

The answer for Sample A

A:Q1:

A:

1. Autoimmune diseases is a group of disorders in which tissue injury is caused by humoral (by auto-antibodies) or cell mediated immune response (by auto-reactive T cells) to self antigens
2. Immunology: is the study of the immune system, including its responses to microbial pathogens and damaged tissues and its role in disease.
3. Avidity: is a measure of the overall strength of binding of an antigen with many antigenic determinants and multivalent antibodies

B: Type II (Cytotoxic) Hypersensitivity

Type II cytotoxic reaction is mediated by antibodies directed against antigens on the cell membrane that activates complement thereby causing antibody-mediated destruction of cells. The cell membrane is damaged by a membrane attack complex during activation of the complement. The reactions involve combination of IgG or IgM antibodies with the cell-fixed antigens or alternately circulating antigens absorbed onto cells.

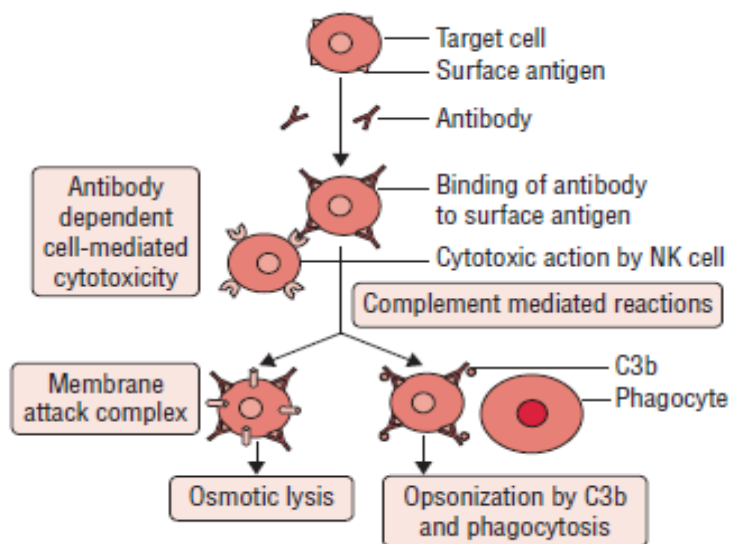
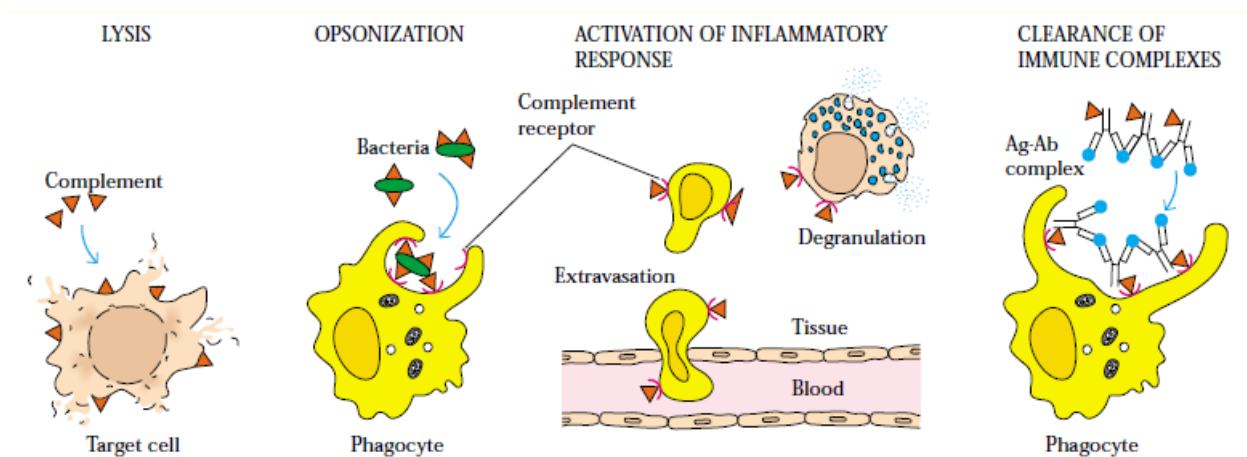


