



**EMBU UNIVERSITY COLLEGE**  
**(A Constituent College of the University of Nairobi)**

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**2015/2016 ACADEMIC YEAR**

**SECOND SEMESTER EXAMINATION**

**THIRD YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE**  
**(MICROBIOLOGY AND BIOTECHNOLOGY)**

**SZL 315: VIROLOGY**

**DATE: APRIL 7, 2016**

**TIME: 08:30-10:30AM**

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**INSTRUCTIONS: Answer any ten (10) questions (7 marks each)**

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1. Describe briefly the use of highly active antiretroviral therapy in management of HIV infection.
2. Describe HIV-1 replication.
3. Outline the causes of genetic variation in viruses.
4. Discuss briefly the diagnosis, clinical characteristics and treatment of rotaviruses.
5. Outline considerations made by International Committee on Taxonomy of viruses in making taxonomic assignments.
6. Discuss the importance of studying viruses.
7. Describe the purification of viruses using centrifugation.
8. Discuss theta  $\theta$  and  $\sigma$  replication in viruses.
9. Describe the events in the induction of  $\lambda$  phage.
10. Discuss briefly productive infections.
11. Describe the "single-burst experiment" virus infectivity assay that provides data for a one-step growth curve.
12. Discuss the effect of temperature on viral infectivity.

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