

CHUKA UNIVERSITY

THIRD YEAR EXAMINATION BMET232: MEDICAL VIROLOGY

STREAM: Y2S2 BSc. BIOMEDICAL SCIENCE AND TECHNOLOGY

TIME: 2 HOURS

INSTRUCTIONS

- i. Answer Question One and any other Two Questions**
- ii. Do not write on the question paper**

Question One (30 marks)

- a. Outline the factors that affect virus host range. (3 marks)
- b. Explain how virus inhibit host cell nucleic acid synthesis and RNA transcription (6 marks)
- c. Draw the structure of a virus and highlight the basic structural forms of viruses in nature (7marks)
- d. Briefly describe types of virus-cell interaction (7 Marks)
- e. What are some of immunological responses to viral infections? (3marks)
- f. Outline the various properties of viruses (4marks)

Question Two (20 marks)

- a. Describe in detail the various microscopy techniques used in viral visualization (10 marks)
- b. What are the mechanisms of cell damage as a result of a virus infection? (10 marks)

Question Three (20 marks)

- a. Describe in details, any 5 types of viral propagation methods. (10 marks)
- b. What are the three primary methods used for the indirect enumeration of viruses? (10 marks)

Question Four (20 marks)

- a. Describe the following methods used diagnostic microbiology.

- i. Antigen detection (5 marks)
 - ii. Nucleic acid detection (5 marks)
- b. Describe the various tests used for HIV detection and monitoring. (10 marks)