Diagram showing type II hypersensitivity

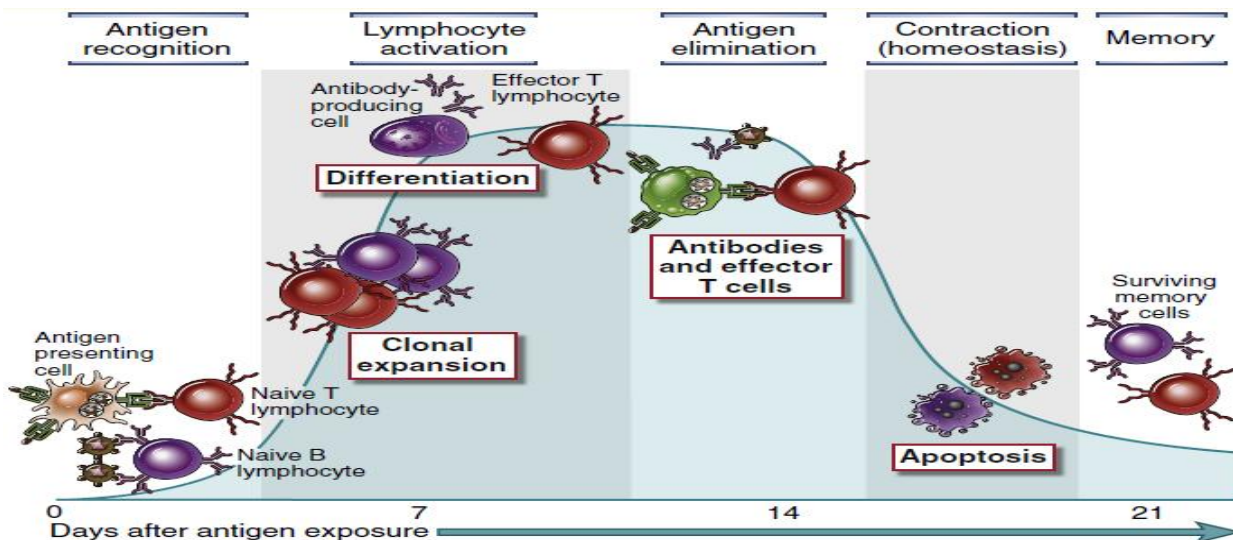
Q2:1.500 2. **blood components** 3. staphylococcal enterotoxins, toxic shock syndrome toxin, exfoliative toxins, or some viral proteins 4. 220–240 amino acids 5. 0- 200 6. Kupffer cell

A:Q3: 1. There are four main effects of complement:

- It causes lysis of cells (such as bacteria, viruses, allografts, and tumor cells).
- It generates mediators that participate in triggering specific cell functions, inflammation, and secretion of immunoregulatory molecules.
- It facilitates opsonization, the process by which bacteria are more readily and more efficiently engulfed by phagocytes.
- It causes immune clearance, in which immune complexes from the circulation are removed and are transported to spleen and liver.



2.



B:

Bone Marrow: is the site of generation of most mature circulating blood cells, including red blood cells, granulocytes, and monocytes, and the site of early events in B cell maturation.

Mast cell: contain abundant cytoplasmic granules filled with histamine and other mediators

Adjuvants: are the substances that when mixed with an antigen and injected with it boost the immunogenicity of the antigen. Adjuvants increase both the strength and the duration of immune response

Memory : Exposure of the immune system to a foreign antigen enhances its ability to respond again to that antigen. Responses to second and subsequent exposures to the same antigen, called secondary immune responses, are usually more rapid, larger, and often qualitatively different from the first, or primary, immune response to that antigen.

spleen :to remove aging and damaged blood cells and particles (such as immune complexes and opsonized microbes) from the circulation and to initiate adaptive immune responses to blood-borne antigens.

A: Q6: 1.T 2.F 3.F 4.T 5.T 6.F

Examiner:
Dr. GhasounM.ali