OFFICE OF THE DEPUTY VICE CHANCELLOR
ACADEMICS, STUDENT AFFAIRS AND RESEARCH

UNIVERSITY EXAMINATIONS

2024 /2025 ACADEMIC YEAR

THIRD YEAR FIRST SEMESTER MAIN EXAMINATION

FOR THE DEGREE OF BACHELOR OF BUSINESS MANAGEMENT

COURSE CODE: BBM 350

COURSE TITLE: MANAGERIAL STATISTICS

DATE: 07/01/2025 **TIME:** 8:00-11:00PM

INSTRUCTION TO CANDIDATES

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MAIN EXAM

BBM 350: MANAGERIAL STATISTICS

STREAM: BED (Arts) **DURATION: 3 Hours**

Instructions: Answer question one in section A (compulsory) and any other two questions from section B.

SECTION A (30 MARKS)

Question One

a) Explain what is Geometric distribution (10 marks)

b) Explain the following types of probability distributions:

i) Normal distribution (4 marks)

ii) Binomial distribution (4 marks)

c) Given that;

$X \sim N\ (\mu, \sigma 2)$

Interpret (3 marks)

d) Explain the keys differences between

i) Inferential statistics (5 marks)

ii) Descriptive analysis (5 marks)

e) There are 10 prices hidden on a game board with 100 spaces. One price is worth Sh. 50, two are worth sh. 20 and another seven are worth sh. 10. You have to py sh. 5 to the host if your choice is not correct. et the random variable X be the winner:

i) Find the expected value of X (3 marks)

ii) Find the standard deviation of the distribution (4 marks)

SECTION B (40 MARKS)

Question Two

a) Discuss the Small sample theory (10 marks)

b) Given the function;

$$Yt = \propto 0 + \beta 1Y1 + \beta 2Y2 + \varepsilon$$

i) What is the dependent variable? (2 marks)

c) How many parameters are to be estimated) (3 marks)

d) Explain the function of the disturbance term in the equation (5marks)

Question Three

a) Explain what is meant by hypothesis testing (3 marks)

b) Outline the seven steps in hypothesis testing (7 marks)

c) Explain Five factors to consider when choosing a sample size (10 marks)

Question Four

a) Briefly explain what is meant by Chi- square statistic (3 marks)

b) In a sample population, a medical study examines the association between smoking and lung cancer. the information is as follows:

Smoker 80 (yes) 50 (No)

Non-smoker 20 (yes) 110 (No)

Find the association between smoking and lung cancer (10 marks)

Question Five

a) A farmer wants to compare the yields of two maize varieties using different fertilizer brands. Explain the technique he may employ bringing out the key features.

(10marks)

b) Outline Five main assumptions of Ordinary Least Squares (OLS) method of estimation

(10marks)