FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF MICROBIOLOGY

SECOND SEMESTER EXAMINATION 2013/2014 SESSION

COURSE CODE: MCB 525
COURSE TITLE: PHARMACEUTICAL MICROBIOLOGY (2 UNITS)
CLASS: 500 LEVEL
TIME: 2 HOURS

Instructions: Answer FOUR Questions. Two from each section

SECTION A

1. (i) Define Pharmaceutical Microbiology and explain the importance of sterility of pharmaceutical products
   (ii) List six (6) different pharmaceutical products you know
   (iii) Describe chemotherapeutic agents, chemotherapy and prophylaxis (including the various forms of chemotherapy)

2. (i) Name the classes of antibiotics in nature with examples
   (ii) List the characteristics of a clinically-useful antibiotic
   (iii) Explain the principle of selective toxicity

3. (i) Discuss modes of action of antibiotics giving specific examples in each case
   (ii) Explain Pharmaceutical Quality Control and Pharmaceutical Quality Assurance

SECTION B

1. Explain the significance of the following physiological structures in microorganisms as they relate to susceptibility and resistance of microorganisms
   (a) Cell wall
   (b) Cyst
   (c) Efficient transport system
   (d) Biofilms
   (e) Porins

1(a). Discuss the roles the following play in reducing the efficacy of antibiotics therapy.
   (i) Human activities
   (ii) Microbial adaptation
   (b) How can these problems be resolved?

2. Briefly explain how the following are used in disinfection and sterilization.
   (i) Dyes
   (ii) Copper
   (iii) Quarternary Ammonium compounds