

Obafemi Awolowo University, Ile-Ife
Department of Microbiology
2010/2011 Rain Semester Examinations

Pathogenic Bacteriology (MCB 302)

December, 2011

Answer all Sections in separate booklets provided

Time Allowed: 3 h

Important Notice

ACADEMIC INTEGRITY: Requires you to uphold a high standard of honesty in this examination and eschew cheating in whatever form. Some examples of violations of this requirement are: **using notes, handouts or books; looking** at another person's answer booklet; **knowingly allowing** another student to look at your answer booklet; and, **verbally exchanging information** with another student etc. You are strongly advised to simply put in your best and leave the rest!

SECTION A

- 1 a Mention the major outcome of complement system activation
- b What are the various means of phagocytic evasion by bacteria?
- c Explain how inflammation and antibody production can be damaging
- d Give an example of a serum resistant bacterium
- 2 a Explain immunopathology and autoimmune response
- b Describe the chemical means of body defense
- c What is an A-B toxin?
- d List the mechanisms used by bacteria for avoiding antibodies

SECTION B

1. Outline the history in the discovery, development and use of penicillin stating the relevant individuals and dates. Mention two combination therapy (antibiotics) in the treatment of bacterial infections.
2. Deduce reasons for or against this statement: In pathogenic bacteriology, colonizers are referred to as normal flora. Mention the sequence of events, indicate the virulence factors and mechanisms leading to infection caused by *Staphylococcus aureus*.
3. State clearly (not more than 2 lines - each) the mechanism of action of the oxazolidinones (linezolid), aminoglycosides and tetracyclines.
4. One of the mechanisms for bacterial resistance to antibiotics is altering the target site receptor for the antibiotic to reduce or block its binding. Discuss using **ONE** example to describe this mechanism.

GOODLUCK