THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

(A Centre of Excellence)

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

DIPLOMA IN BUILDING & CIVIL ENGINEERING
DIPLOMA IN ARCHITECTURE
DIPLOMA IN CIVIL ENGINEERING

EBC 2304: RESEARCH METHODOLOGY AND PROJECT I

END OF SEMESTER EXAMINATION
SERIES: AUGUST 2012
TIME: 2 HOURS

Instructions to Candidates:
You should have the following for this examination
- *Answer Booklet*

This paper consists of **FIVE** questions. Answer any **THREE** questions
Maximum marks for each part of a question are as shown
This paper consists of **THREE** printed pages

Question One (20 marks)

a) Discuss **FIVE** ethical issues relating to the respondents in a research. **(10 marks)**

b) Give **FOUR** reasons whey literature review should be conducted. **(8 marks)**

c) Name the **TWO** types of research. **(2 marks)**

Question Two (20 marks)

a) (i) Golden Value Investment was interested in the rates of return of two different funds. Grow bucks fund showed interest rates over the last five years in 12, 10, 13, 9 and 11 percent; while Dollarize yielded 13, 12, 14, 10 and 6%. Both funds offer an average return of 11%. Calculate the variance of each and indicate which one should Golden Value select for its clients. **(10 marks)**

(ii) Calculate the standard deviation for each fund. **(2 marks)**

b) List **FOUR** sources of research topic. **(4 marks)**

c) Define the following terms:
   i) Sampling
   ii) Element **(4 marks)**

Question Three (20 marks)

The top management of Pride Enterprise has realized the importance of Management Information System (MIS) training to its middle level management. After the MIS training, 5000 middle level managers were graded in ranks A, B, C and D in their work attitude in the ration 2:3:5:8.

Grade	A	B	C	D
Middle Level Manager	46	75	126	253

The null hypothesis is that there is no significant improvement in the work attitude of middle level managers after MIS training.

   i) Calculate the Chi Square. **(17 marks)**
   ii) Calculate the degree of freedom **(1 mark)**
   iii) Given the table value at 0.05 level of significance is 7.81473. Comment on the hypothesis. **(2 marks)**

Question Four (20 marks)

a) Define the following terms:

   i) Sample
   ii) Census study
   iii) Research **(6 marks)**

b) Discuss briefly the following sampling techniques.
   i) Snow ball sampling
   ii) Cluster sampling
   iii) Systematic sampling
   iv) Self selection
   v) Self selection
   vi) Convenience sampling   **(10 marks)**

c) Explain how an interview is conducted.   **(4 marks)**

Question Five (20 marks)

a) Name **TWO** types of data.   **(2 marks)**

b) Give **TWO** differences between hypothesis and problem statement.   **(4 marks)**

c) Give an example of a problem statement and its hypothesis.   **(4 marks)**

d) Give **TWO** disadvantages of using mean as a measure of central tendency.   **(4 marks)**

e) Give TWO reasons why sample study is preferred to census study.   **(6 marks)**