

Commodity Futures Markets Practice Exam

Instructions

The Exam is worth 20% There are three (3) questions with multiple parts.. Answer the questions in the spaces provided on the question sheets. If you run out of room for an answer, continue on the back of the page. Show working for all answers. Please note graph paper is attached.

Questions

1. Consider a European call option with strike price \$10, maturity 6 months and current market price \$5. The risk free interest rate is 4%, then
 - (a) Plot the payoff function at time T using the graph paper provided. (5 points)
 - (b) At what spot price does this option begin to earn money? (5 points)

Answer:

2. Describe in words what is meant by

(a) Contango (1 point)

(b) Backwardation (1 point)

(c) Show that as $t \rightarrow T$ that the Futures/Forward price approaches the spot price at maturity. (3 points)

Answer:

3. Use Ito's lemma to derive the price dynamics for the logarithm of the underlying price S where the underlying price evolves according to the Ito equation $dS = \mu S dt + \sigma S dW$. (5 points)

Answer:

