



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**SCHOOL OF HEALTH SCIENCES**  
**UNIVERSITY EXAMINATION FOR DEGREE OF BACHELOR OF SCIENCE PUBLIC**  
**HEALTH / COMMUNITY HEALTH AND DEVELOPMENT**  
**2<sup>ND</sup> YEAR 1<sup>ST</sup> SEMESTER 2016/2017 ACADEMIC YEAR**  
**KISII**

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**COURSE CODE: HCD 3212**

**COURSE TITLE: INTRODUCTION TO VIROLOGY**

**EXAM VENUE: STREAM: (BSc. P. Health / Comm Hlth & Dev)**

**DATE: EXAM SESSION: AUGUST 2016**

**TIME: 2.00 HOURS**

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**Instructions:**

- 1. Answer all the questions in Section A and ANY other 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 Answer all questions in this section (30 marks)**

1. Differentiate between Vertical and horizontal transmission giving examples (3marks)
2. Describe Herd immunity and its clinical significance (3 marks)
3. Draw and label a basic structure of a virus (3 marks)
4. Highlight any three characteristics of a virus that makes it different from a bacteria (3marks)
5. State three attributes of a good vaccine (3 marks)
6. Explain the types of viral capsids (3 marks)
7. Describe the reaction of viruses to heat and cold temperatures (3 marks)
8. Explain the lysogenic cycle in bacteriophage replication (3 marks)
9. Explain the effects of viral Infections on host cell (3 marks)
10. Describe the organs and systems affected by Adenovirus in the human body (3 marks)

**SECTION B Answer any two Questions (40 Marks)**

- 11 a) With an example describe the three classes of a persistent infection (12 marks)  
b) Describe the Baltimore classification system (8 marks)
12. Explain the mechanism of immune evasion by viruses (20 marks)
13. State and explain the replication of viruses (20 marks)
14. Discuss the direct methods of virus diagnosis (20 marks)