



**KISII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**

**FIRST YEAR EXAMINATION FOR THE AWARD OF DEGREE OF MASTER OF  
SCIENCE IN BIOMEDICAL SCIENCES  
FIRST SEMESTER, 2023/2024  
(MAY-AUGUST, 2024)**

**MBSM 823: ADVANCED MEDICAL VIROLOGY I**

**STREAM: Y1S1**

**TIME: 3 HOURS**

**DAY: TUESDAY, 12.00PM-3.00PM**

**DATE: 13/08/2024**

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**INSTRUCTIONS**

- 1. Do not write anything on this question paper.***
- 2. Answer question one and any other two questions.***

**QUESTION ONE**

The majority of individuals infected with hepatitis C virus develop a persistent infection. Discuss the factors leading to the development of a persistent HCV infection and the implication for antiviral therapies and vaccines. [20 Marks]

**QUESTION TWO**

Write an essay on measles virus covering its virulence and how the virus spreads round the body with specific emphasis on the virus's receptors usage. Conclude with a brief discussion on how measles might be modified for our benefit. [20 Marks]

**QUESTION THREE**

Write an essay about Ebola virus transmission and pathogenicity with specific emphasis on how the gene product of the virus subvert the host immune response contributing to its unusually high lethality in humans. [20 Marks]

**QUESTION FOUR**

Describe the structure and replication of coronaviruses and their association with respiratory disease in man as well as highlighting the unique features of these viruses that promote cross species transfer. [20 Marks]

