



FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF LIFE SCIENCES
DEPARTMENT OF MICROBIOLOGY
FIRST SEMESTER EXAMINATION 2018/2019 SESSION
ENVIRONMENTAL MICROBIOLOGY (MCB 523) 3 UNITS

Instruction: Answer five (5) Questions in all. Attempt at least ONE Question from each section.

Time Allowed: 2½ Hours

Section A

1. Man is the greatest problem of the ecosystem. Discuss this statement, relating it to four (4) distinct elemental cycles?
- 2(a). Give reasons why phosphorus is not in the atmosphere?
- 2(b). How does microbial transformation of sulphur establish the sulphur cycle in nature?
- 3(a). Mention 4 groups of microorganisms involved in nitrogen cycle and state their roles.
- 3(b). Mention 2 ways you would employ to prevent the hazards caused by excessive nutrient influx to water bodies.

Section B

4. Describe the steps used to minimize the risk of microbial contamination in drinking water.
- 5(a). Briefly discuss the population of microorganisms in the air.
- 5(b). Explain any two (2) of the following methods of air analysis:
 - (i) Impingement in liquid
 - (ii) Impingement on solid
 - (iii) Sieve and slit method.

Section C

- 6(a). Define pesticide.
- 6(b). Outline the properties of an ideal pesticide.
- 7(a). What are biopesticides?
- 7(b). Itemize the types of biopesticides.