



**ELIZADE UNIVERSITY,  
ILARA-MOKIN, NIGERIA**

**FACULTY: BASIC & APPLIED SCIENCES**

**DEPARTMENT: BIOLOGICAL SCIENCES**

**FIRST SEMESTER EXAMINATION**

**2018/2019 ACADEMIC SESSION**

**COURSE CODE: MCB 307**

**COURSE TITLE: MICROBIAL ECOLOGY**

**DURATION: 2 HOURS**

**HOD's SIGNATURE**

**NAME:.....**

**MAT. No:.....**

**INSTRUCTIONS: ATTEMPT ALL QUESTIONS IN SECTION A AND ANY THREE (3)  
QUESTIONS IN SECTION B**

## SECTION A

- I. The lower urinogenital tract of a female has a unique defense mechanism. Enumerate the conditions that support this statement
- II. Name the enzyme responsible for first line of defense in the eye.
- III. What is the main function of gastric juice in the stomach?
- IV. List factors that influence the microbiota composition of the stomach
- V. Mention the two predominant bacteria found inside the nostril.
- VI. What group of microorganism predominates the colon? Give reasons for your answer
- VII. List the physiologic functions associated with the nose
- VIII. Why is the skin surface not a favourable environment for microbial colonization?
- IX. What is the pathogenic microorganism responsible for acne vulgaris?
- X. List the infections that the presence of bacteria in oral cavity can result into.

## SECTION B

1. (a) Define the following terms; i. Biomass, ii. Microbial ecology, iii. Abiotic and Biotic ecosystem, iv. Parasitism, v. Mutualism, vi. Ectosymbiosis and vii. Syntrophism  
(b) Mention different types of microbial ecosystem with relevant examples
2. (a) Explain the major roles of soil Actinomycetes  
(b) Diagrammatically, discuss the biological zones in a lake
3. (a) Light and temperature affect the nature of water as microbial habitat. Discuss  
(b) What are microbial loop and the importance of viruses in this process?
4. (a) Mention different ways by which microorganisms in different ecosystem can be dispersed and explain how inanimate and biological vectors aid in the dispersal methods  
(b) Differentiate between the following terms: normal microbiota, resident flora and transient flora and enumerate different benefits of normal microbiota
5. (a) Write concisely on functions of soil bacteria  
(b) Skin is a physical barrier mechanism that contains lysozyme and cathelicidins. Discuss