

**OLABISI ONABANJO UNIVERSITY
DEPARTMENT OF MICROBIOLOGY**

2018/2019 HARMATTAN SEMESTER EXAMINATION

COURSE: ENVIRONMENTAL MICROBIOLOGY CODE: MCB 409 DATE: 23-04-19

INSTRUCTION: Attempt two questions from each section TIME: 1:30Mins

SECTION A

- 1a. Highlight and discuss the effect of the various chemical pollutants in an aquatic ecosystem.
- b. State five (5) waterborne diseases and their causative agents.
2. The air pollution level is based on the level of five major atmospheric pollutants. Highlight these pollutants and discuss them in detail.
3. Discuss extensively on how the following can be sources of microorganisms in the air environment: (a) Human (b) Animals (c) Plants (d) Soil

SECTION B

4. Write concisely on two of the following sewage treatment processes
 - i. The septic tank
 - ii. The oxidation pond
 - iii. Solid treatment
- b. Briefly highlight the microbiological characteristics of sewage
- c. List three bacteria that are actively involved in anaerobic digestion of sewage
- 5a. Describe one standard microbiological test for ascertaining the portability of water.
- b. Write briefly on indicator organisms.
- 6a. Explain the metabolic diversity and interdependence that exist among aquatic microorganisms as illustrated in the Winogradsky column.
- b. Define eutrophication
- c. List three organisms that inhabits the freshwater environment.