



# THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

*Faculty of Engineering and Technology*

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR DEGREE IN  
BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY (BSc. I.T. 9S)  
(YR III, SEM II)

BIT 2301: RESEARCH METHODOLOGY

END OF SEMESTER II EXAMINATION

SERIES: DECEMBER 2011

TIME: 2 HOURS

## **Instructions to Candidates:**

You should have the following for this examination

- *Answer Booklet*

This paper consist of **FIVE** questions in **TWO** sections **A & B**

Answer question **ONE (COMPULSORY)** and any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

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## **SECTION A (*Compulsory*)**

### **Question Two [30 marks]**

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

**SECTION B (Attempt any TWO questions)**

**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** significances of undertaking survey in research (4 marks)
- b) Explain relevance of case studies in information technology projects (4marks)
- c) Explain limitation of case studies in research (4 marks)
- d) Outline **EIGHT** ethical considerations in research (8 marks)

**Question Five [20 marks]**

- a) Describe the plan used in writing a research proposal, indicating in detail the major components (12 marks)
- b) Describe steps involved in research process (8 Marks)