

Sl. No.

S.S.L.C. EXAMINATION, MARCH - 2018**BIOLOGY**

(English)

Time : 1½ Hours

Total Score : 40

Instructions :

- First 15 minutes is given as Cool-off time.
- Answer only on the basis of instructions and questions given.
- Consider Score and time while answering.

Answer any five questions from Qn. No. 1 to 6. Each carries 1 score.

Score
5x1=5

1.

Woman (44 + XX)

Man (44 + XY)

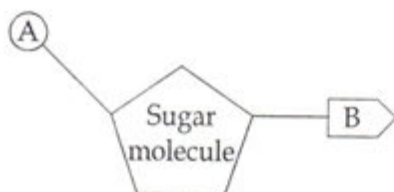
What does the number '44' indicate in this illustration ?

2. Find out the correct pair from the following :
- | | | |
|-----------------------|---|--------------------------------------|
| (a) Thalamus | - | Maintenance of homeostasis |
| (b) Medulla oblongata | - | Centre of thought, intelligence etc. |
| (c) Cerebellum | - | Co ordinates muscular activities |
| (d) Cerebrum | - | Relaying of impulses |
3. Identify the word pair relation and fill the blanks.
- (a) Arrangement of nucleotides : DNA profiling
- (b) Identifying the location of a gene in DNA : _____.
4. Which one of the following gases was not present in the atmosphere of primitive earth ?
- (a) Methane
- (b) Ammonia
- (c) Oxygen
- (d) Nitrogen
5. Choose the names of pheromones from the terms given in the box.
- | |
|---|
| Cortisol, Bombycol, Gibberellin, Civetone |
|---|
6. Fill the blanks in the statement.
- "Three types of cone cells are present in human eye. This is due to the change in _____ in the Opsin molecule".

P.T.O.

Answer any six from Qn. No. 7 to 13. Each carries two score.

7. (a) Identify the picture given.



- (b) What do A and B indicate ?

8. "Mucus and Cilia in the respiratory tract provide first level defense."

(a) What is the role of mucus and cilia in defense ?

(b) Write an example for second level defense ?

9. List out four concepts that can be included in the pamphlet to be distributed in an awareness programme against dengue fever.

10. (a) Identify the disease from the following symptoms.

- Continuous muscular contraction
- Frothy discharge from the mouth
- Clenching of the teeth
- Patient falls unconscious.

(b) Write the cause of this disease.

11. "Though antibiotics are effective medicines, their regular use develops immunity in pathogens against antibiotics."

Write any two other side effects of the regular use of antibiotics.

12. "The basis of genetic engineering is the discovery of the fact that genes can be cut and joined with the help of enzymes."

(a) Name the enzyme used for cutting genes.

(b) Name the enzyme used for joining the genes.

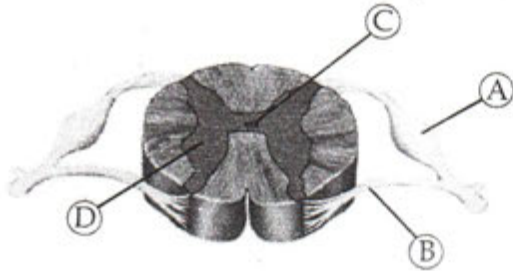
13. (a) Select the statements related to the disease Haemophilia from the following :

- Structure of haemoglobin changes.
- The synthesis of proteins that help in the clotting of blood fails.
- Oxygen Carrying Capacity of haemoglobin decreases.
- Excess bleeding even through minor wounds.

(b) Name the disease to which other statements are related.

Answer any five from Qn. No. 14 to 20. Each carries 3 score.

14. (a) Identify the given diagram.
(b) Name the parts labelled as A, B, C and D.



