

**FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI**  
**SCHOOL OF PHYSICAL SCIENCE**  
**DEPARTMENT OF SCIENCE LABORATORY TECHNOLOGY**  
**STM 503: PRINCIPLES OF EPIDEMIOLOGY AND PUBLIC HEALTH**  
**HARMATTAN SEMESTER EXAMINATION 2016 / 2017 ACADEMIC SESSION**

*Instructions: Instructions: Answer five questions and at least one from each section.*

**Time allowed: 3 Hrs**

**Date: 23/06/2017**

**SECTION A**

- 1a. What is epidemiology?
- b. Discuss the following epidemiological concepts;  
(i) epidemiological triad  
(ii) descriptive epidemiology
- 2a. What is immunization?
- b. What does it tend to achieve?
- c. Give two examples of immunization agents and their achievements
- 3a. Outline the importance of epidemiological studies and write extensively on planning and evaluation.

**SECTION B**

- 4a. Discuss the social factors influencing the emergence of infectious diseases.
5. Write short notes on the following;
  - a. Hantavirus
  - b. SARS
  - c. H5N1
  - d. Human activities influencing re-emerging diseases.

**SECTION C**

- 6a. Compare and contrast the following epidemiological study designs: (i) experimental and observational studies, (ii) Cohort and case-control studies.
- b. Carefully outline and discuss the series of stages involved in the epidemiological studies.
- 7a. Explain the concept of Herd immunity.
- b. Differentiate between the following (i) asymptomatic carriers and incubatory carriers (ii) convalescent carriers and chronic carriers.
- 8a. Discuss "antigenic drift".
- b. Differentiate between "antigenic drift" and "antigenic shift".
- c. Differentiate between natural history of disease and spectrum of disease.