



FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
MICROBIOLOGY DEPARTMENT
FIRST SEMESTER EXAMINATION, 2017/2018 SESSION
COURSE : PRINCIPLES OF STERILIZATION & DISINFECTION (MCB 312), 2 UNITS

Instruction: Attempt two (2) questions in section A and any other one in section B
Time allowed: 1½ Hours

SECTION A

- 1(a). How do microorganisms survive in the natural environment? (7 marks)
- 1(b). What is growth? (4 marks)
- 1(c). Briefly explain how to measure microbial cell concentrations. (4 marks)
- 2(a). Sterilization is an absolute term. Explain. How does sterilization differ from disinfection? (5 marks)
- 2(b). Classify sterilization methods (2 marks)
- 2(c). Discuss sterilization at the temperature of 100°C (8 marks)
3. Discuss fully viral inactivation (15 marks)

SECTION B

- 4(a). Why is it essential to perform antimicrobial susceptibility testing?
- 4(b). What is Kirby – Bower test?
- 4(c). What is an MIC and MBC? Why is MIC a common test in clinical microbiological laboratories.
- 5(a). Write short notes on the following:
 - (i) Chemotherapeutic agents
 - (ii) Supportive therapy
 - (iii) Combined drug therapy
 - (iv) Antibiotic(r) drug resistance
- 5(b). State major toxicity of the following antibiotics.
 - (i) cephalosporins
 - (ii) Aminoglycosides
 - (iii) Chloramphenicol
 - (iv) Isoniazid
 - (v) Sulfonamide
- 5(c). Mention five antibiotics each that affect cell wall and protein synthesis of bacteria