



NATIONAL OPEN UNIVERSITY OF NIGERIA
UNIVERSITY VILLAGE, PLOT 91 CADASTRAL ZONE, NNAMDI AZIKIWE
EXPRESS WAY, JABI - ABUJA.
FACULTY OF SCIENCE
September 2020_1 Examination

BIO 318: Immunology and Immunochemistry III

TIME: 2½ Hours

Credit Units: 3

INSTRUCTION: Answer FIVE questions in all. Question 1 is compulsory

- 1a. Give examples of the organs of the immune systems in humans? (4 marks)
- b. Briefly explain any four methods of graft. (12 marks)
- c. Outline any three recent techniques in immunochemistry (3 marks)
- d. What are the main agents that first triggered the use of chemotherapy and when was that? (2 marks)
- e. List one secretory component of the adaptive immune (1 mark)

- 2a. Write a concise note on lymphocytes. (5 marks)
- b. What were the observations on people diagnosed with cancer during the 20th century? (2 marks)
- c. What do you understand by adaptive immunity? (2 marks)
- d. What were the milestones of immunology in its initial discovery? (2 marks)
- e. What are the cellular components of the adaptive immune? (1 mark)

3. a. What are the main functions of the immune system? (2marks)
- b. What are the principal components of the immune system? (3 marks)
- c. What are the cellular components of the innate immune system? (2 ½ marks)
- d. What are haptens? (2marks)
- e. List the secretory components of the innate immune system? (2 ½ marks)

4. a. Outline the activities of macrophages? (11 marks)
- b. Name the two types of immune response (1 mark)

5. .a. Define immunogens (1 marks)
- b. What are antigenic determinant? (2 marks)
- c. What are the three structures of antigenic determinant that must be recognized by antibody binding site? (5 marks)

- d. List any three anthelmintic chemotherapeutic agents (1 ½ marks)
 - e. List any three antiviral chemotherapeutic agents (1 ½ marks)
 - e. What is the organelle that is involved when chemotherapeutic agents inhibit protein synthesis? (1 mark)
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- 6. a. Give four examples of granulocytes? (4 marks)
 - b. What is the link between the innate and adaptive immune response? (3 marks)
 - c. Outline the feature of B lymphocytes (5 marks)