



**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA  
SCHOOL OF LIFE SCIENCES  
DEPARTMENT OF MICROBIOLOGY**

**SECOND SEMESTER EXAMINATION 2015/2016 SESSION**

**COURSE CODE: MCB 321**

**COURSE TITLE: GENERAL MICROBIOLOGY II (3 UNITS)**

**CLASS: 300 LEVEL**

**TIME: 2 HOURS**

**Instruction: Answer all questions in Section A and any other three (3) from Section B & C**

**SECTION A**

1. What are the major setback in the use of chlorine for water purification? (3 marks)
  - (a). Explain the mode of action of chlorine on microorganisms. (2 marks)
  - (b). How can we prevent contamination of water bodies? (3 marks)
  - (c). How can recontamination of purified water be prevented? (2 marks)
  - (d). What roles do *Mycorrhiza* spp play in the soil? (2 marks)
  - (e). How would you enhance the activities of microorganisms in the soil? (2 marks)
  - (f). State five limitations of using microorganisms as foods. (2 <sup>1/2</sup>marks)
  - (g). Assess pasteurization as a method of sterilization of food. (3 marks)
2. Define the following terms with examples
  - (a) Mutualism (3 marks)
  - (b) Commensalism (3 marks)
  - (c) Parasitism (3 marks)
3. State five functions of normal flora.

**SECTION B**

- 1(a) Contrast between the course of an infection and the initiation of an infection
- 1(b) What advantages does growth within a biofilm confer on a pathogen?
- 2(a) What is the physiological difference between plasmodial schizonts and merozoites?

- 2(b) State with examples, the cell wall components that a pathogen could use to evade phagocytosis.

### **SECTION C**

- 1(a). Why are bacteria used as model organisms in microbial genetic studies?
- 1(b). “Transduction occurs due to error in the phage life cycle”. Discuss
2. Discuss vividly the roles of microorganisms in industrial fermentation process.