TRIAL TEST 5:
RESPONSE TO INFECTION

Time allowed:	**60 minutes**	**Section One –** Multiple Choice	30 marks
Total marks:	**100**	**Section Two –** Short Answer	50 marks
		Section Three – Extended Answer	20 marks

SECTION 1 – MULTIPLE CHOICE (30 MARKS)

1. Every year, members of the public and elderly people in particular, are encouraged to have an influenza injection. This is because the:
   (a) influenza vaccine does not stimulate the production of antibodies.
   (b) influenza vaccine is broken down by enzymes in the body.
   (c) influenza virus exists for a long time.
   (d) influenza virus changes its form regularly.

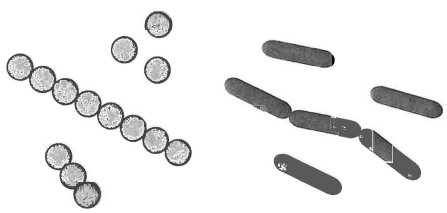
2. Memory cells in the immune system:
   (a) are found in the frontal lobe of the brain.
   (b) circulate in the blood.
   (c) are found in the spinal cord.
   (d) stay in lymphoid tissue.

3. Natural active immunity refers to antibodies:
   (a) being manufactured from an infection due to a pathogen.
   (b) being injected into the body via a vaccine.
   (c) being manufactured from an injection of a toxin.
   (d) that pass from a mother to her unborn child through the placenta.

4. 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.

5. Antigens are:
   (a) the body's 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.

6. T lymphocytes:
   (a) form and mature in the bone marrow.
   (b) are responsible for humoral (antibody)-mediated immunity.
   (c) develop into plasma cells.
   (d) promote phagocytosis or destroy the antigen.



7. Antibiotics:

(i) are made by B cells.
(ii) destroy bacteria.
(iii) destroy all pathogens.
(iv) are made by bacteria.

Which of the following is/are correct?

(a) (i) only.
(b) (ii) only.
(c) (i) and (iii) only.
(d) (iii) and (iv).

8. Antibodies DO NOT react with specific antigens by:

(a) neutralising the toxins produced by bacteria.
(b) causing them to clump together so phagocytes can destroy them.
(c) making them more resistant to phagocytosis.
(d) combining with the antigen.

9. 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.

10. Most bacteria are NOT:

(i) decomposers.
(ii) saprophytes.
(iii) parasites.
(iv) pathogens.

(a) (i)
(b) (ii) and (iii)
(c) (iii)
(d) (iv)

SECTION 2 – SHORT ANSWER (50 MARKS)

1. What parts of your body make up the immune system?

_____

_____

[2 marks]

2. What is an antigen? Name two examples.

_____

_____

_____

[2 marks]

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

(i) A specialised protein that is produced in response to an antigen.

_____

(ii) Where lymphocytes are produced.

_____

(iii) Cells that provide cell-mediated immunity.

_____

(iv) Cells that secrete antibodies.

_____

(v) The process macrophages use to ingest particles.

_____

(vi) The ability to resist infection.

_____

(vii) Material made from some microorganisms which is injected to stimulate immunity in the recipient.

_____

(viii) The proper name for a 'swollen gland'.

_____

(ix) Where T cells mature.

_____

(x) Where B cells mature.

(xi) Drugs used against viruses.

(xii) The cells from which all types of blood cells originate.

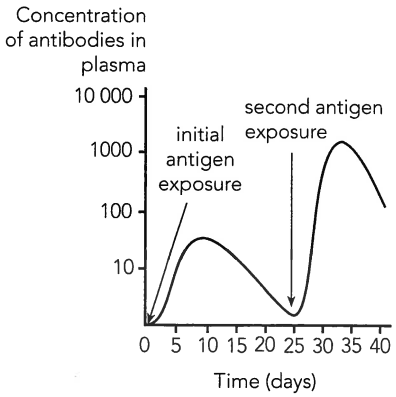
(xiii) Disease causing organisms.

(xiv) Global spread of a disease.

(xv) Proteins released by cells when they are infected by viruses.

[15 marks]

4. What does the graph below show?



[4 marks]

5. Distinguish between natural and acquired immunity. Give examples of each.

[8 marks]

6. Increasing numbers of people around the world are being diagnosed with AIDS. AIDS is a disease that attacks the immune system.

(a) What causes AIDS?

[1 mark]

(b) Why does it cause illness?

[1 mark]

(c) What is the usual cause of death in an AIDS sufferer?

[1 mark]

7. (a) Viruses are not considered to be living organisms. Explain why.

[2 marks]

(b) So how do they infect more cells? Explain.

[4 marks]

8. (a) What are antibiotics?

[1 mark]

(b) Explain why is it important that you should take all the antibiotic tablets, as prescribed by the doctor.

[3 marks]

9. (a) Distinguish between 'self' and 'non-self '.

[2 marks]

(b) Explain how this can cause complications for transplant recipients.

[2 marks]

(c) What are some strategies that may be possible in the future to overcome this situation?

[2 marks]

SECTION 3 – EXTENDED ANSWER (20 MARKS)

1. (a) What is meant by specific in the phrase 'specific immune response'? Describe the specific immune response to an invading pathogen.

[10 marks]

(b) Vaccines which stimulate the body's natural defence systems have been developed for many diseases. Explain how these work and prevent us from succumbing to disease.

[7 marks]

(c) List and describe the ways in which the spread of disease can be minimised.

[3 marks]

END OF TEST (100 MARKS)