MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

SECOND YEAR SECOND SEMESTER EXAMINATIONS FOR THE
DEGREE OF BACHELOR OF SCIENCE IN MEDICAL
LABORATORY SCIENCE WITH INFORMATION TECHNOLOGY

PMT 228: LABORATORY ANIMAL SCIENCE AND MANAGEMENT

Date: 7th April, 2014   Time: 2.45 – 5.00 p.m.

INSTRUCTIONS:

- Answer ALL questions in Section A and ANY TWO from Section B.

PMT 228: LABORATORY ANIMAL SCIENCE AND MANAGEMENT

TIME: 2 Hours

INSTRUCTIONS: Answer ALL questions in section A and any TWO from section B.

SECTION A: Answer ALL questions in section A-40 marks

1. Outline 5 signs of pain and distress in a named laboratory animal (5 marks).

2. Define and give example of the following:
   a). Laboratory animal (2 marks)
   b). Anaesthesia (2 marks)
   c). Analgesia (2 marks)
   d). Euthanasia (2 marks)

3. Outline 5 methods that can be used to identify individual animals in a laboratory house (5 marks).

4. Outline the advantages and disadvantages of using guinea pigs in biomedical research (5 marks).

5. a). What is a Specific Pathogen Free (SPF) animal? (2 marks)
   b). Outline 5 methods used to prevent introduction of disease in a laboratory animal house (5 marks).

6. Outline the occupational hazards associated with the care and use of Laboratory Animals (5 marks).

7. Briefly explain the purposes of using the following types of laboratory animals in biomedical research
   a). Knockout mice (2 marks)
   b). Nude mice (3 marks)

SECTION B: Answer any TWO questions in section B-30 marks

8. Discuss the role of laboratory animals in biomedical research (15 marks).

9. Discuss the general housing and husbandry requirements for laboratory animals (15 marks).

10. Describe the techniques that can be used to collect blood samples from and administer test material to a named laboratory animal (15 marks).

11. Discuss the important handling and restraint techniques for the following laboratory animals
    a). Mice (5 marks).
    b). Rabbits (5 marks)
    c). Rats (5 marks)