



**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

UNIVERSITY EXAMINATIONS

2021/2022 ACADEMIC YEAR

**MAIN EXAMINATIONS
MAIN CAMPUS**

FIRST YEAR SECOND SEMESTER EXAMINATIONS

**FOR THE DEGREE
OF
MASTER OF SCIENCE IN CROP PROTECTION**

COURSE CODE: SMB 821

COURSE TITLE: ADVANCED VIROLOGY

DATE: FRIDAY, 22ND APRIL 2022

TIME: 9:00 – 12:00 P.M.

INSTRUCTIONS TO CANDIDATES

Answer ANY FOUR (4) questions

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over.



1. Describe the morphology of HIV (Human Immunodeficiency Virus) and compare it with the structure of a common bacteriophage. (15 marks)
2. Describe a TAS-ELISA (Triple antibody sandwich enzyme-linked immunosorbent assay) experiment to identify TYLCV (*Tomato yellow leaf curl virus*) in sick tomato plants and state differences to a DAS-ELISA. (15 marks)
3. Discuss merits and demerits of two (2) Infectivity Assays of your choice. (15 marks)
4. Describe the steps of lysogenic viral life cycle and compare it with the lytic cycle. (15 marks)
5. Discuss the method and advantages of the cultivation of viruses using embryonated eggs. (15 marks)
6. Compare the pathogenesis and patterns of Herpes virus and human Poxvirus. (15 marks)