

**SSLC MARCH 2022 - SAMPLE QUESTION PAPER
BIOLOGY**

Time : 1 ½ Hours

Maximum Score: 40

PART : I

A. Answer any four questions from 1 to 6. Each carries 1 score

(4X1 = 4)

1. Cerebrum: evokes sensations , Hypothalamus :
2. Genetic scissors: Restriction endonuclease ; Genetic glue :
3. Which one of the following is not a bacterial disease
A) Rat fever, B) Diphtheria, C) Nipah, D) Tuberculosis
4. "Nobody can receive blood from everybody"
To substantiate this statement, choose suitable facts from those given below.
a) Antibody of the donor's blood and the antigen of the recipient's blood react with each other to form blood clot
b) Blood clot is formed due to reaction of the antigen and antibody of the donor's blood with the blood of the recipient.
c) Antigen of the donor's blood and the antibody of the recipient's blood react with each other to form a blood clot.
5. Correct the statement by replacing the underlined word:
The aperture seen at the centre of the iris is cornea.
6. 1. Which of the following is not a part of RNA?
(a)Thymine (b) Guanine (c) Uracil (d) Adenine

B. Answer all questions from 7 to 9. Each carries 1 score

(3 X 1 = 3)

7. Examine the given statements and make correction if any required in the underlined part
a) Spinal cord coordinates the repeated movements during walking, running
b) The part of the spinal cord where myelinated nerve cells are present in abundance is called grey matter.
c) Spinal cord is the continuation of the medulla oblongata
8. The symptoms of a disease are given below. Identify the disease.
Pressure inside the eye increases, Damage occurs to the retina and photoreceptor cells.
9. 'To live in harmony with nature' is related to which treatment system?

PART : II

A. Answer the following question. Carries 2 scores

(1X2 = 2)

10. Arrange the following terms in the order shown as in the model
a) Foot and mouth disease b) Blight c) Malaria d) Bacteria e) Virus f) Protozoa g) Humans
h) Cattle i) Plant
Model: Virus - Foot and mouth disease – Cattle

B. Answer any one question from 11 to 12

(1X2=2)

11. 'Genetic engineering along with its all advantages also raises some threats to mankind'. Write down one argument each to justify this statement
12. When a tall and round seeded (TTRR) plant is crossed with a dwarf and wrinkled seeded one (ttrr), in the F1 all were tall and round seeded. The genetic makeup of some offspring in the F2 are given below. Write down their characters
a. Tt rr
b. tt RR

PART III

A. Answer any three questions from 13 to 16. Each carries 3 scores

(3X3=9)

13. Arrange B,C column with A column

Pancreas	Growth hormone	Convert glucose into glycogen
Thyroid	Calcitonin	Promotes growth of the body
Pituitary	Insulin	Maintains calcium level in blood

14. Complete the following table by choosing suitable points given below

- Low production of somatotropin in growth phase
- Excess production of somatotropin in adults
- Stunted growth of body
- Growth of the bones on the face, jaws and fingers.
- Acromegaly
- Gigantism

Disorder	Cause	Symptom
• Dwarfism	.....a.....	.....b.....
•c.....	.....d.....	• excessive growth of the body
•e.....	• Excess production of somatotropin after growth phase	•f.....

15. The pathogen enters the body and multiplies by utilising the genetic mechanism of the lymphocytes.

- a) Which microbe is mentioned here?
- b) Name the disease caused by this pathogen?
- c) Write any two modes of transmission of this disease.

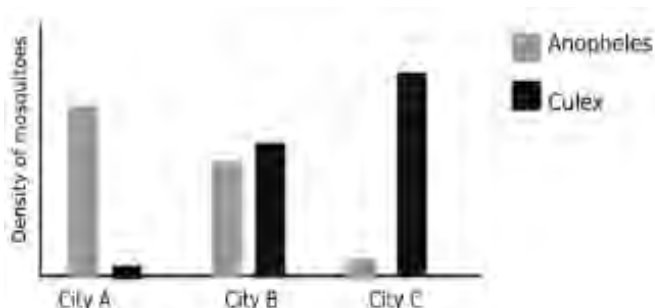
16. The main steps involved in the production of human insulin from bacteria are given below.

- A) Cutting of insulin gene from human DNA
 - B) Joining insulin gene with plasmid vector
 - C) Plasmid ligated with insulin gene is Inserted into bacterial cell
 - D) Active insulin is produced.
 - E) Isolation of Plasmid from bacterial cell
 - F) Production of inactive insulin by bacteria
- i) What is this technology called?
 - ii) Arrange the above steps in their correct order

B . Answer the following question. Carries 3 scores

(1X3=3)

17. Analyse the graph and answer the questions.



- a) Which disease will affect more in city A?
- b) Which disease has the highest possibility of occurrence in city C?
- c) What measures should be taken by the people of cities A, B and C in order to prevent various diseases.

