UNIVERSITY OF TEXAS AT AUSTIN

Quiz #24

Asian options.

Please, provide your **final answer only** to the following questions:

Problem 24.1. (2 points) An Asian arithmetic-average-strike call option is at least as valuable as an otherwise identical Asian geometric-average-strike option. *True or false?*

Problem 24.2. (2 points) Asian options are always strictly more expensive than otherwise identical vanilla options. *True or false?*

Problem 24.3. (2 points) The price of a geometric average price Asian call option is strictly greater the price of an otherwise identical arithmetic average price Asian call option. *True or false?*

Problem 24.4. (2 points) One specific use for Asian options is when an investor is exposed to risk due to an exchange rate which can vary over time. *True or false?*

Problem 24.5. (2 points) One specific use for Asian options occurs when there is a possibility for short-term manipulation of the price of the underlying. *True or false?*

Problem 24.6. (5 points) Let $A(T)$ denote the arithmetic average of a set of observed stock prices, and let $G(T)$ denote the geometric average of the same set of observed stock prices. Which one of the following inequalities is **always** correct?

(a) $(K - A(T))_+ \geq (K - G(T))_+$
(b) $(A(T) - K)_+ \geq (G(T) - K)_+$
(c) $(A(T) - K)_+ \geq (S(T) - K)_+$
(d) $(S(T) - K)_+ \geq (G(T) - K)_+$
(e) None of the above.