



UNIVERSITY EXAMINATIONS

**SECOND YEAR EXAMINATION FOR THE AWARD OF THE DEGREE OF
BACHELOR OF SCIENCE IN BIOMEDICAL SCIENCES AND TECHNOLOGY**

FIRST SEMESTER 2022/2023

[JAN – APRIL, 2023]

BMED 110: VIROLOGY

STREAM: Y2 S1

TIME: 3 HOURS

DAY: MONDAY, 9:00 – 12:00 P.M.

DATE: 03/04/2023

INSTRUCTIONS:

- 1. Do not write anything on this question paper.***
- 2. Answer ALL questions in Section A (Compulsory) and any other TWO questions in section B.***

SECTION A: (40 MARKS)

ANSWER ALL QUESTIONS IN THIS SECTION

1. Viruses are neither living nor non-living. Using empirical evidence explain this statement. (5marks)
2. Compare and contrast mechanical versus vector viral transmission mechanisms. (5marks)
3. a) Explain with examples the differences between acute, chronic and latent viral infections (3¹/₂marks)
b) Identify three ways through which viruses are transmitted from a maternal system to the offspring. (1¹/₂ marks)

4. With the aid of a diagram illustrate viral replication cycle in a susceptible host cell. (5marks)
5. A Patient is brought to the hospital with manifestation of Western Equine Encephalitis virus infection like symptoms. Explain the most likely clinical signs observed in this patient. (5marks)
6. Describe briefly types of serological tests commonly used in detecting viral infections. (5marks)
7. The Sand-fly fever virus is one of the common human viruses in the family of *Bunyaviridae* that manifest in patients mainly with haemorrhagic fever, renal failure, encephalitis and meningitis. Discuss its transmission, diagnosis, prevention and control. (5 marks)
8. A young boy is bitten by a rabid dog on his way to school. If immediate medical treatment is not given, explain the infection phases of the Rabies virus in this young boy. (5marks)

SECTION B (30 MARKS)

Answer any two questions from this section. All questions carry equal marks

9. An infant manifest with watery eyes, runny nose and raised rashes. Upon clinical examination it is suspected to be measles infection. Discuss the diagnostic techniques and procedures you will employ to confirm this infection in the laboratory. (15 marks)
10. Hepatitis B virus is one of the etiological factors responsible for liver cirrhosis in humans. Discuss its transmission, clinical signs, prevention and control. (15marks)
11. A local community has invited you to give a health talk on cervical cancer among women of reproductive age. Describe your presentation detailing its etiological factors, transmission, pathogenesis, diagnosis, control and prevention. (15 marks)