MURANG'A UNIVERSITY COLLEGE

(A Constituent College of Jomo Kenyatta University of Agriculture and Technology)

SCHOOL OF PURE AND APPLIED SCIENCES

DIPLOMA IN APPLIED BIOLOGY

CLASS: AS/BIO/13D

COURSE CODE: ASB 1311

PHAMACOLOGY, TOXICOLOGY, ANIMAL AND PLANT HUSBANDRY ENTOMOLOGY AND PLANT PATHOLOGY

DATE: 23RD JULY 2015 TIME: 2HRS

INSTRUCTIONS TO CANDIDATES

This paper consists of two sections; A and B Answer ALL questions in section A and any THREE questions from section B Each question in section A carries 4 marks while each question in section B carries 20 marks

SECTION A (40 marks)

Answer ***ALL*** the questions in this section

1. List ***FOUR*** functions of the membrane proteins in regards to drug absorption (4mrks)
2. a) Define Biotransport of drug (2mrks)
   b) List ***TWO*** factors which affect drug absorption and bioavailability (2mrks)
3. Plot a serum concentration time curve to show concentration of drug at various time intervals after its oral administration (4mrks)
4. Classify drugs giving one example in each case (4mrks)
5. a)Differentiate MTC from MEC (2mrks)
   b) Define apparent volume of distribution (VD) (2mrks)
6. Describe the environmental parameters for locust/grasshoppers rearing in the laboratory (4 marks)
7. Discuss culture media for Musca domestica, house fly (4 marks)
8. Outline humane ways of killing laboratory animals (4 marks)

9. Discuss the 3Rs in animal husbandly as introduced by S. Russel and L Burch. (4marks)
10. Illustrate hormonal interaction in insect metamorphosis as illustrated by cecropia moth (4 marks)

SECTION B (60 marks)

Answer any THREE questions from this section

11. Discuss factors which determine the rate of drugs distribution in the system (20mrks)
12. Discuss the excretion of drugs (20mrks)
13. a) Discuss the system routes of drug administration outlining advantages and disadvantages in each case (15mrks)
    b) Outline on the parental route of drug administration (5mrks)
14 Discuss survival of plant pathogens (20 marks)
11. Discuss methods of sterilizing media for greenhouse (20 marks)