



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

FIRST SEMESTER EXAMINATION 2016/2017 SESSION

COURSE CODE: MCB 511

COURSE TITLE: PATHOGENIC BACTERIOLOGY (3 UNITS)

CLASS: 500 LEVEL

TIME: 2 HOURS

Instruction: Answer any four (4) questions

1. Discuss bacterial toxin. Compare and contrast the different types of toxin and give specific examples.
2. (i) Write short notes on bacterial virulence
(ii) Explain three mechanisms by which bacteria demonstrate it.
3. (i) Describe bacterial morphology
(ii) Explain the roles of at least three bacterial organelles
4. Give at least ten bacterial pathogens and highlight the mechanisms of pathogenesis of each of them.
5. Using standard laboratory procedures, explain how you will show that a given sample of bacterial culture contains *Staphylococcus aureus*.
6. (a) Describe the procedures for carrying out the following laboratory tests: lactose fermentation, methyl red, indole, gas formation, and sugar fermentation.

(b) How will you quickly differentiate the following bacteria in the laboratory?
Pseudomonas aeruginosa, *Escherichia coli*, *Staphylococcus aureus*, *Salmonella typhi*, and *Streptococcus pneumoniae*