

SSLC MODEL EXAMINATION, FEBRUARY - 2017.

BIOLOGY
(English)

Time : 1½ Hours

Total Score : 40

Instructions :

- (1) First 15 minutes is given as cool off time. This time is to be used for reading and understanding the questions.
- (2) The score and time for each question should be considered while answering.
- (3) For questions 5 and 14 answer either A or B.

Score

1. The pairs given below represent the name of an organism and the name of a receptor. 1
Identify the correctly matched pairs.
 - (i) shark - lateral line
 - (ii) snake - ommatidia
 - (iii) planaria - eye spot
 - (iv) housefly - Jacobson's organ
 - (a) (ii) alone
 - (b) (ii) and (iii)
 - (c) (i) and (iii)
 - (d) (ii), (iii) and (iv)

2. Given below are certain communicable diseases. 3
Dengue fever, Tuberculosis, Athletes' foot, Filariasis, Ringworm disease.
 - (a) Identify the diseases that are caused by fungi.
 - (b) Why does the lymph ducts in the legs get swollen in persons infected with Filariasis ?
 - (c) Being a responsible citizen, suggest two measures to prevent the spread of communicable diseases.

3. Write the role or use of those given below : 2
 - (a) Dopamine
 - (b) C.T. Scanner

4. Analyse the newspaper report and answer the questions. 3

Missing child found among gypsies - real parents identified through DNA Fingerprinting

 - (a) How can the real parents be identified through DNA Fingerprinting ?
 - (b) Who paved the way for DNA Testing ?

Score
2

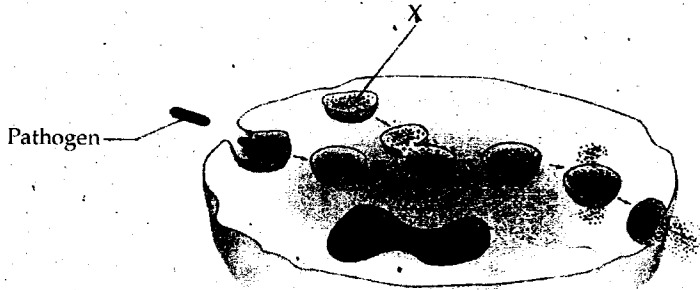
5. (A) We have two eyes, but we see only one image of the object. Justify the statement.

OR

- (B) In the medical test for the recruitment of pilots, Gopi was diagnosed with colourblindness and he was certified "unfit for pilot recruitment". Colourblindness leads to Gopi's unfitness. Justify.

6. Analyse the illustration and answer the questions given below :

3



- (a) Identify the process and define it.
(b) Identify X and explain its role in the process.

7. Internal ears help us in hearing as well as in maintaining the balance of the body. The chart given below compares how hearing and body balancing is effected by the internal ears. Examine the chart and complete it appropriately.

3

HEARING	BODY BALANCING
(i) part of internal ear	Vestibular apparatus of internal ear
Sensory hair cells present in (ii) act as receptors	Sensory hair cells present in the vestibule and semicircular canal act as receptors
Vibrations created by sound waves generate impulses	Body movements generate impulses
Impulses reach (iii) of brain through (iv) and hearing is effected	Impulses reach (v) of brain through (vi) and body equilibrium is maintained

8. Appu is a farmer. He uses Ethyphon in his rubber plantation and Abscisic acid in his orchard.

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- (a) What is Ethyphon? What is its use in rubber plantation?
(b) What is the use of Abscisic acid?

9. Ramu says, "Man evolved from monkeys".

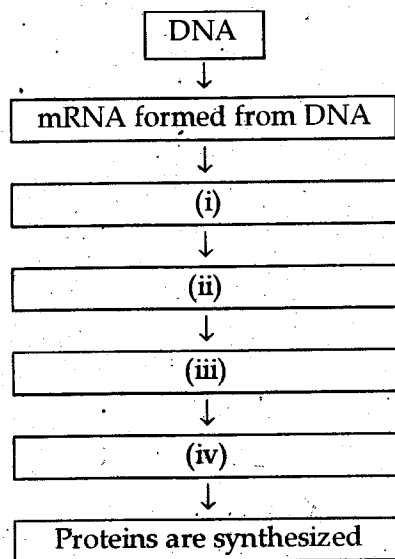
Gopu says, "Man evolved directly from chimpanzees".

Mark your opinion and cite reasons in the table given below :

3

	agree/disagree	Reason
Ramu's opinion		
Gopu's opinion		

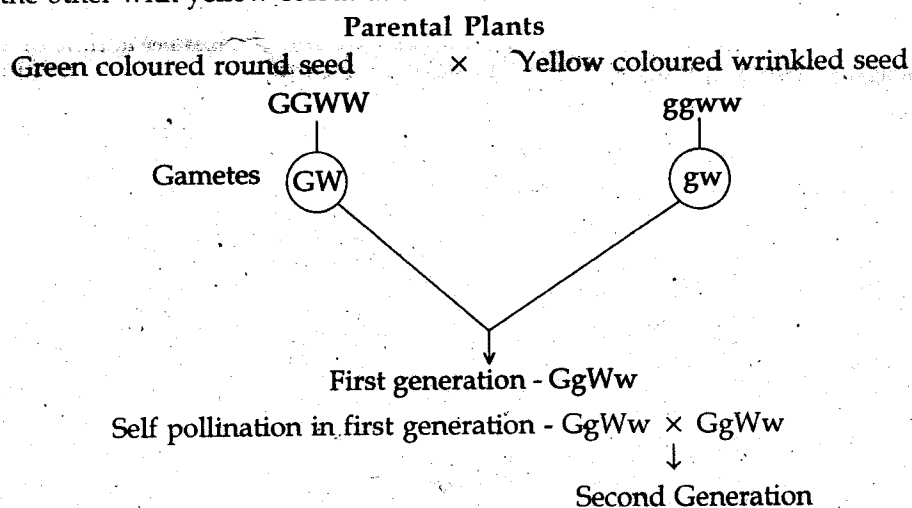
10. DNA does not participate directly in protein synthesis. Illustrate the process of protein synthesis with the help of flow chart given below. 2



