**SOUTH EASTERN KENYA UNIVERSITY**

**UNIVERSITY EXAMINATIONS 2016/2017**

**FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF**

**SCIENCE IN BIOLOGY**

**SBL 204: GENERAL MICROBIOLOGY**

**DATE: 16TH DECEMBER, 2016**

**TIME:10.30-12.30 P.M**

**INSTRUCTIONS TO CANDIDATES**

**(a) Answer ALL the Questions in Section A**

**(b) Answer ANY TWO Questions in Section B**

**(c) Illustrate your answers with well labeled diagrams where appropriate**

**SECTION A (30 Marks)**

1. Explain briefly the criteria for classifying viruses.

2. Explain the usage of the following terms in microbiology:

(a). Phycobilliproteins.

(b). *Podoviruses.*

(c). *Rhizoctonia.*

3. State how formation of aflatoxins in maize can be avoided.

4. Give **three** reasons why bacteria produce endospores.

5. Briefly describe **three** microenvironments that define microbial habitats.

**(3 marks)**

**(1 mark)**

**(1 mark)**

**(1 mark)**

**(3 marks)**

**(3 marks)**

**(3 marks)**

6. Explain **three** biotic activities of microbes in the soil which increase agricultural

productivity.

**(3 marks)**

7. Explain **three** ways on how *mycorrhiza* improves plant uptake of phosphorus and water.

**(3 marks)**

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8. Describe briefly the fungal cell wall.

9. List **three** distinguishing features of the Phylum Oomycota.

**(3 marks)**

**(3 marks)**

10. Draw a labelled diagram showing the formation of a mycelium from a single spore.

**(3 marks)**

**SECTION B (40 Marks)**

11. Giving **five** examples, discuss the protist diversity based on structures and modes of

nutrition.

**(20 marks)**

12. Giving specific examples, discuss **five** features that delineate fungi from other organisms.

**(20 marks)**

13. (a). Discuss **five** factors that influence bacterial growth and their exemptions. **(10 marks)**

(b). Using a diagram, describe the bacterial cell wall.

14. Discuss the economic importance of fungi.

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**(10 marks)**

**(20 marks)**

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