UNIVERSITY OF TEXAS AT AUSTIN

Quiz #14

Chooser options. Gap options. Foreign currencies.

Provide your **final answer only** to the following problem(s):

Problem 14.1. (2 points) The chooser option with the exercise date T and with the strike K is worth at least as much as a vanilla call with the same underlying, strike and exercise date. *True or false?*

Problem 14.2. (2 points) The payoff of a gap call option is always nonnegative regardless of the choice of the trigger and the strike. *True or false?*

Problem 14.3. (2 points) Gap call options are always worth more than otherwise identical call options with the same strike price. *True or false?*

Problem 14.4. (5 points) Consider a continuous-dividend-paying stock with the current price of \$45 and dividend yield 0.02. The continuously compounded, risk-free intrest rate is 0.04. Consider a pair of six-month, \$50-strike, \$45-trigger gap options. The gap call sells for \$1.70. What is the price of the gap put?

(a) \$5.17
(b) \$6.16
(c) \$7.27
(d) \$7.41
(e) None of the above.

Problem 14.5. (5 points)
An American investor wants to hold 100 euros six months from today. You are given the following:

- the spot exchange rate is \$1.12 per euro;
- the continuously compounded risk-free interest rate on the euro is 3.0%;
- the continuously compounded risk-free interest rate on the USD is 1.25%.

What is the price the investor would have to pay today?

(a) \$108.69
(b) \$110.33
(c) \$111.61
(d) \$112
(e) None of the above.