AS 288, Quiz 1 T122 Form: A

Name: _____ ID#:_____ Serial#:___

Directions: Show all work to receive full credit. You can use an approved SOA calculator or any scientific calculator. Quiz duration is 20 minutes. You may begin now. Good luck.

1. The S&R index currently has a price of 1000. The price of a six month 1010-strike put is 74.08. The annual interest rate is 4.94% compounded continuously. What is the profit on this put in six months if the spot price then is 980?

a) -94.35
b) -45.93
c) 0
d) 30
e) 104.53

Work shown (4 points):

2. The stock of ABC company pays no dividends and has a current price of 40. The forward price for delivery in one year is 42. If there is no advantage to buying either the stock or the forward contract, what is the continuously compounded one year interest rate.

a) 0.0488
b) 0.0494
c) 0.05
d) 0.0506
e) 0.0512

Work shown (4 points):

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a) -94.35
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Work shown (4 points):

The put profit is $max(0, 1010 - S_T) - 74.08e^{0.0494(0.5)} = \max(0, 1010 - 980) - 75.93 = -45.93$
Answer is B

2. The stock of ABC company pays no dividends and has a current price of 40. The forward price for delivery in one year is 42. If there is no advantage to buying either the stock or the forward contract, what is the continuously compounded one year interest rate.

a) 0.0488
b) 0.0494
c) 0.05
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e) 0.0512
Work shown (4 points):

The correct theoretical price of the forward should apply,
Thus $F_{0,T} = S_0 e^{rT} \rightarrow 42 = 40e^{r(1)} \rightarrow r = 0.0488$
Answer is A