



MACHAKOS UNIVERSITY

University Examinations for 2022/2023

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE CERTIFICATE OF

INFORMATION COMMUNICATION TECHNOLOGY

CODE 1920/205 : RESEARCH METHODOLOGY

DATE: 31/3/2023

TIME: 8:30-11:30 AM

Instructions:

Answer any FOUR questions

Don't write on this question paper

QUESTION ONE

- a) For a process to be called research, it is imperative that it has some characteristics. Critically discuss **five** of these characteristics. (10 marks)
- b) Objectives of the research should be SMART. Describe the term SMART as used in formulating research objectives. (10 marks)

QUESTION TWO

- a) Describe the following types of Research, describing the purpose of each:
 - i. *Basic Research:*
 - ii. *Applied Research:*
 - iii. *Evaluation Research.* (6 marks)
- b) The Code of Ethics supplies the people who take part in your research with details about what you intend to do with the information they give. Describe the main issues it should cover. (10 marks)
- c) Outline **four** advantages of having a good literature review. (4 marks)

QUESTION THREE

- a) Describe the following concepts in relation to research methodology:
- a. *Intellectual Property*;
 - b. *Research Scope*;
 - c. *Research proposal*. (6 marks)
- b) Describe **five** common Mistakes that researchers make in Proposal writing. (10 marks)
- c) Differentiate between primary and secondary sources of data. (4 marks)

QUESTION FOUR

- a) The research process is similar to undertaking a journey. Describe the different steps involved in a Research Process. (10 marks)
- b) When you start to think about your research project, a useful way of remembering the important questions to ask is to think of the five 'Ws': Describe the five Ws'. (10 marks)

QUESTION FIVE

- a) One expects a good scientific research to satisfy a certain criteria: describe these criteria. (10 marks)
- b) Research can be a long process and take up much of your time. It is important to stay interested in what you're doing if you are to complete your project successfully. Describe **five** Considerations while selecting a research problem that will help to ensure that your study will remain manageable and that you will remain motivated. (10 marks)