



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**National Open University Of Nigeria**  
**Plot 91, Cadastral Zone, NnamdiAzikiwe Expressway, Jabi - Abuja**  
**Faculty of Health Sciences**  
**2020\_1 EXAMINATIONS**

**COURSE TITLE: 316: IMMUNOLOGY AND IMMUNIZATION**

**Course Units: 2 Credit Units**

**Time Allowed: 2 Hours**

**Total Score: 70 Marks**

**ANSWER ALL QUESTIONS**

- 1a. State the major principles of immunology (5marks)
- b. State eight (8) applications of immunology (8marks)
- c. Explain the mechanisms involved in hypersensitivity reactions (2marks)
- d. Outline five(5) factors that could have adverse effect on immunity (10marks)
- 2a. State the major role of vaccines in human body (5marks)
- b. Outline five (5) vaccine components (5marks)
- c. Itemize five (5) immunizable diseases (5marks)
- d. State the antibodies and antigens compatibility in blood grouping system (5marks)
- 3a. Define the term cold-chain (2marks)
- b. Outline the techniques involved in the study of immunology. (5marks)
- c. List the four (4) immunological reactions which often correlate with clinical manifestation. (8marks)
- d. State five (5) immunological techniques (10marks)