

## Sample issues for M4380 final

The following multiple choice questions may help you understand a number of issues about option pricing. Each of the answers can be determined by a number of different logical arguments. Most can be deduced in some way from the call-put parity formula which can be written as

$$C - P = S_0 - Ke^{-rT}$$

Question 1. Will the price of a call option on a stock go up, down or stay the same (circle one) when

- (i) the stock price goes up,
- (ii) the strike price goes up,
- (iii) the time to expiration increases

Question 2. Repeat question 1 for put options.

Question 3. Does the price of a call, respectively put, option go up when the stock price goes down?

Question 4. If you sell a call (or put) option with a strike price of \$K and you do not want it to be exercised (so you can pocket the purchase price), do you want the price of the shares to stay above or below \$K.

Question 5. Suppose that you would like to own more shares of XOM.. Which of buying a call, buying a put, selling a call or selling a put, might end up with you owning more shares of XOM? When will you buy at a price less than the current stock price if the option is exercised? (ie What are the good values of K in each case).

Question 6. Suppose that you own some shares of XOM and would like to be prepared to reduce your holding. Which of buying a call, buying a put, selling a call or selling a put, might end up with you owning fewer shares of XOM? When will you sell at a price greater than the current stock price if the option is exercised?