



NATIONAL OPEN UNIVERSITY OF NIGERIA
UNIVERSITY VILLAGE, PLOT 91 CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESS WAY, JABI
- ABUJA.

FACULTY OF SCIENCE
Department of Pure and Applied Sciences

2021_2 Examination

BIO 318: Immunology and Immunochemistry III

TIME: 2½ Hours

Credit Units: 3

INSTRUCTION: Answer question ONE (1) and any other FOUR (4) questions

- 1a. Relate the Historical background of immunology to modern medicine (4 marks)
 - 1b. State 2 reasons why most antifungal chemotherapeutic agents are developed to break the cell wall of fungi (2marks)
 - 1c. Highlight the different tissue Grafts and the nature of their immune response (10marks)
 - 1d. State the features of
 - i. Innate immune system (3 marks)
 - ii. Adaptive immune system (3 marks)
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- 2a. Elaborate on the linkages that exist between the innate and adaptive immune response (6 marks)
- 2b. Determine the mechanism of action of the following chemotherapeutic agents (i) Bacitracin (ii) Polymyxin B and polymixin E (iii) sulfonamides (iv) Azoles (v) Acyclovir (vi) Quinolones, (6 marks)
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3. Give an account of the contributions of the following scientists in the field of Immunology and Immunochemistry (i) Karl Landsteiner (ii) F McFarlane Burnet (iii) Elvin Kabat and colleagues contributions (iv) Linus Pauling (v) Paul Ehrlich, (vi) Ilya Ilyich Mechnikov (12 marks)
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- 4a. State the reason for short lag phase during secondary exposure to an antigen by antibodies (3marks)
- 4b. Discuss how antibody repertoire is achieved through the Somatic Recombination (random rearrangement of different genes). (9 marks)
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5. Explain how the disparity in MHC molecules between donor and recipient influence the degree of rejection of tissues or organs (12 marks)
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- 6a. In a tabular form, differentiate between Innate and Adaptive Immune Systems based on cellular and secreted components. (9 marks)
- 6b. Outline the mechanisms involved in the recognition of alloantigens in grafted organs (3 marks)