



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF HEALTH SCIENCES**

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE**

**PUBLIC HEALTH/COMMUNITY HEALTH AND DEVELOPMENT**

**2<sup>nd</sup> YEAR 1<sup>ST</sup> SEMESTER 2017/2018 ACADEMIC YEAR**

**KISUMU CAMPUS**

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**COURSE CODE:** HCD 3212

**COURSE TITLE:** INTRODUCTION TO VIROLOGY

**EXAM VENUE:** STREAM: BSc Public/ Comm. Hlth & Dev

**DATE:** **EXAM SESSION:**

**TIME: 2.00 HOURS**

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**Instructions:**

- 1. Answer all the questions in Section A and 2 questions in Section B.**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

**SECTION A (30MKS)**

1. Define the following terms as used in virology;
  - a. Plaque forming assay (1mk)
  - b. X-ray crystallography (1mk)
  - c. Icosahedral (1mk)
2. With specific virus types, outline the major differences between enveloped and non-enveloped viruses (3mks)
3. Mention the functions of viral proteins (3mks)
4. Outline the disadvantages of classifying viruses based on the International Committee on Taxonomy of Viruses (3mks)
5. List the diseases transmitted by prions (3mks)
6. Give examples of accessory host receptors on target cell surfaces (3mks)
7. Explain briefly how an enveloped virus infects an animal cell (3 mks)
8. Write short notes on killed vaccines (3mks)
9. List laboratory methods used for the diagnosis of viral infections (3mks)
10. Describe the properties of viruses that distinguishes them from the other microorganisms (3mks)

**SECTION B (40MKS)**

11. Discuss the Baltimore virus classification scheme mentioning examples of virus families in each category (20mks)
12. Discuss the attachment interactions of HIV-1 with its target cells (20mks)
13. Discuss the Antiretroviral drug modalities used by HIV infected patients (20 mks)
14. Discuss the advantages and disadvantages of killed vaccines (20mks)