



FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF LIFE SCIENCES
DEPARTMENT OF MICROBIOLOGY
SECOND SEMESTER EXAMINATION 2018/2019 SESSION
GENERAL MICROBIOLOGY II (MCB321) 3 UNITS

Instructions: Answer five (5) questions in all. Attempt at least one question from each section.

Time: 2 Hrs

SECTION A

- 1(a). Use the knowledge acquired in water analysis experiment in the laboratory to answer the following questions
- Explain why Escherichia coli was chosen as the indicator of fecal pollution
 - what circumstances in human life style made water pollution so serious?
 - Why did EMB changed color?
 - What is the importance of testing beaches and pools for coliforms?
 - If you are in the wilderness and do not have a water purifier why is it important to boil your water prior to drinking it?
- 1(b). A number of pathogenic microorganisms have enrolled to take advantage of water as vehicle of distribution between hosts. Comment
- 2(a). What is the role of immune system?
- 2(b). Define the following terms:
- Immune system
 - Immunology
 - Immunity
 - Immune response
 - Antibodies
- 2(c). Name components of Immune system

SECTION B

3. Discuss with illustrations, any two mechanisms of gene transfer in bacteria
- 4(a). Explain the flow of genetic information in bacteria
- 4(b). what are the differences between DNA and RNA

5. Write short note on the following;
- (i) Plasmid Transfer
 - (ii) Mutation
 - (iii) DNA

SECTION C

- 6(a). Differentiate between infectious diseases and communicable diseases
- 6(b). Distinguish between species, serotypes and strains.
7. Write an essay on the infectious diseases caused by *Salmonella* species highlighting its causative agent, reservoir, signs and symptoms and prevention strategies.