



**FEDERAL UNIVERSITY OF TECHNOLOGY,
MINNA**

SCHOOL OF LIFE SCIENCES

DEPARTMENT OF MICROBIOLOGY

SECOND SEMESTER EXAMINATION, 2017/2018

SESSION

**COURSE CODE: MCB 221 (INTRODUCTION TO
MICROBIOLOGY II) UNIT: 3**

**INSTRUCTIONS: Answer FIVE Questions in all. Attempt at least
two questions in each section.**

TIME: 2^{1/2}HOURS

SECTION A

- 1a. List and explain the elements of aseptic techniques
- 1b. Give five rules of any aseptic techniques.
2. Define the following:
 - i. Limiting factor
 - ii. Keystone species
 - iii. Trophic level
 - iv. Food chain
3. In a tabular form give the major roles of organisms in an ecosystem.
- 4a. Differentiate between symbiotic and non-symbiotic relationship.
- 4b. List and explain three kinds of microbial interaction with one example each.

SECTION B

5. Write short notes on any five of the following
 - i. Resolution
 - ii. Definition
 - iii. numerical aperture
 - iv. oil immersion objective
 - v. counter stain
 - vi. mordant
 - vii. fixatives
- 6a. What is the major difference between light microscope and electron microscope?
- 6b. Give three differential qualities and two examples each of gram-positive and gram-negative bacteria.
- 7a. What is the importance of staining in Microbiology?
- 7b. Explain the procedure of Gram's staining technique.