Immune System

General Human Biology

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Score \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/56

**MULTIPLE CHOICE SECTION**

1. A key component of cell- mediated immunity is the body’s production of

(a) antigens

(b) killer T cells

(c) antibodies

(d) memory B cells

2. A child receiving antibodies from its mother’s breast milk develops

(a) naturally acquired passive immunity

(b) artificially acquired active immunity

(c) artificially acquired passive immunity

(d) naturally acquired active immunity

3. T cells and B cells are both

(a) phagocytes

(b) erythrocytes

(c) thymocytes

(d) lymphocytes

4. The antibiotic Vancomycin would be least effective at combating

(a) a foot infection caused by a large splinter

(b) a sore throat caused by the Staphylococcus bacterium

(c) the measles virus

(d) severe food poisoning

5. Pus is formed when special cells of the immune system enter the site of infection and ingest or engulf foreign matter. These cells are called

(a) T cells

(b) phagocytes

(c) lymphocytes

(d) antigens

6. Which statement about lymph nodes is correct?

(a) they have a role in the pumping of lymphatic fluid

(b) they contain cells that phagocytose bacteria

(c) they produce antigens, vital chemicals that combat infection.

(d) they contain B- lymphocytes that engulf foreign particles

7 Memory cells in the immune system

(a) are found in the frontal love of the brain

(b) circulate in the blood

(c) are found in the spinal cord

(d) stay in lymphoid tissue

8. Antigens are:

(a) the bodies main immune response

(b) proteins usually found in blood plasma and tissue fluid

(c) formed in response to stimulation by foreign substances

(d) foreign substances not usually found in the body

9. Pathogens can be:

(a) pollen grains, viruses and bacteria

(b) bacteria, viruses and spores

(c) bacteria, viruses and fungi

(d) viruses, fungi and pollen grains

10. Vaccinations:

(a) stimulate the immune system to produce antibodies before you are exposed to the pathogen

(b) cause you to have the infection

(c) increase production of antigens in the body

(d) reduce the level of antibodies in the body

Refer to the following diagram when answering questions 11 and 12



11. What process is occurring in the diagram above?

1. (a) Production of antibodies
2. (b) Phagocytosis
3. (c) Exocytosis
4. (d) Antibiotics

12. The cell responsible for this process is

1. (a) Lymphocyte
2. (b) Macrophage
3. (c) Leukocyte
4. (d) Killer T cells

13. Influenza vaccinations have to be repeated frequently because

1. (a) The influenza viruses have a longer life span than other viruses
   * 1. (b) The antibodies produced in response to the vaccinations are not strong enough.
2. (c) Genetic changes in the viruses continually produce new strains
3. (d) The influenza viruses multiply at a very rapid rate.

14. Which pair of statements in the table below best describes aspects of cell-mediated AND humoral immunity?

|  |  |  |
| --- | --- | --- |
|  | Humoral Immunity | Cell-mediated Immunity |
| (a) | Lymphocytes produced in bone marrow | Lymphocytes produced in the thyroid |
| (b) | Lymphocytes secrete antibodies | Plasma cells produce antibodies |
| (c) | Antigen is attacked by antibody | Antigen is attacked by killer cells |
| (d) | Attracts pathogens in lymphatic fluid | Destroys pathogens in bloodstream |

15. A component of the immune system’s first line of defense is

1. the spine.
2. the skin.
3. antibodies.
4. cytokines.

**SHORT ANSWER SECTION**

**Question 16 (5 marks)**

Write down the word or phrase that best describes each of the following.

1. Disease causing organisms

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Cells that provide cell mediated immunity

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. cells that secrete antibodies

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. the process macrophages use to ingest particles

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. the ability to resist infection

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Question 17

Microorganisms are all around us, in the air we breathe, in the water and food we eat. Name and explain two features of the human body that are considered to be part of the bodies first line of defence in protecting us from infection. (4 marks)

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Question 18

List three ways in which transmissible diseases can be caught by people. (3 marks)

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Question 19

Viruses are not considered to be living organisms. Explain why. (2 marks)

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Question 20

Name the three main types of bacteria. (3 marks)

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_