



SAMAGRA SHIKSHA, KERALA
SECOND TERMINAL EVALUATION 2023 - 24
BIOLOGY

Standard : X

Time : 1½ Hrs
 Total score : 40

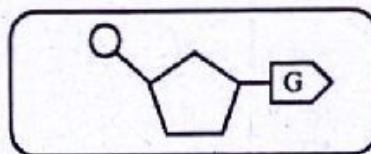
Instructions

- The first 15 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 any 5 questions from Qn. No. 1 to 6. Each carries 1 score.

(5x1=5)

1. Select the correct nucleotide that pairs with the given nucleotide in the box. (1)



- a)
- b)
- c)
- d)

2. Identify the correct pairs out of the following. (1)

- | | |
|----------------------------|----------|
| a) Quick wilt in pepper | Fungus |
| b) Wilt disease in brinjal | Virus |
| c) Bunchy top of banana | Virus |
| d) Foot and mouth disease | Bacteria |

3. Complete the given table suitably. (1)

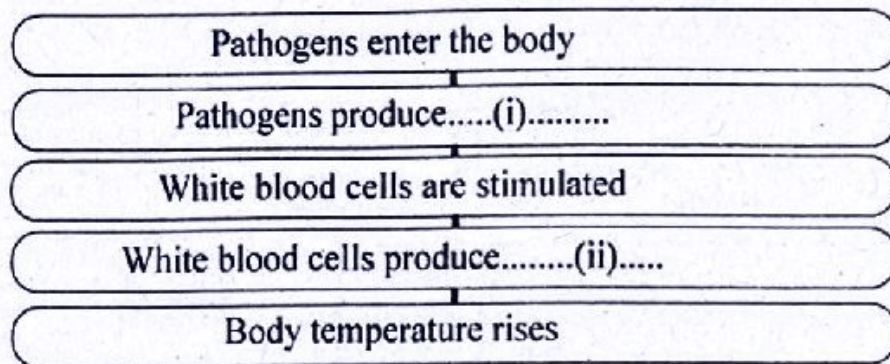
Blood group	Antigens	Antibody
B Positive	B, ..(i) (ii)

4. Correct mistakes if any, in the underlined part. (1)

- a) A protein called callose present in epidermis prevents the entry of germs.
- b) Lysozyme present in saliva destroys germs.
- c) T-lymphocytes produce antibodies against antigens which enter our body

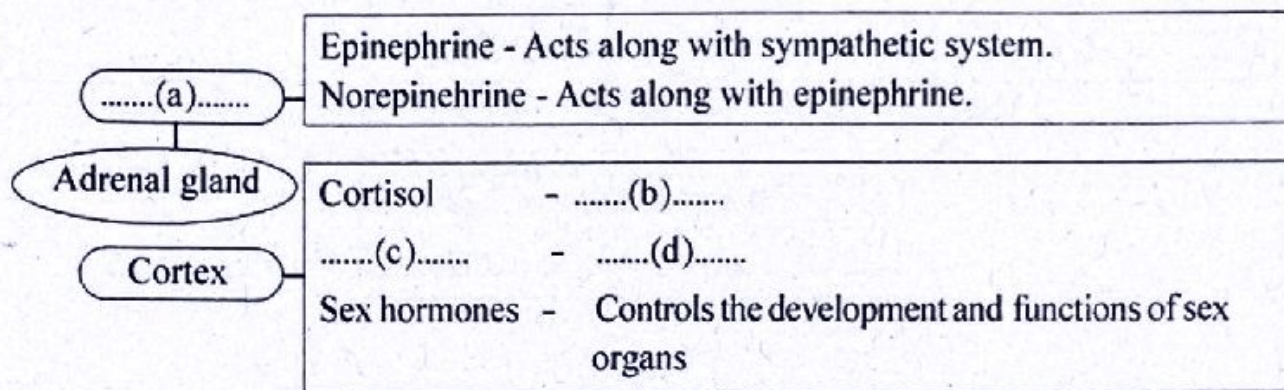
10. Answer the following questions.

a) Fill up the flow chart related to fever suitably. (1)



b) Write two advantages of rise in body temperature. (1)

