

## Quiz - Antibodies

### Part A: True/False Questions

1. Antibodies are produced by T-lymphocytes.
2. The antigen-receptors on the surface of beta-lymphocytes are made by proteins.
3. Secondary immune response produces much more antibodies than primary immune response but it is slower than the primary one.
4. During primary immune response, beta-lymphocytes will proliferate and divide into memory-B cells and helper-B cells.
5. Antibodies are Y-shaped molecules formed by four protein chains which have similar length.
6. Epitopes are the specific sites on the antibodies which can bind to antigen molecules.
7. Antibodies binding domain(ABD) are the specific sites on the antigens which can bind to antibodies.
8. Polyclonal antibodies can response to multiple antigens.
9. Each antigen has less than two antibodies-binding domain.
10. Membrane-bound antibodies cannot directly eliminate harmful substances in our antibodies.

### Part B: Multiple Choice Questions

1. Which of the following word equals to the word "antibody".
  - A. Immunoglobulin
  - B. Antibiotics
  - C. Immunoglobulin
  - D. Immunobody
2. Which of the element must be found in antibodies :
  - A. Sulphur
  - B. Phosphorus
  - C. Sodium
  - D. Copper
3. Compared to primary immune response, secondary immune response :
  - 1) Is quicker
  - 2) produce much more antibodies
  - 3) requires more antigen-stimulations
  - 4) Is slower
  - A. 1, 2 only
  - B. 1, 3 only
  - C. 2, 3 and 4 only
  - D. 1,2 and 4 only
4. Which of the following substances are not highly specific
  - A. Antibodies

- B. Beta-lymphocytes
  - C. Macrophages
  - D. None of above
5. Antigen-binding domain contributes to which of the following characteristics of antibodies
    - A. Superiority only
    - B. Selectivity only
    - C. Superiority and Specificity
    - D. Selectivity and Specificity
  6. Which of the following is wrong for antibodies production
    - A. Antibodies production requires the use of mammals
    - B. Antibodies production does not involve primary immune response
    - C. Antibodies production involves secondary immune response
    - D. Antibodies production involves the collection of blood from the animal
  7. The correct sequence for the primary immune response is:
    - 1) Membrane-bound antibodies recognize its targeted antigens
    - 2) Secreted antibodies recognize its targeted antigens
    - 3) Plasma cells secrete antibodies
    - 4) Beta-lymphocytes proliferate and differentiate
    - A. 2,4,3,1
    - B. 4,3,1,2
    - C. 4,1,3,2
    - D. 1,4,3,2
  8. Each antibody molecule consists of:
    - A. One light and three heavy chains
    - B. One heavy and two light chains
    - C. Two heavy and two light chains
    - D. Five identical chain
  9. Antibodies produced by injecting into rabbits can be used for
    - A. Hepatitis B vaccine for human
    - B. Hepatitis B vaccine for rabbits
    - C. An research that aims for checking the population for a particular epitope
    - D. Protein detection
  10. The antigen receptors on B-cells (which are response to hepatitis B virus) are:
    - A. Hepatitis B virus
    - B. Eptiopes
    - C. Hepatits B vaccine
    - D. Antibodies