



# TECHNICAL UNIVERSITY OF MOMBASA

---

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF PURE & APPLIED SCIENCES

**UNIVERSITY EXAMINATION FOR:**

**BACHELOR OF TECHNOLOGY IN ANALYTICAL CHEMISTRY**

**AAB 4310: TOXICOLOGY (P2)**

**SPECIAL/SUPPLEMENTARY EXAMINATION**

**SERIES: SEPTEMBER 2018**

**TIME: 2 HOURS**

**DATE: Pick Date Sep 2018**

## Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

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

**Do not write on the question paper.**

---

## **Question ONE**

- a) Differentiate between Potency and Efficacy (3 marks)
- b) Describe the following;
- i) ED<sub>50</sub> (3 marks)
- ii) ADI (3 marks)
- c) Highlight the stages of Carcinogenesis (6 marks)
- d) Explain the concept of NOAEL (5 marks)
- e) Highlight the cell layers of the placenta (5 marks)
- f) Describe the important features of active transport (5 marks)

## **Question TWO**

- a) Describe species as a factor affecting toxic response (10 marks)
- b) Explain the factors affecting dermal absorption (10 marks)

## **Question THREE**

- a) Explain the half-life of a chemical in the blood (10 marks)
- b) Describe the xenobiotic transporters found on the kidney tubules (10 marks)

## **Question FOUR**

- a) Describe the blood brain barrier (10 marks)
- b) Highlight the teratogenic toxic response (10 marks)

## **Question FIVE**

- Discuss genetic toxicity response (20 marks)