

**BONDO UNIVERSITY COLLEGE  
SCHOOL OF HEALTH SCIENCES**

**HCD 3212: INTRODUCTION TO VIROLOGY**

Answer ALL questions in Section A and ANY TWO questions in Section B.

Section A. Answer all the questions in this section (**30 marks**)

1.) Define the following terms

- (A).Obligatory intracellular parasites
- (B) viroids
- (C) Oncogenes
- (D) Capsids
- (E) virions
- (F) Envelopes (**3marks**)

2.) Explain why vaccination against DNA viruses tend to be more long lasting than vaccination against RNA viruses. (**3 marks**)

3.) State 3 important steps necessary for a successful viral infection to occur (**3 marks**).

4.) Explain how viral infections were recognized before the invention of the electron microscope (**3 marks**).

5.) State three names of viruses that cause tumor cells in animals (**3 marks**).

6.) Define latent viral infections. Give 2 examples of latent viral infections (**3 marks**)

7.) What are prions, give an example of a disease caused by prions (**3 marks**)

8.) Unlike tumor cells normal cells stop dividing when they encounter each other, name the process involved. (**3 marks**)

9.) Give an example of two viral infections that are transmitted by the oral fecal route (**3 marks**)

10.) *Lentivirus* HIV-1 cannot be destroyed by the body immune system because they attacks and hide into specific cells of the same immune system. Name the cells that are involved in hiding the HIV-1 viruses. (**3 marks**).

**SECTION 2 ANSWER ANY TWO QUESTIONS**

1. (A) Describe the 5 steps of the Lytic cycle in Bacteriophage replication (**10 marks**) (B) State the differences between the lytic and lysogenic cycles (**10 marks**).
2. Describe the cytopathic effects (CPE) caused by the viral infections to the host cell (20 marks)
3. With examples discuss the advantages and disadvantages of physical and chemical methods used in viral control (**20 marks**).
4. Describe the four (4) important processes in polymerase chain reaction (PCR) (**20 marks**).