



# TECHNICAL UNIVERSITY OF MOMBASA

---

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES

**UNIVERSITY EXAMINATION FOR:**

DIPLOMA IN ENVIRONMENTAL HEALTH

ACH 2108: INTRODUCTION TO LABORATORY METHODS.

END OF SEMESTER EXAMINATION

**SERIES:SEPT 2017**

**TIME:2HOURS**

**DATE: SEPT 2017**

**Instructions to Candidates**

You should have the following for this examination

*-Answer Booklet, examination pass and student ID*

This paper consists of **FIVE** Question(s). Attempt question ONE (Compulsory) and any other TWO questions.

- a. List 4 items that should be recorded in the notebook when conducting experiment (4 marks )
- b. Explain the principle behind cryopreservation (2 marks )
- c. Name one cryoprotectant and state its function (2 marks )
- d. Objective is one characteristic of good scientific report. explain (2 marks )

- e. What led to institution of good laboratory practice (GLP) (2 marks)
  - f. Explain the purpose of standard operating procedure (SOP) (2 marks)
  - g. Outline administration of personnel in the laboratory (3 marks)
  - h. Outline the role of laboratory information management system (LIMS) in electronic data exchange (2 marks)
  - i. Explain the principle behind the use of radioactive tracers (2 marks)
  - j. state the strength of radiosotopic laboring techniques (1 marks)
  - k. Name one radiation detector (1 mark)
  - l. What is a scientific report (3 marks)
  - m. state three importance of making laboratory design up to acceptable standards (2 marks)
  - n. define the term hazard (2 marks)
  - o. name two examples of physical hazard (2 marks)
  - p. what is a laboratory fume hood (3 marks)
  - q. state four roles of laboratory management (4 marks)
2. (a) Explain accreditation process (11 marks)
- (b) Explain two uses of radioactive tracers (4 marks)
3. explain administration of
- (a) Instrumental performance checks (8 marks)
- (b) Sample analysis (7 marks)
4. Discuss laboratory waste disposal (15 marks)
5. Discuss laboratory design considerations (15 marks)