11. Fill up the concept map related to adrenal gland. (2)



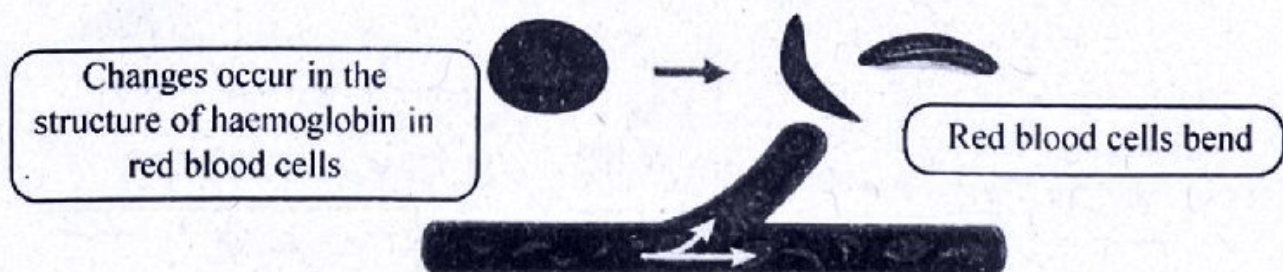
12. Observe the illustration and answer the questions.



a) Which is the process indicated in the illustration? In which type of cell division does it occur? (1)

b) How does the process cause variation in organisms? (1)

13. Observe the illustration and answer the questions.



a) Identify the disease. How does the oxygen carrying capacity of red blood cells in these patients decrease? (1)

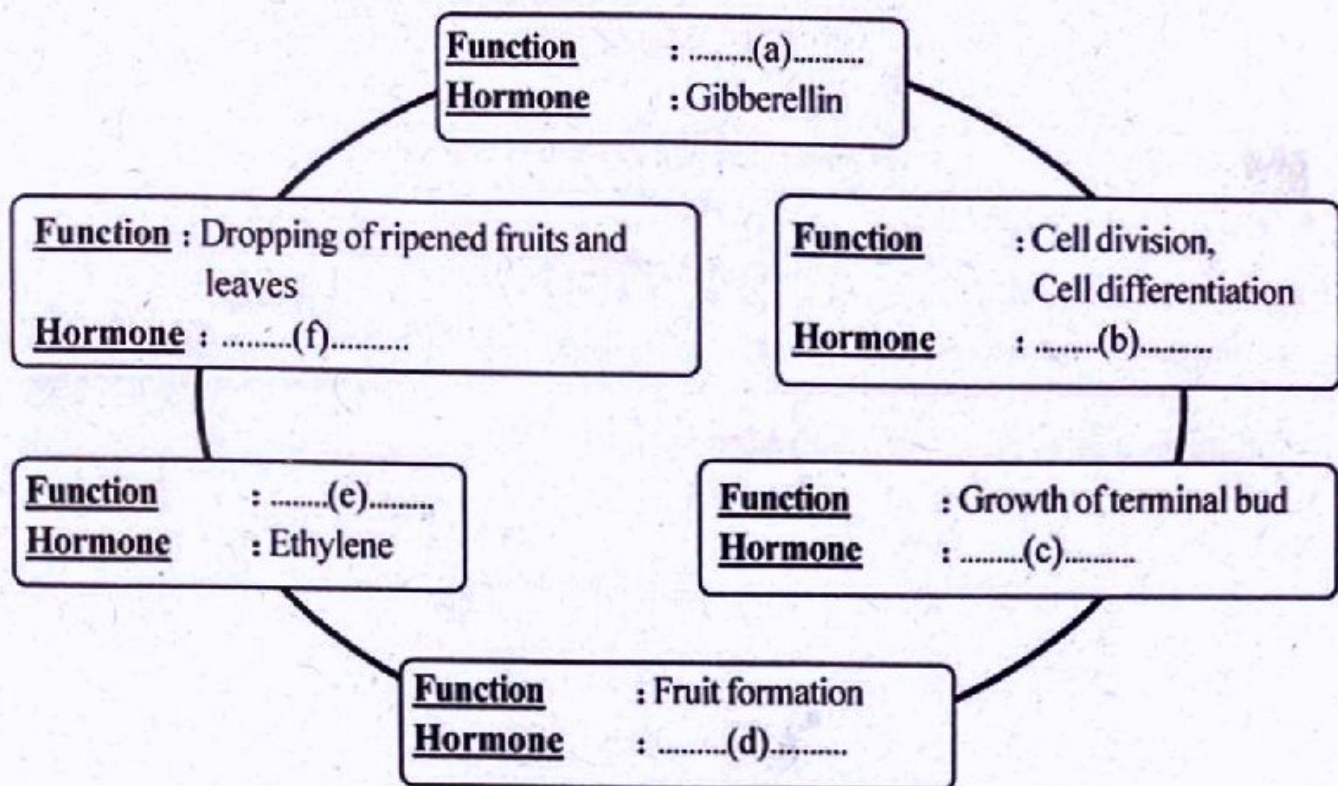
b) How does this disease affect blood circulation? (1)

Answer any 5 questions from Qn. No. 14 to 20. Each carries 3 score.

