

SSLC MODEL EXAMINATION MARCH 2024

BIOLOGY

Time 1½

Total Score: 40

General Instructions to Candidates:

- The first 5 minutes is cool-off time.
- You may use the time to read the questions and plan your answers.
- Answer only on the basis of instructions and questions given.
- Consider score and time while answering.

Answer all Questions from 1 to 5. Each question carries 1 score. (5 × 1 = 5)

1. If there is any mistake in the underlined part of the given statements, correct it. [1]
 - a. Chemical evolution theory was proposed by Oparin and Haldane.
 - b. Organic molecules such as Nucleic acids are formed in Urey-Miller experiment.
2. Identify the word pair relation and fill in the blank. [1]
Planaria : Eye spot
House fly :
3. The technology helps to identify the location of a gene in the DNA responsible for a particular trait is : [1]
(a) Gene therapy (b) Gene mapping (c) Genome (d) Human Genome Project
4. Choose the correct pair from the following options. [1]
ENT : Treatment of Eye
Cardiology : Treatment of Heart
Ophthalmology : Treatment of Cancer
5. The genetic make up of human female is 44+XX and that of male is 44+XY. What do the XX and XY indicate? [1]

Answer all Questions from 6 to 11. Each question carries 2 score. (6 × 2 = 12)

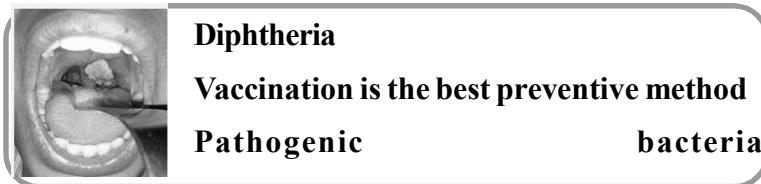
6. Analyse given statement and answer the following questions. [2]
“Genetic engineering has made a great leap in the treatment of genetic diseases”.
 - a. Name the treatment method indicated.
 - b. What is the specific peculiarity of this treatment method?
7. Symptoms of a viral disease are given. Analyse them and answer the questions. [2]
 - Inflammation of the liver.
 - White portions of the eyes and nails become yellow coloured.
 - (a) Identify the disease.
 - (b) Why the white portions of the eyes and nails become yellow coloured?
8. Analyse the given illustration and answer the questions. [2]


(a) Which process does this illustration indicate?
 (b) How does this process cause variation?

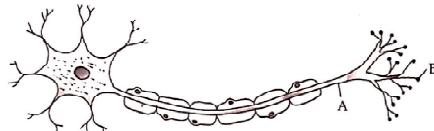
9 Analyse the given statements and answer the questions. [2]

(i) Sudden withdrawal of the hand while touching on a hot object unknowingly.
 (ii) Blinking of eyes when light suddenly falls on them.
 (a) Name the reflex actions that take place in (i) and (ii).
 (b) What is reflex action?

10. Complete the missing portions in the poster given below. [2]



11. Write the name and functions of A and B in the given figure. [2]



Answer all Questions from 12 to 16. Each question carries 3 score.

(5 × 3 = 15)

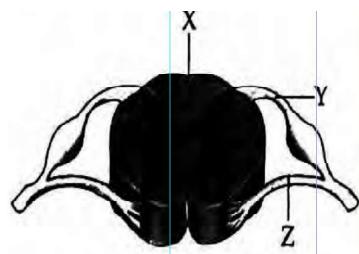
12. Observe the illustration and answer the following questions. [3]



(a) Identify the defense mechanism mentioned above.
 (b) Which are the white blood cells participates in this process?
 (c) How pathogens are destroyed by this process?

13. Evaluate the statement and answer the questions. [3]
“Ants moving in a line along a particular trail by the production of certain chemical substances”.
 a. Such chemicals are known as _____.
 b. Write two examples for these chemical substances.
 c. Write other two uses of these chemicals substances.

14. Observe the illustration and answer the questions. [3]



(a) Identify the part indicated as X? Which is the fluid present in this part?
 (b) Write the name of the parts Y and Z.

(c) Is the same type of impulses pass through Y and Z why?

15. Hints related to a disease are given. Analyse them and answer the questions. [3]

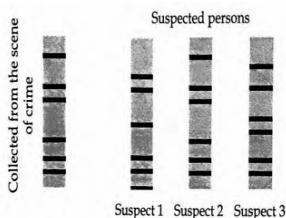
- It is a genetic disease.
- Excess blood is lost even through minor wounds.

(a) Identify the disease.

(b) Why excess blood is lost even through minor wounds in such patients?

(c) How temporary relief is brought in, for such patients?

16. Analyse the illustration regarding the test samples in DNA finger printing and answer the questions [3]



(a) What conclusion can be drawn from the sample examination?

(b) What is the basis of the technology DNA finger printing?

(c) Write two other uses of this technology.

Answer all Questions from 17 to 18. Each question carries 4 score. ($2 \times 4 = 8$)

17. The feature of a fluid in the eye is given below. Analyse it and answer the following questions. [4]

It is formed blood, and is reabsorbed into blood

a. Name the fluid.

b. What is its function?

c. Name the eye disease associated with this fluid.

d. How does this disease can be rectified?

18. Redraw the diagram, and answer the following questions. [4]

i. Maintains equilibrium of the body

ii. Controls voluntary movements

iii. Acts as relay station of impulses

b. Name the part labelled "X" and write its function.