15. Match the plant hormones and their functions suitably.

- Auxin
- Gibberellin
- Ethylene
- Abscisic acid

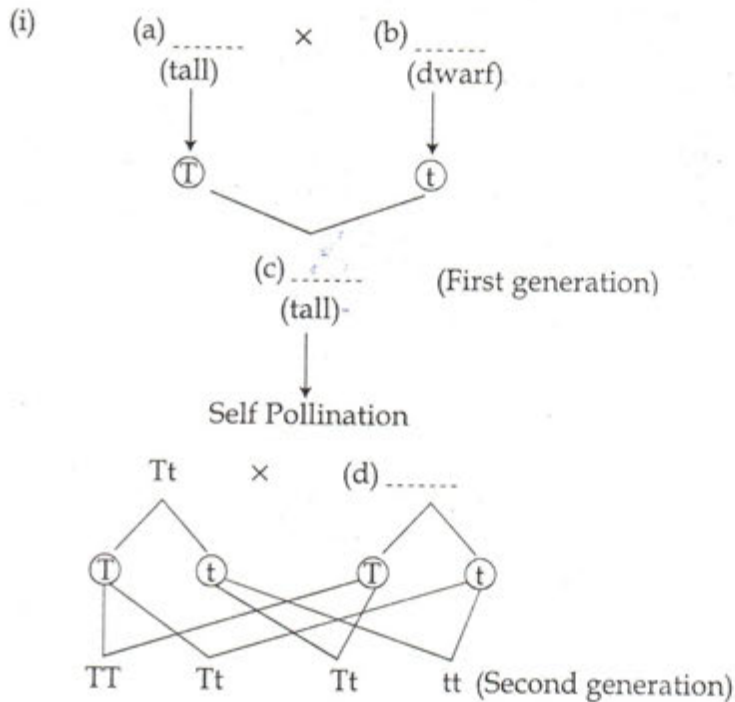
- Helps in ripening of fruit
- Promoting the growth of terminal buds
- Controls wilting of leaves, flowering etc
- Stimulate the breakup of stored food

16. The main concepts of two theories regarding the origin of life on earth are given. Arrange them in the following table. Write the name of theories as title.

- (i) Life has originated in some other planet in the universe.
- (ii) Changes occurred in the chemical substances in water, under specific conditions of the earth.
- (iii) Organic substances identified in meteors supports this theory.
- (iv) Life originated in the Ocean.

(a)	(b)
.....
.....

17. Complete the illustration of the hybridisation experiment conducted by Mendel in Pea plants.



- (ii) Which are the characters expressed in second generation ?

18. How do the following substances protect the plants from diseases ?

- Lignin
- Callose
- Cuticle

19. (a) Name the factors that lead to transformation of normal cells into Cancer cells.
(b) Name two methods used in the treatment of Cancer.

20. (i) (A) → fluid fills in the chamber between the lens and cornea → Nourishes the tissues of the eye.

- (ii) (B) → (C) → Maintains the shape of the eye.

- What do A, B and C indicate in the above illustration ?
- How do conjunctiva and tears protect the eye ?

Answer any two from Qn. No. 21 to 23. Each carries 4 scores.

21. Arrange columns B and C according to the items in column A.

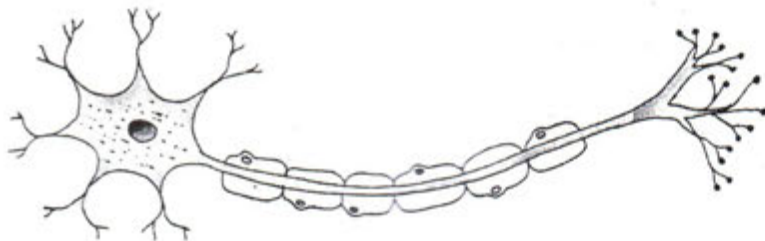
	A	B	C
(i)	Cataract	Infection	Diet Containing Vitamin A
(ii)	Glaucoma	Lens become opaque	Hygiene
(iii)	Conjunctivitis	Cornea become dry and opaque	Laser Surgery
(iv)	Xerophthalmia	increased pressure in the eyes	Lens replacement Surgery

22. Certain hormones released from the anterior lobe of pituitary gland are given.

- Thyroid Stimulating Hormone (TSH)
- Adreno Cortico Tropic Hormone (ACTH)
- Gonado Tropic Hormone (GTH)

- (a) Write the common feature of these hormones.
- (b) Write one function of ACTH and TSH.
- (c) Name two hormones secreted by the action of GTH.

23. Redraw the diagram. Name and label the parts indicated below.



- (a) Carries impulses away from the cell body
- (b) Secretes neurotransmitter
- (c) Branches of dendrons