KABARAK UNIVERSITY

EXAMINATIONS

2008/2009 ACADEMIC YEAR

FOR THE DEGREE OF BACHELOR OF COMMERCE

COURSE CODE: **FNCE 423**

COURSE TITLE: **OPTIONS AND FUTURES MARKETS**

STREAM: **Y4S2**

DAY: **WEDNESDAY**

TIME: **2.00 – 4.00 P.M.**

DATE: **25/03/2009**

INSTRUCTIONS:

1. Question **ONE** is compulsory
2. Answer **any other THREE** questions from the rest of the questions
3. Be clear and neat
4. Begin a new question on a new page

Note:

Black-Scholes Model:

$C_0 = S_0N(d_1) – Ee^{-rt} N(d_2)$

Where:

$d_1 = \{In (S/E) + (r +½\delta^2)t\}/\sqrt{\delta^2 t}$, $d_2 = d_1 - \sqrt{\delta^2 t}$

And $P_0 = C_0 – S_0 + Ee^{-rt}$

Attached: Cumulative probabilities of the Standard Normal Distribution Function

PLEASE TURN OVER

QUESTION ONE

a) With relevant examples, describe the effect of the following factors on the value of a call option

(i) Stock price (2 marks)

(ii) Exercise price (2 marks)

(iii) Option life (2 marks)

b) The following information has been obtained from an investment available for consideration:

Stock price = $20.00

Exercise price = $ 20.00

Time to expiration = 3 months

Risk free rate = 12%

Stock return variance = 0.16

Required:

Using Black – Scholes OPM, how much should an investor pay for this call option? (9 marks)

c) Discuss the following terms pointing out when they are said to be In-the- money

(i) Call Options (5 marks)

(ii) Put Options (5 marks)

QUESTION TWO

a) Discuss the role of margins in the trading of futures clearly pointing out the difference between initial margin and maintenance margin (9 marks)

b) Explain how investors use financial futures (6 marks)

QUESTION THREE

Differentiate between the following concepts:

(i) Interest rate caps and interest rate floors (4 marks)

(ii) Plain vanilla swaps and callable swaps (4 marks)

(iii) State why commercial banks, investment banks, mortgage companies and other investors use interest rate swaps (7 marks)

QUESTION FOUR

a) Eurex Ltd expects to receive 55,000 sterling pounds from exporting products to Europe at the end of each of the next 3 months. The spot rate of the sterling pound is shs. 134.70. The forward rate of the sterling pound for each of the next three months is also shs. 134.70

Required:

(i) If at the end of the 3 months the sterling pound has depreciated to shs. 130.20 calculate the losses or gains for Eurex ltd for having not hedged with the forward contract (2½ marks)

(ii) If, on the other hand at the end of the 3 months, the sterling pound appreciates to shs. 136.50, calculate the losses or gains for Eurex ltd for having hedged with the forward contract (2½ marks)

b) Explain the importance of currency swaps markets? (4 marks)

c) Differentiate between basis risk and sovereign risk as used in currency swaps (6 marks)

QUESTION FIVE

Are Forwards and Futures the same? Discuss (15 marks)