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**University Examinations 2015/2016**

STAGE THREE EXAMINATION FOR

DIPLOMA IN INFORMATION TECHNOLOGY

**CIT 2203: RESEARCH METHODOLOGY**

**DATE: AUGUST 2016 TIME: 1 ½ HOURS**

**INSTRUCTIONS:** *Answer question* ***one*** *and any other* ***two***questions.

**QUESTION ONE (30 MARKS)**

1. Scientific research is the systematic investigation of scientific theories and hypotheses. Systematic are means that the research is procedural. Outline and clearly explain the steps involved in development of a successful Scientific Research. (6 marks)
2. The Government of Kenya is calling for proposals for a research on how ICT can be effectively utilized in attainment of its development agenda. Use this information to answer the following questions
3. Formulate a relevant Research Topic that would be appropriate for this research work (2 marks)
4. State any two Hypothesis for your intended research (1 marks)
5. What are the possible research questions that you could include in your questionnaire for this research work (1 marks)
6. Define the following terms as used in Research Methodology
7. Research objective (2 marks)
8. Hypothesis (2 marks)
9. Data analysis (2 marks)
10. Questionnaire (2 marks)
11. Citation (2 marks)
12. Outline four qualities of a good research topic (4 marks)
13. Clearly explain the following sections of a proposal document
14. Preliminaries (2 marks)
15. Text section (2 marks)
16. Appendix (2 marks)

**QUESTION TWO (20 MARKS)**

1. State and explain four objectives of carrying out a scientific research. (8 marks)
2. Using relevant real life examples, explain the difference between the following types of research.
3. Qualitative and Quantitative research (3 marks)
4. Basic and Applied research (3 marks)
5. Prospective ad Retrospective research (3 marks)
6. State two sources of Research Topics (3 mark)

**QUESTION THREE (20MARKS)**

1. Briefly explain four ethical considerations a researcher would put into account when carrying out a general research (10 marks)
2. Outline FOUR effective research data management principles (4 marks)
3. Discuss any three sources of Literature Review material (6 marks)

**QUESTION FOUR (20 MARKS)**

1. Discuss the various Research data management principles (8 marks)
2. Briefly explain three methods of securing research data (6 marks)
3. Define the following terms as applied in research work.
4. Metadata (3 mark)
5. Referencing (3 mark)