



UNIVERSITY EXAMINATIONS

**FIRST YEAR EXAMINATION FOR THE AWARD OF THE DEGREE OF
BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCE**

SECOND SEMESTER 2022/2023

[JANUARY – APRIL, 2023]

MELS 173: LABORATORY ANIMAL SCIENCE

STREAM: Y1 S2

TIME: 3 HOURS

DAY: TUESDAY, 2:00-5:00 P.M.

DATE: 28/03/2023

INSTRUCTIONS

- 1. Do not write anything on this question paper.***
- 2. Answer ALL questions in Section A and any two in section B.***

SECTION A: Attempt all questions (40 MARKS)

1. Briefly discuss application of Non-Human Primates in research.
2. Ethically, are animals justified as tools in research?
3. A drug under development requires a battery of tests. Under which circumstances are animals ideal for use in regard to this statement
4. Just like humans, animals experience pain and suffering. Why is necessary to recruit them into research despite the afore statement?
5. Explain coprophagy and its role in laboratory rodents
6. Differentiate between Coisogenic and congenic strains as used in animal breeding.
7. What is the significance Outbred Stock in laboratory animals?
8. Explain in detail how to obtain transgenic breeds in a laboratory

9. Define the following

- a) Gnotobiotic
- b) Axenic animals

10. Briefly, discuss breeding in hamsters.

SECTION B: Attempt any two questions (30 MARKS)

1. Justify the use of laboratory animals in research.
2. Use of rodents in research is preferred over other animals. Discuss this statement.
3. Discuss the major areas of medicine and biology where animals are used for experiments.