



FACULTY OF SCIENCE AND TECHNOLOGY
END OF SEMESTER EXAMINATIONS - APRIL 2025

PROGRAMME: MIT

YEAR/SEM: YEAR 1/SEMESTER 1

COURSE CODE: MIT715

NAME: RESEARCH METHODOLOGY

DATE: 2025-04-23

TIME: 2:00-5:00PM

INSTRUCTIONS TO CANDIDATES:

1. Read the instructions very carefully
2. The time allowed for this examination is STRICTLY three hours
3. Read each question carefully before you attempt and allocate your time equally between all the Sections
4. Write clearly and legibly. Illegible handwriting cannot be marked
5. Number the questions you have attempted
6. Use of appropriate workplace examples to illustrate your answers will earn you bonus marks
7. Any examination malpractice detected will lead to automatic disqualification.

DO NOT WRITE ANYTHING ON THE QUESTION PAPER

Section A Attempt All (40 marks, each question carries 8 marks)

Question 1:

1. Why should researchers be concerned about research ethics ? (08 Marks)
2. What is the difference between primary and secondary data? Provide examples of each (08 Marks)
3. State the purposes of literature review. (08 Marks)
4. With the help of examples differentiate between significance and justification of research. (08 Marks)
5. List eight elements commonly found in the preliminary pages of a research report. (08 Marks)

Section B Attempt 4 (60 marks, each question carries 15 marks)

Question 1:

Explain the following types of research:

- a. Applied research (03 Marks)
- b. Pure research (03 Marks)
- c. Descriptive research (03 Marks)
- d. Correlational research (03 Marks)
- e. Explanatory research (03 Marks)

Question 2:

Describe the process of data collection in research. Discuss the advantages and disadvantages of using surveys as a method of data collection. (15 Marks)

Question 3:

Explain the following terms as applied to research misconduct

- (i) Deception (03 Marks)
- (ii) Plagiarism (03 Marks)
- (iii) Falsification (03 Marks)
- (iv) Fabrication (03 Marks)
- (v) Misrepresentation of research findings (03 Marks)

Question 4:

Explain the steps in a research process (15 marks)

Question 5:

What is the difference between qualitative and quantitative research? Explain the key characteristics of each approach and when one might be preferred over the other. (15 Marks)

Question 6:

Explain the meaning of

- (a) a research design (03 Marks)
- (b) the following in context of research design.
 - (i) Dependent variable (03 Marks)
 - (ii) Independent variable (03 Marks)
 - (iii) Extraneous variables (03 Marks)
 - (iv) Confounded relationship (03 Marks)