MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS
2019/2020 ACADEMIC YEAR
THIRD YEAR FIRST SEMESTER

SCHOOL OF NATURAL RESOURCE AND ANIMAL SCIENCES

BACHELOR OF SCIENCE IN ANIMAL HEALTH AND PRODUCTION

COURSE CODE: 2201

COURSE TITLE: MICROBIOLOGY II

DATE: 02-12-2019 TIME: 2 Hrs

INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions

This paper consists of 3 printed pages. Please turn over

MICROBIOLOGY [100 Marks]

1. Briefly describe the underlying principles of how the following serological tests work.
   a. Enzyme Linked Immunosorbent Assay **[5 marks]**
   b. Precipitation test **[3 Marks]**
   c. Agglutination test **[3 Marks]**
   d. Complement fixation test **[3 Marks]**
   e. Immunofluorescence test **[3 Marks]**
   f. Neutralization test **[3 Marks]**

2. Discuss dermatophytes under the following:
   a. Pathogenesis and pathogenicity **(15 Marks)**
   b. Diagnosis **(5 Marks)**
   c. Treatment and control **[10 Marks]**

3. Discuss epizootic lymphangitis under the following sub headings:
   a. Aetiological agent **(2 Mark)**
   b. Animal species affected (give examples) **(3 Marks)**
   c. Means of transmission **[2 Marks]**
   d. Diagnosis **(3 Marks)**
   e. Treatment/Management **(2 Marks)**

4. Discus aflatoxicosis under the following subheadings:
   a. Fungi associated with aflatoxin production organisms (give genus & species names) **(3 Marks)**
   b. Food/feed commonly associated with contamination by the fungi mentioned in (4a) above **(2 Marks)**
   c. Animal species (give examples)that are likely to suffer from aflatoxicosis **(2 Marks)**
   d. Control and prevention **(8 Marks)**

5. Discuss leptospirosis in dogs under the following subheadings:
    a. Aetiology **(2 Marks)**
    b. Prevention and control **(2 Marks)**

6. Discuss briefly enzootic abortion of ewes highlighting aetiology, tissues collected for definitive diagnosis and diagnostic tests employed **(4 Marks)**

7. Name the disease caused by the rickettsia *Ehrlichia canis* and give the laboratory diagnostic options available. **(5 Marks)**

8. Discuss briefly farm biosecurity measures aimed at reducing exposure of animals to microbial pathogens. **(10 Marks)**