (evidence on this is mixed and inconclusive)

Since the evidence of the risk premium is mixed and inconclusive, it should not be considered the "most likely" or best reason for high implied volatilities of long deep OTM puts.

Question 2 of 100

A researcher is developing a model for valuing volatility products. In addition to including volatility diffusion in the model, the researcher includes a volatility jump. Which of the following corresponds to why the researcher includes this second factor?

- **A.** to account for large, expected changes in volatility
- **B.** to account for small, unexpected changes in volatility
- **C.** to account for small, expected changes in volatility
- ✓ **D.** to account for large, unexpected changes in volatility

EXPLANATION • Learning Objective 7.1.4 **ID:** L2-7.1.4-003

The volatility jump process allows for large, unexpected discontinuities or jumps in volatility when significant events occur. The jump process also includes a source of expected change in volatility, but the rational of the jump process is to account for large, unexpected jumps in volatility.

Question 3 of 100

Which of the following is generally true of positive gamma portfolios?

- **A.** They are short options and have positive theta.
- **B.** They are long options and have negative theta.
- **C.** They are long options and have positive theta.
- **D.** They are short options and have negative theta.

EXPLANATION • Learning Objective 7.1.2 **ID:** L2-7.1.2-009

Positive gamma portfolios tend to be long options and have negative theta.

Question 4 of 100

A trader wants to take advantage of a volatility skew. Which of the following is generally true regarding this skew?

I. Implied volatility of at-the-money puts is lower than implied volatility of out-of-the-money puts.
II. Out-of-the-money call options have lower implied volatilities than their put option counterparts.
III. Implied volatility of deep in-the-money puts on a broad equity index is higher than that of deep out-of-the-money puts.

- **A.** I and II only
- **B.** II only
- **C.** I only
- **D.** II and III only

EXPLANATION • Learning Objective 7.1.5 **ID:** L2-7.1.5-002

The volatility skew is a graph of an option's implied volatility (IV) against its price/strike (or strike price).

- ATM puts have lower IVs than OTM puts (and ITM puts).
- OTM puts have higher IVs than corresponding call options.

Response III: Deep OTM puts have the highest IVs (compared to ATM and ITM puts). Thus, IV of deep ITM puts is lower than that of deep OTM puts.

Question 5 of 100

A trader has established a long ABC strangle position in the hope of benefiting from a large move in ABC stock Which of the following represents characteristics of the trader's position?

- **A.** negative gamma and convex payoff
- **B.** negative gamma and concave payoff
- ✓ **C.** positive gamma and convex payoff
- **D.** positive gamma and concave payoff

EXPLANATION • Learning Objective 7.2.1 **ID:** L2-7.2.1-008

A long strangle is long volatility, which has a convex payoff and positive gamma.

Question 6 of 100

Which of the following best describes the CBOE Volatility

- **A.** market-based estimation of the 30-day realized volatility of S&P 500 options
- **B.** model-based estimation of the 30-day implied volatility of S&P 500 options
- ✓ **C.** market-based estimation of the 30-day implied volatility of S&P 500 options
- **D.** model-based estimation of the 30-day realized volatility of S&P 500 options

EXPLANATION • Learning Objective 7.2.3 **ID:** L2-7.2.3-012

The CBOE VIX is a market-based estimation of the 30-day implied volatility of S&P 500 options. It represents the market's expectation of volatility.

Question 7 of 100

The payoff diagram of which of the following structured products is the same as that of a short put option?

- **A.** capped capital protection
- ✓ **B.** discount certificate
- **C.** uncapped capital protection
- **D.** barrier discount certificate

EXPLANATION • C25-L2-7.3.6-001 **ID:** C25-L2-7.3.6-001

The discount certificate's payoff diagram is the same as that of a short put option.

Other response: The payoff of an uncapped capital protection product is similar to that of a long call.