PART IV

Answer any two questions from 18 to 20. Each carries 4 scores

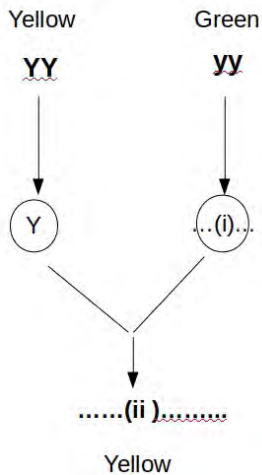
(2X4=8)

18. Analyse the table given below and answer the questions

Blood Groups	Antigens	Antibodies
A	..... (i).....	b
B	B	..... (ii).....
AB	..... (iii).....	Nil
O	Nil	..... (iv).....

- Write down i, ii, iii and iv
- What is the basis of blood grouping?
- Write any two things that should be taken care of while transfusing blood?

19. A cross between yellow seeded pea plant with a green seeded plant is shown below



- Write down (i) and (ii)
- Which is the dominant and recessive trait?
- How is F₂ produced?
- What types of plants would appear in F₂ and in which ratio?

20. Some important points related to an evolutionary theory is given below

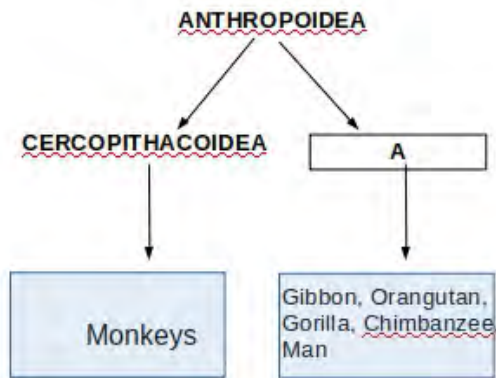
- Overproduction
- Struggle for existence
- Organisms with favorable variations survive and others are eliminated
- Origin of new species

- Name the evolutionary theory related to this.
- Who proposed this theory?
- What are the situations which lead to the struggle for existence?
- What is the modified version of this theory known as?

B. Answer any one question from 21 to 22. Each carries 4 Scores

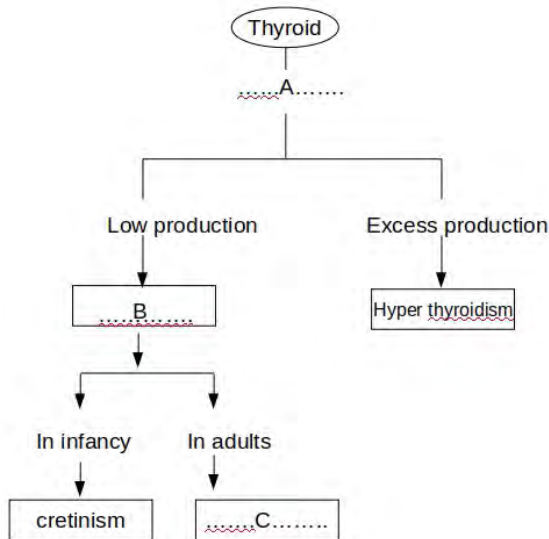
(1X4 =4)

21. .Observe the illustration given below



- Name the group A
- What are the common features of the members of 'A'?
- "Man evolved from monkeys". Do you agree with this statement? Why?

22. Analyse the illustration given below



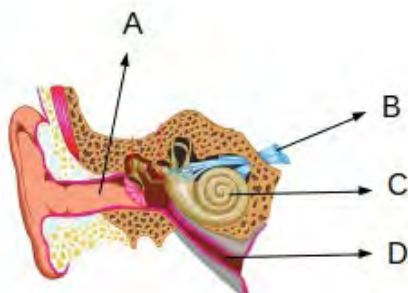
- Name the hormone A
- Write down any two functions of A
- What are the conditions B and C?
- Mention any two symptoms of condition C.

PART V

A. Answer any one question from 23 to 24. Each carries 5 scores

(1X5=5)

23.. Observe the figure and answer the questions given below



- a. Identify the parts A, B, C and D
- b. What is the role of D ?
- c. Explain the changes that take place when vibrations reach in the part C.

24. Observe the diagram answer the following questions



- a. Copy the diagram.
- b. Identify and label the parts mentioned below
 - i) Control voluntary movements
 - ii) Relay station of impulses
 - iii) Maintain body equilibrium
- c. Name the fluid present inside the brain. Mention its function