

**MAASAI MARA UNIVERSITY**

**SUPPLEMENTARY UNIVERSITY EXAMINATIONS 2016/2017 ACADEMIC YEAR**

**THIRD YEAR FIRST SEMESTER**

**SCHOOL OF TOURISM AND NATURAL RESOURCE MANAGEMENT**

**BACHELOR OF SCIENCE IN ENVIRONMENTAL STUDIES**

**COURSE CODE: EBH 402**

**COURSE TITLE: ENVIRONMENTAL TOXICOLOGY**

**DATE: TIME:**

**INSTRUCTIONS TO CANDIDATES**

Answer **ALL** questions in section **A** and any other **THREE** in section **B.**

***This paper consists of 2 printed pages. Please turn over***

**SECTION A (25 MARKS)**

1. Using a diagram, demonstrate the inter-disciplinary nature of environmental toxicology **(5 marks)**
2. Define the following terms:
   1. Dose response curve **(1 mark)**
   2. Poison **(1 mark)**
   3. Chronic exposure **(1 mark)**
   4. Adipose tissue **(1 mark)**
   5. Non-point pollution **(1 mark)**
3. State the difference between ecotoxicology and environmental health toxicology? **(5 marks)**
4. (a) List the mechanisms of movement of molecules across biological lipid membranes. **(2 marks)**

(b) Briefly discus one of the mechanisms of molecule movement listed in 4 (a). **(3 marks)**

1. Classify the types of environmental pollutants, giving relevant examples **(5 marks)**

**SECTION B: Answer any 3 (three) questions (45 marks)**

1. Discuss the physiology of the liver, explaining its functions and its role in toxin metabolism **(15 marks)**
2. Discus the mercury pollution dynamics in an ecosystem and its mode of action in animal poisoning **(15 marks)**
3. With the help of a diagram, describe the process of poisoning in an animal or human showing how pathways from exposure to excretion. **(15 marks)**
4. In the experimental design of experiments to estimate the human health risk to toxic substances using animals, there is need to select the test species. Discuss how you arrive at the choice of test animal **(15 marks).**