

BIOL 3702 Take-Home Examination IV

Spring 2007 Semester

General Instructions and Information: Obtain an answer sheet from the instructor and legibly write your name in the appropriate space. You must enter your Patron ID number (beginning with two zeros, e.g., 00123456) in the appropriate space and darken the corresponding bubbled numbers. Should you not enter your Patron ID number or incorrectly darken the bubbles, five (5.0) points will be deducted from your final score for this exam. In addition, be sure to place the instructor's last name on the lines provided.

This examination consists of twenty-five (25) multiple-choice questions. Each correct answer is worth two (2.0) points. Hence, a total of 50 points are available on this exam.

When you have completed the examination, return both the examination and the answer sheet to the instructor.

Instructions For Answering Multiple Choice Questions: Read each question very carefully. Determine the BEST answer for a particular question from among the four different choices listed below it. Darken the appropriate bubble on the answer sheet corresponding to the question you are answering. In doing so, be sure to follow the instructions on the back of the answer sheet. Mismarked answer sheets (i.e., answers placed out of order) will not be rescored. Hence, you are strongly encouraged to review your answer sheet before returning it.

1. Which of the following is not true concerning T-independent B cell activation?
 - A. affinity maturation does not occur
 - B. no B memory cells are formed
 - C. B cell receptors are not involved in activation
 - D. all of the choices are true

2. Which of the following releases histamine?
 - A. mast cells
 - B. basophils
 - C. plasma cells
 - D. mast cells and basophils
 - E. none of the choices

3. The humoral immune response differs from the cell-mediated immune response in that only in the humoral immune response is there
 - A. secretion of antibody.
 - B. a precommitted lymphocyte.
 - C. a clonal selection mechanism.
 - D. the development of memory cells.

4. Antibodies
 - A. can bind to an immunogen.
 - B. can target the immunogen for destruction.
 - C. are part of the nonspecific immune response.
 - D. both can bind to an immunogen and can target the immunogen for destruction.
 - E. both can bind to an immunogen and are part of the nonspecific immune response.
5. Acquired immunity refers to the type of specific immunity that
 - A. develops after exposure to a specific pathogen.
 - B. involves the participation of lymphocytes.
 - C. involves a memory aspect.
 - D. all of the choices
6. Acquired immunity refers to the type of specific immunity that
 - A. develops after exposure to antigen.
 - B. can result from transfer of antibodies from one individual to another.
 - C. can be induced by natural or artificial means.
 - D. all of the choices
7. Which of the following types of immunoglobulins is most abundant in serum?
 - A. IgA
 - B. IgG
 - C. IgE
 - D. IgM
8. When an individual's immune system comes into contact with an appropriate antigenic stimulus during the course of daily activities, this is called
 - A. naturally acquired passive immunity.
 - B. naturally acquired active immunity.
 - C. artificially acquired active immunity.
 - D. artificially acquired passive immunity.
9. Cytokines
 - A. cause lysis of invading microorganisms.
 - B. play key roles in both specific and non-specific immunity.
 - C. are required for regulation of the immune response.
 - D. play key roles in both specific and non-specific immunity and are required for regulation of the immune response.

10. A vaccination is a good example of
- A. naturally acquired passive immunity.
 - B. naturally acquired active immunity.
 - C. artificially acquired active immunity.
 - D. artificially acquired passive immunity.
11. Which of the following is a characteristic associated with secondary antibody responses?
- A. shorter lag phase
 - B. higher antibody titer
 - C. higher antibody affinity
 - D. all of the choices
12. Tears protect the eyes by
- A. flushing and lysozyme.
 - B. inflammation.
 - C. vasodilation.
 - D. stimulating opsonization.
 - E. flushing and lysozyme and vasodilation
13. The lungs are protected from microorganisms by
- A. the mucociliary blanket.
 - B. lysozyme in mucus.
 - C. phagocytic action of alveolar macrophages.
 - D. all of the choices
14. T cells produce and secrete factors which do not directly interact with invading microorganisms but which augment the body's defense mechanisms. These molecules are called
- A. antibodies.
 - B. cytokines.
 - C. immunogens.
 - D. augmetins.
15. Type III hypersensitivity conditions such as arthritis involve
- A. the activation of mast cells.
 - B. a cytotoxic reaction.
 - C. delayed, cell-mediated immune reactions.
 - D. the formation of immune complexes.
 - E. all of the choices

16. Which of the following is a physical barrier in the nonspecific defense of a mammalian host?
- A. inflammation
 - B. phagocytosis
 - C. fever
 - D. mucous membranes
17. Macrophage
- A. are derived from monocytes.
 - B. have receptors for compounds released by the immune system that coat microorganisms and enhance phagocytosis.
 - C. spread throughout the body of animals and take up residence in specific tissues.
 - D. all of the choices
18. A mature activated B cell is called a(n)
- A. plasma cell.
 - B. dendritic cell.
 - C. natural killer cell.
 - D. spleen cell.
19. The response of the immune system the second time an invader is encountered is called
- A. the anamnestic response.
 - B. the effector response.
 - C. the enhanced response.
 - D. none of the choices
20. Lysozyme is an enzyme that lyses
- A. viruses.
 - B. fungi.
 - C. bacteria.
 - D. parasites.
21. Under normal circumstances, which of the following is (are) normally sterile environments in mammals?
- A. kidneys
 - B. ureters
 - C. urinary bladder
 - D. all of these

22. Lymphocytes are comprised of which of the following cell types?
- A. T cells
 - B. B cells
 - C. natural killer cells
 - D. all of the choices
 - E. T cells and B cells
23. Natural killer cells specifically kill which of the following?
- A. tumor cells and cells infected by microorganisms
 - B. gram positive bacteria
 - C. fungi and protozoa
 - D. foreign transplanted tissue
24. The immune system normally discriminates between _____ antigens.
- A. self and nonself
 - B. B and T cells
 - C. humoral and cell-mediated
 - D. primary and secondary response
25. Substances that are recognized as foreign and provoke immune responses are called
- A. antibodies
 - B. antigens
 - C. infective agents
 - D. inducers