

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN BIOMEDICAL SCIENCE, TECHNOLOGY AND BACHELOR OF SCIENCE IN BIOCHEMISTRY

BMET 232: MEDICAL VIROLOGY

STREAMS: BSC (BIOMED), BSC (BIOC)

TIME: 2 HOURS

DAY/DATE: TUESDAY 14/04/2020

2.30 PM – 4.30 PM

INSTRUCTIONS:

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

Question One (30 marks)

- a. Describe briefly the pathogenic steps involved in human infection to a virus. (5marks)
- b. Describe briefly the general immune response to a viral infection. (5 marks)
- c. With the aid of clearly labeled diagrams differentiate between a naked and an enveloped virus. (5 marks)
- d. Briefly give a description of cytocidal changes in a virus infected cell. (4 marks)
- e. Outline the three principle methods of storing viruses? (3marks)
- f. Describe the methods used for the diagnosis of respiratory tract viral infections such as the novel coronavirus disease 2019(Covid-19) caused by SARS-Cov-2 virus.. (5 marks)
- g. Briefly state the various properties of viruses. (3 marks)

Question Two (20 marks)

- a. Describe in detail the steps involved in viral replication. (10 marks)
- b. Explain 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. Describe the three primary methods used for the indirect enumeration of viruses. (10 marks)

Question Four (20 marks)

- a. Describe the following methods used in 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)
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