Assignment 5

Due on 2019-09-04, 23:59 IST.

1. Consider a one-year forward contract on an underlying asset whose current price is $125. If the annual risk-free rate (continuously compounded) is 4%, then the forward price pays:

No, the answer is incorrect.

Score: 0

Accepted Answers:
- $135.25
- $139.44

2. Consider a six-month forward contract with the spot price of the underlying asset being $100. Further, the six-month risk-free rate is 5% and the forward price is $122, then the expected payoff for this long forward position equals:

No, the answer is incorrect.

Score: 0

Accepted Answers:
- $122
- $126.09

3. The value of a forward contract at the initial time t = 0 equals:

No, the answer is incorrect.

Score: 0

Accepted Answers:
- $100
- $105

4. Consider a one-year forward contract on an asset with S(0) = $100 and the annual risk-free rate (continuously compounded) is r = 6%, with the forward price F(1,t) = $110. If it is assumed that the payoff at 12 months is $100, then the forward price becomes F(S(t)), then the value of F(S(t)) is:

No, the answer is incorrect.

Score: 0

Accepted Answers:
- $110
- $120

5. State whether the following statement is TRUE or FALSE. For a future contract with maturity T, if the future price F(T) and F(T) + 6T are 120 and 130, then the expected payoff of an amount of 6 transferred at time 0 from the margin account of the party with long forward position to the margin account of the party with the short forward position:

- TRUE
- FALSE

No, the answer is incorrect.

Score: 0

Accepted Answers:
- TRUE
- FALSE

6. Consider an European call option with the maturity of one-year and strike price of $1 = $100. Suppose that the stock price S(0) at maturity may take the values 80, 90, 100 and 110 with the respective probabilities 1/4, 1/4 and 1/2, then the expected payoff for the buyer of the call option at maturity equals:

No, the answer is incorrect.

Score: 0

Accepted Answers:
- $10
- $15

7. Suppose that there is an European call and an European put option, both with identical expiration of six months and identical strike price of $1 = $100. If the current stock price is $50 and the annual dividend rate is 5% and if the price of the call option is $20, then the price of the put option equals:

No, the answer is incorrect.

Score: 0

Accepted Answers:
- $15
- $25

8. Consider an American put option on an underlying asset with current price S(0) = $100 and the strike price being $1 = $110. The price C(T) of this American put option is $50. If C(T) denotes the price of an American call option on the same underlying, same maturity and same strike price as this American put option, then which of the following statements is TRUE? I. C(T) can be greater than $5.25.
II. C(T) can be equal to $4.50.
III. C(T) can be less than $5.25.

No, the answer is incorrect.

Score: 0

Accepted Answers:
- I only
- II only
- I and II
- I and III

9. State whether the following statement is TRUE or FALSE. The price C(V)/S(0) of an European call option with strike price $1 = $100 is an increasing function of $1:

- TRUE
- FALSE

No, the answer is incorrect.

Score: 0

Accepted Answers:
- TRUE
- FALSE

10. The intrinsic value of a put option with strike price X = $100, with the current asset price S(0) = $100 equals:

No, the answer is incorrect.

Score: 0

Accepted Answers:
- $100
- $0