



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja**  
**Faculty of Sciences**  
**Department of Pure and Applied Sciences**  
**JUNE, 2020 EXAMINATIONS**

**COURSE CODE: BIO406**

**COURSE TITLE: PARASITOLOGY AND IMMUNOLOGY**

**CREDIT: 2 units**

**TIME ALLOWED: 2 Hours**

**INSTRUCTION: Answer question ONE (1) and any other THREE (3) questions**

1. Write succinctly on the following:
  - (i) Infection **(5mks)**
  - (ii) Specific Humoral Immunity Resistance to infection **(8mks)**
  - (iii) Non-specific Resistance to infection **(12mks)**
  
- 2(a) What are:
  - (i) Antigens **(6mks)**
  - (ii) Immunogens **(3mks)**
  
- (b) Highlight the steps involved in procession and presentation of endogenous antigens to T-cells. **(6mks)**
  
- 3(a) What is hypersensitivity? **(2mks)**
- (b) Discuss on the following types of hypersensitivity reaction
  - i. Type I: Immediate Hypersensitivity **(7mks)**
  - ii. Type II: Cytotoxic Hypersensitivity **(6mks)**
  
- 4(a) Draw and label a typical diagram of Immunoglobulin. **(4mks)**
- (b) Discuss the factors affecting measurement of antigen-antibody reactions. **(4mks)**
- (c) What are the genetic factors affecting autoimmunity **(3mks)**
- (d) What do you understand by Humoral Immunity? **(4mks)**
  
- 5(a) Succinctly explain the concepts of Autoimmunity **(3mks)**
- (b) What are the theories that help explain immunological tolerance? **(6mks)**
- (c) List any six of the mechanisms that are operative in the pathogenesis of autoimmune diseases. **(6mks)**