



# **MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATIONS  
2018/2019 ACADEMIC YEAR  
THIRD YEAR FIRST SEMESTER**

**SCHOOL OF TOURISM AND NATURAL  
RESOURCE MANAGEMENT  
BACHELOR OF SCIENCE IN ANIMAL HEALTH  
AND PRODUCTION**

**COURSE CODE: AHP 3103  
COURSE TITLE: PHARMACOLOGY AND  
TOXICOLOGY**

**DATE: 4<sup>TH</sup> DECEMBER, 2018**

**TIME: 0830 - 1030 HRS**

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**INSTRUCTIONS TO CANDIDATES**

Answer **ALL** questions

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

## PHARMACOLOGY AND TOXICOLOGY (120 MARKS)

1. (a) Define the following terms: (6marks)
  - i. Half-life of a drug
  - ii. Adverse drug reactions
  - iii. Pharmacokinetics(b) Briefly describe the factors to be considered when choosing route of drug administration. (5marks)  
(c) Define bio-availability and describe the factors that affect drug absorption. (5marks)  
(d) Explain the ethical uses of drugs and agrochemicals. (5 marks)
2. (a) List factors that affect distribution of drugs in the body. (4 marks)  
(b) Describe different types of drug antagonism. (6 marks)  
(c) Describe the different routes of drug excretion. (10marks)
3. (a) Write short notes on organochlorine pesticides residues are important. (5 marks)  
(b) Describe the factors that affect the action of a toxicant. (5 marks)  
(c) Give four steps in the mechanisms of toxicity. (5 marks)  
(d) Describe poisoning management measures that hinder the absorption of the poison from the gut. (5marks)
4. Discuss antimicrobial resistance and the role of veterinarian under the following:
  - a) Two major aspects of antimicrobial use that should be of concern to animal health practice. (8 marks)
  - b) Strategies veterinarian should adopt to minimize the risk of emergence of antimicrobial resistance. (12 marks)
5. Describe sulphonamides under the following topics:
  - i. Mechanism of action (6 marks)
  - ii. Clinical use (6 marks)
  - iii. Principles to be followed in sulphonamide chemotherapy (8 marks)
6. (a) List 5 medicinal plants and their respective applications. (10marks)  
(b) Describe the various phytochemicals found in medicinal plants. (10 marks)

**//END**



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**SUPPLEMENTARY UNIVERSITY**  
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## **PHARMACOLOGY AND TOXICOLOGY (120 MARKS)**

1. (a) Give five characteristics of an ideal ectoparasiticides **(5 marks)**  
(b) State five possible sources of exposure to organ chlorine poisoning in animals. **(5 marks)**  
(c) Outline the factors affecting the activity of toxicants. **(5 marks)**  
(d) Describe the signs you would observe in an animal with organophosphate pesticide poisoning. **(5marks)**
  
2. (a) State the major mechanism of action of antimicrobial agents, with examples of each type. **(5 marks)**  
(b) Describe therapeutic indications of macrolides. **(5 marks)**  
(c) Describe tetracycline under the following:
  - i. Classes **(3 marks)**
  - ii. Mechanism of action **(2 marks)**  
(d) Briefly describe different types of dosage forms. **(5 marks)**
  
3. (a) Define drug distribution. **(2 marks)**  
(b) Outline the enzymes responsible for metabolism of drugs. **(5 marks)**  
(c) Describe phase I reactions **(6 marks)**  
(d) Describe renal excretion of the drugs and the process involved **(7 marks)**
  
4. (a) Discuss the various ways in which anthelmintic drugs affect energy metabolism of worms. **(10 marks)**  
(b) Discuss the predisposing factors for development of anthelmintic drug resistance by parasites. **(10 marks)**
  
5. (a) Describe the concept of receptor and non-receptor mechanism in pharmacodynamics. **(5 marks)**  
(b) Describe types of drug antagonisms and their importance. **(15 marks)**
  
6. Write short notes on 5 phytochemicals found in medicinal plants. **(20marks)**