

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**FIRST YEAR EXAMINATION FOR THE AWARD OF
DIPLOMA IN COMPUTER SCIENCE**

COSC 0280: INTRODUCTION TO RESEARCH METHODS IN COMPUTER SCIENCE

STREAMS: DIP (COMP SCI) Y2S1

TIME: 2 HOURS

DAY/DATE:

INSTRUCTIONS:

- **ANSWER QUESTION ONE AND ANY OTHER TWO FROM SECTION B**
- **DO NOT WRITE ON THIS PAPER**

SECTION A {COMPULSORY}

QUESTION ONE (30 MARKS).

- a) Define the term research. (2 mrks)
- b) Explain four different ways on how you would go about discovering various issues pertaining research problem. (8 mrks)
- c) The final step in reviewing literature is to synthesize what you have learned from the review thus you must pull together the diverse perspectives and research results that you read into a cohesive whole. Outline any four issues that you may address in synthesizing literature review. (6mrks)
- d) Outline the features of a good design. (4 mrks).
- e) Explain the objectives of conducting research. (4mks).
- f) What is a research design? what is its need in any research undertaking and what are some of the important factors to consider in developing a good research design(6mks).

SECTION B: ANSWER ANY TWO QUESTIONS FROM THIS SECTION

QUESTION TWO (20 MARKS)

- a) State and explain four benefits that are likely to arise from carrying out a literature review (8 mrks).
- b) Describe the stages of the research process. (10 mrks).
- c) Distinguish between Research methods and Research methodology. (2mks).

QUESTION THREE (20 MARKS)

- a) Research can broadly be classified from several different perspectives [12 marks]
 - i. Descriptive Versus Analytical
 - ii. Applied versus Fundamental
 - iii. Quantitative Versus qualitative
 - iv. Conceptual versus Empirical
- b) Describe the essential differences among the following scales (8mks).
 - i. Nominal scale
 - ii. Ordinal scale
 - iii. Interval scale
 - iv. Ratio scale

QUESTION FOUR (20 MARKS)

- a) “A problem clearly stated is a problem half solved”. This is a popular saying and is applicable in the formulation of a research problem. Qualify the meaning of this statement. (4 mrks).
- b) What is a research design? what is its need in any research undertaking and what are some of the important factors to consider in developing a good research design(6mrks).
- c) Explain the objectives of conducting research. (6mks).
- d) Examine the merits and limitations of the observation method in collecting material. Illustrate your answer with suitable examples. (4mks).

QUESTION FIVE (20 MARKS)

- a) In your opinion, what features would you like a research proposal to exhibit? (6 mrks)

- b) After carrying out a research you need to report the results obtained. What sections will you include in your research report to support your work? (14 mrks)
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