



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**UNIVERSITY VILLAGE, PLOT 91 CADASTRAL ZONE, NNAMDI AZIKIWE**  
**EXPRESS WAY, JABI - ABUJA.**  
**FACULTY OF SCIENCE**  
**Department of Biological Sciences**  
**2025\_1 EXAMINATION...**

**BIO415: Virology and Tissue Culture**

**TIME: 2Hours**

**CREDIT UNITS: 2**

**INSTRUCTION: Attempt THREE questions in all. Question 1 is compulsory**

- 1a. List the ten factors used in the classification of viruses into families (10 marks)
- 1b. Discuss the use of N-test in the diagnosis of viral diseases infections (10 marks)
- 1c. There are two modes of actions of interferons. Identify these two modes and explain their actions (10 marks)
  
- 2a. Viruses are acellular organisms, discuss their characteristic features (10 marks)
- 2b. Discuss the two nucleic acids in viral particles of viruses (10 marks)
  
- 3a. Explain the mode of actions of anti-viral drugs (13 marks)
- 3b. Discuss the conditions that must be met before specimens are used for the diagnosis of viral diseases (7 marks)
  
- 4a. Succinctly discuss the criteria a purified physical particle of virus should fulfill before it can be identified as a virus particle. (10 marks)
- 4b. Explain the special precautionary measures and ethical practices in a virology laboratory (10 marks)
  
5. In a tabular form, name the principal vaccines used in the prevention of viral diseases of human. Name the disease, source of vaccine, condition of virus and route of administration of the vaccine (20 marks)