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

**SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

**FOURTH YEAR SECOND SEMESTER UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN HORTICULTURE**

**2016/2017 ACADEMIC YEAR**

**REGULAR**

**COURSE CODE: ALP3421**

**COURSE TITLE: Plant Pathology**

**EXAM VENUE: STREAMS: BSc. Horticulture**

**DATE: EXAM SESSION:**

**TIME: 2 HOURS**

**Instructions:**

1. **Answer ALL questions in section A and ANY other 2 Questions in section B.**
2. **Candidates are advised not to write on question paper.**
3. **Candidates must hand in their answer booklets to the invigilator while in the examination room.**

**SECTION A [30 MARKS]**

**Answer ALL questions from this Section.**

1. Describe Koch’s postulates (4 marks)
2. Explain the following terminologies
3. Pathogenicity (1 marks)
4. Virulence (1marks)
5. Outline the most common visible or detectable abnormality expressed on the plant as a result of a disease (4 marks)
6. State and explain the principles of plant disease management (4 marks)
7. Explain the following vegetative methods of reproduction in fungi
8. Fragmentation (2marks)
9. Budding (2marks)
10. (i) Name any 4 genera of fungi that are pathogenic to plants (2 marks)
11. Describe the characteristics of fungi in the genus *Phytophthora* (2marks)
12. Explain how parasitic plants cause diseases to other plants (3 marks)
13. State the role of KEPHIS in the management of plant health in Kenya (2marks)
14. With specific examples of nematodes, outline the symptoms that are presented in bananas due to nematode infection (3marks)

**SECTION B [40 MARKS]**

**Answer ANY TWO questions from this Section.**

1. Explain the biological, chemical and transgenic methods of plant disease control

(20marks)

1. Describe the mechanisms of plants resistance and defense against plant diseases

(20marks)

1. (i) State any 4 groups of viruses that are pathogenic to plants (2marks)
2. Outline the symptoms that guide in the identification of plant virus infection

(6marks)

1. Describe techniques for detection and identification of plant viruses (6marks)
2. State and explain the modes of transmission of plant viruses (6marks)