



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**Plot 91, CADASTRAL ZONE, NNAMDI AZIKWE EXPRESSWAY, JABI, ABUJA**  
**FACULTY OF HEALTH SCIENCES**  
**DEPARTMENT OF ENVIRONMENTAL HEALTH SCIENCE**  
**2025\_2 EXAMINATIONS.**

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**COURSE CODE: EHS316**

**COURSE TITLE: IMMUNOLOGY AND IMMUNIZATION**

**COURSE UNITS: 2 CREDIT UNITS**

**TIME ALLOWED: 1 ½ HOURS**

**TOTAL SCORE: 70 MARKS**

**INSTRUCTION: ANSWER ALL QUESTIONS**

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|---|--|-----------------|
| 1 | (a) Describe the nature of antibodies  | <b>10 marks</b> |
|   | (b) How are antigen used in disease diagnosis?                                 | <b>5 marks</b>  |
|   | (c) Write briefly on the term blood group                                      | <b>5 marks</b>  |
| 2 | (a) What do you understand by the term hypersensitivity?                       | <b>5 marks</b>  |
|   | (b) Write short notes on types of hypersensitivity reactions                   | <b>15 marks</b> |
|   | (c) List at least five (5) diseases associated with hypersensitivity reactions | <b>5 marks</b>  |
| 3 | (a) Discuss vaccines   | <b>5 marks</b>  |
|   | (b) In a tabular form differentiate between active and passive immunization    | <b>16 marks</b> |
|   | (c) Define the term cold-chain management.                                     | <b>4 marks</b>  |