



FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
DEPARTMENT OF MICROBIOLOGY
FIRST SEMESTER EXAMINATION, 2018/2019 SESSION
GENERAL MICROBIOLOGY (MCB 311), 3 CREDIT UNITS

INSTRUCTION: ANSWER ANY FIVE (5) QUESTIONS

TIME ALLOWED: 2Hours

- 1a). Briefly highlight acid-fast staining procedures
- 1b). Why are acid-fast stains useful?
- 1c). How does negative staining help in visualizing capsules?

- 2a). State the purpose of each of the following reagents in a differential staining procedure:
 - (i). Primary stain,
 - (ii). Mordant,
 - (iii). Decolorizing agent,
 - (iv). Counterstain
- 2b). Which is the most crucial step in the performance of the Gram staining procedures? Explain.
- 2c). What are the advantages of differential staining procedures over the simple staining technique?

- 3a). Define the term virus
- 3b). Highlight the basic stages involved in the replication of a virion.

- 4). Discuss the economic importance of protozoa

- 5a). List 5 environmental factors that affect microbial growth and survival?
- 5b). What is the magnification of the oil immersion objective?

- 6a). Define the following terms:
 - (i) extremophiles
 - (ii) isotonic solution,
 - (iii) facultative anaerobes,
 - (iv) aerotolerant

- 6b). What is the unit of micrometry in bacteriology
- 7a). State Koch's postulates used to relate a specific microorganism to a specific disease.
- 7b). State 5 differences between Prokaryotic and Eukaryotic cells