11. Substantiate the following statements by giving evidences : 3

- (a) Bacteria and man have extremely different appearance, but they show close resemblances in their cell structure and physiology.
(any 4 evidences)
- (b) Plants also have defence mechanisms.
(any 2 evidences)

12. Given below is the hybridisation between two pea plants - one with green colour and round seeds and the other with yellow colour and wrinkled seeds. 3

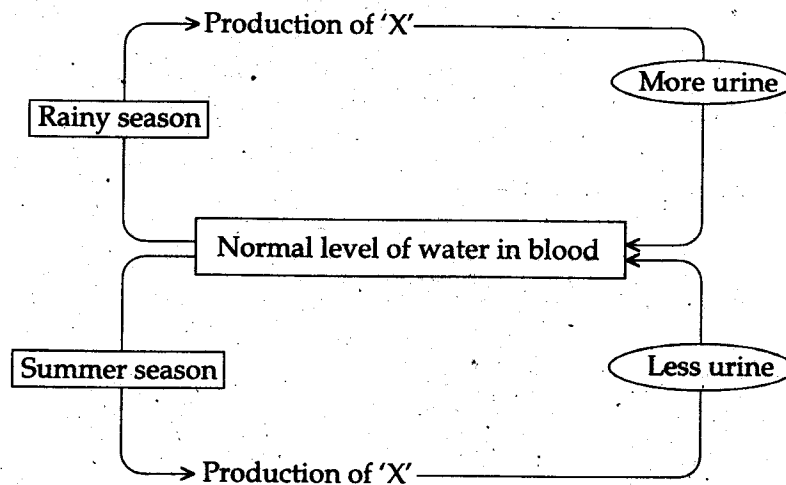


- (a) Write the alleles of the gametes formed while self pollinating the first generation.
- (b) Identify the new combination of characters that appear in the second generation.
- (c) What reason did Mendel give for the appearance of new combination of characters in the second generation ?

13. The N.S.S. unit of your school along with Regional Cancer Centre is organising a Free Medical Camp for the Early Diagnosis of Cancer

- (a) What is cancer ?
 (b) Early diagnosis of cancer is crucial in the treatment of cancer. Comment.

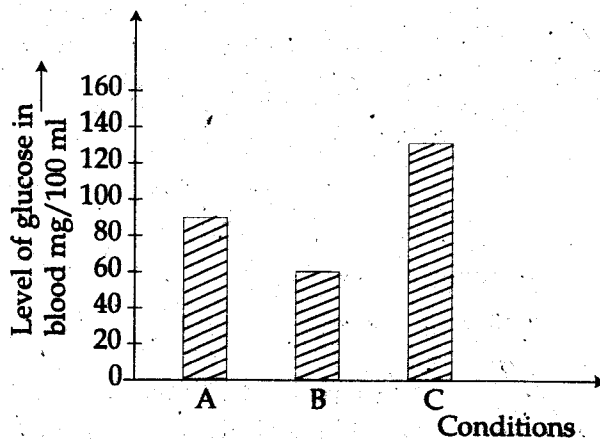
14. (A) In all seasons, Ramu drinks 10 litres of water per day. Given below is an illustration of how the normal level of water is maintained in his blood during rainy season and summer season. Analyse the illustration and answer the questions given below.



- (a) Identify 'X'.
 (b) Explain how 'X' acts to produce more urine during rainy season.
 (c) Explain how hypothalamus and pituitary glands are related to 'X'.

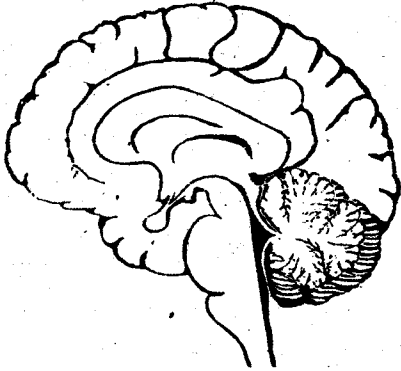
OR

(B) The level of glucose in blood is maintained by the combined action of insulin and glucagon. The graph given below shows three conditions of glucose level in blood.



- (a) Which condition shows the normal level of glucose in blood ?
 (b) Which among the two hormones function in condition B and explain its action ?
 (c) What is the role of insulin in liver and muscles ?

15. Draw the figure, and answer the questions given below.



(a) Label the following parts in the figure :

- (i) Cerebrum
- (ii) Thalamus
- (iii) Cerebellum

(b) Write one function of each part.

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