



University of Technology
Department of Applied Sciences
Final Exam. 2014-2015



Subject : Immunology and Hematology
Branch : Biotechnology
Examiner : Dr. Ghassan M. Sulaiman
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Class : 3 year
Time : 3 hours

Date :

Answer The Followings

Q1: Consist of a set of lettered headings followed by a list of numbered words or phrases. For each numbered word or phrase, select the one lettered heading that is most closely related to it. The same heading can be used once, more than once, or not at all. **(6 Marks)**

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|--|---|
| A. Cell-mediated (delayed) hypersensitivity. | 1- Contact dermatitis on hand of patient with poison ivy. |
| B. Cutaneous basophilic hypersensitivity. | 2- Serum sickness-associated glomerulonephritis. |
| C. Cytotoxic hypersensitivity. | 3- Shock following a penicillin injection. |
| D. IgE-mediated (Allergy). | |
| E. Immune complex-mediated hypersensitivity. | |

Q2: Discrimination between T - Cell subsets using the following items: (1) symbol (2) Surface antigen (3) MHC restriction (4) Target cell (5) Function. **(5 Marks)**

Q3: Answer either **A** or **B** of the followings. **(5 Marks)**

- A. When antigens enter through the skin, in what organs are they concentrated? What cell type (s) plays important roles in this process of antigen capture? Explain.
- B. MAC formation is initiated by the attachment of C5b to the membrane which promotes a complex with.....? Explain.

Q4: Types of grafts and symptoms of transplanted tissue rejection? **(5 Marks)**

Q5: Compare between the followings? **(Choose 1 only; 5 Marks)**

- 1- Radial and Ouchterlony immunodiffusion.
- 2- Class I MHC antigen and Class II MHC antigen.

Q6: On an early morning run near his home, a runner startled a group of dogs being exercised and was bitten on the leg. The runner was later unable to locate the dog and its owner to verify that the dog had an up-to-date rabies vaccination. Given that rabies is always fatal, and despite the very low incidence in domesticated dogs, prudence dictated undergoing treatment. The runner was given human immunoglobulin G-containing antibodies to rabies virus (anti-rabies immunoglobulin) injected around the site of the wound and at several other intramuscular sites. Is the antibody preparation confers instant protection from the virus was with or without requiring the body to develop an immune response? and which type of immunity that interfere during this response?. **(4 Marks)**