



# THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

## Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

**BACHELOR OF SCIENCE IN BUILDING & CIVIL ENGINEERING (BSCE)**  
**[Institutional Based Programmes]**

EBC 4410: RESEARCH METHODOLOGY

**END OF SEMESTER EXAMINATION**

**SERIES: DECEMBER 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 **TWO** printed pages

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### **Question One (20 marks)**

- a) Define the following terms as used in Research. (2 marks)
- (i) Research (2 marks)
  - (ii) Conceptual design (2 marks)
  - (iii) Research proposal (2 marks)
  - (iv) Pilot study (2 marks)
- b) Differentiate between Independent Variables and Dependent Variables (4 marks)
- c) Outline **FOUR** characteristics of a good project proposal (4 marks)
- d) List **FOUR** limitations of research. (4 marks)
- e) State and explain sampling techniques available. (4 marks)
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f) Explain the relevance of concept paper. (6 marks)

**Question Two (20 marks)**

a) Briefly describe **SIX** roles of research. (6 marks)

b) Explain in detail the types of research methods (14 marks)

**Question Three (20 marks)**

a) Define data. (2 marks)

b) Differentiate between primary data and secondary data. (4 marks)

c) Outline **FOUR** advantages of using secondary data in research. (4 marks)

d) Explain in detail the significance of literature review. (10 marks)

**Question Four (20 marks)**

a) List **FOUR** significance of undertaking survey in research. (4 marks)

b) Explain relevance of case studies in building and civil engineering projects. (4 marks)

c) Explain limitation of case studies in research. (4 marks)

d) Outline **EIGHT** considerations in research. (8 marks)

**Question Five (20 marks)**

a) Describe the plan used in writing a concept paper, indicating in detail the major components. (12 marks)

b) Describe steps involved in research process. (8 marks)