(5x3=15)

14. Fill up the blanks in the illustration showing the hormone functions.

(3)



15. Answer the questions related to lifestyle diseases.

a) Write the cause.

(2)

- i) Heart attack ii) Bronchitis

b) Suggest one change each that has to be made in our lifestyle, to keep away from the above diseases.

(1)

16. Classify the following facts and tabulate them correctly.
(Discard the mismatching items)

(3)

- Stimulates other white blood cells
- Engulf and destroy germs
- Destroy cancer cells
- Neutralise the toxin of the antigens
- Dilates blood vessels
- Stimulates other defense cells of the body
- Destroy the bacteria by disintegrating their cell membrane
- Synthesizes chemicals that destroy foreign bodies

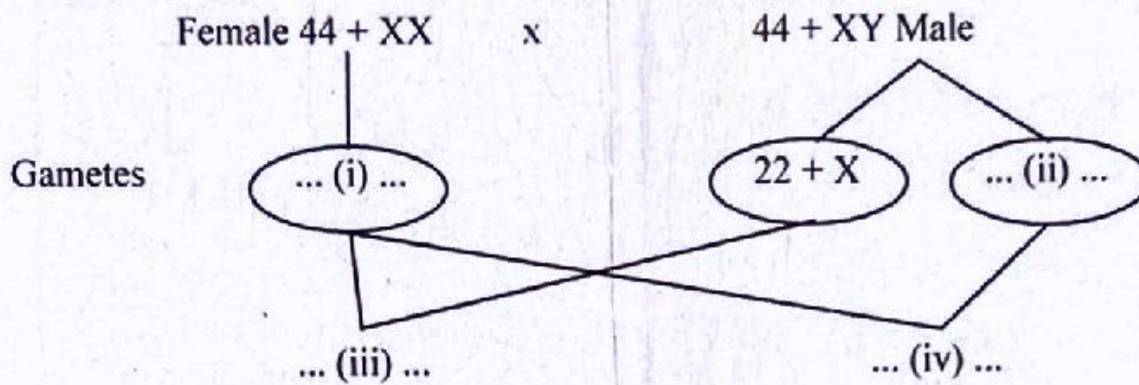
T Lymphocytes	Basophil	Antibodies
•	•	•
•	•	•

17. Answer the following questions.

a) What are vaccines? (1)

b) How does BCG vaccination provide immunity against tuberculosis. (2)

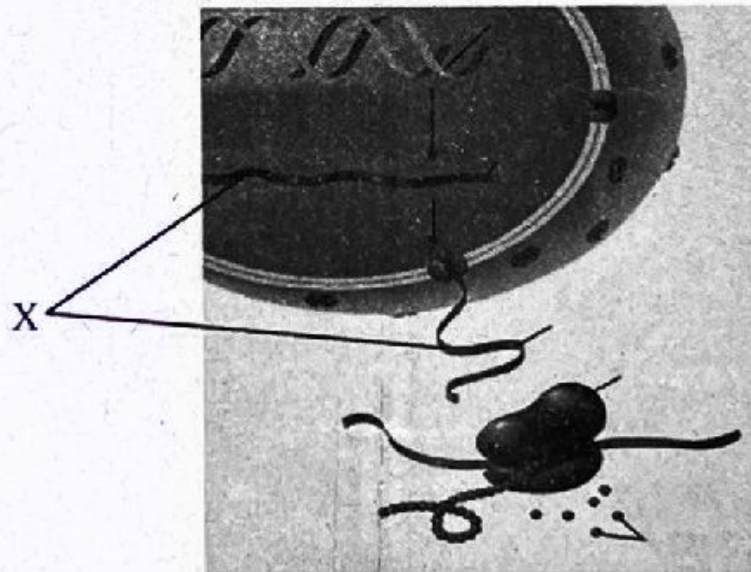
18. Observe the illustration showing the sex determination in human beings and answer the questions.



a) Fill up i, ii, iii and iv. (2)

b) The male and female ratio in humans is approximately 1:1. Give reason for this based on the illustration. (1)

19. Observe the illustration and answer the questions.



a) Name the process indicated in the illustration. (1)

b) Identify the part indicated as 'X'. Why is it known by that name? Write its role in the process illustrated. (2)

20. Make a flow chart that shows the mechanism of hearing, by using indicators from the box. (3)

- The sound waves which pass through the external ear vibrate the tympanum.
- Vibration of the fluid in the cochlea.
- Impulses are formed by the stimulation of hair cells in the Organ of Corti.
- Ear ossicles vibrate
- Impulses reach the cerebrum through the auditory nerve and hearing is effected.
- Movement of oval window

Answer any two from questions 20 - 23. 4 scores each

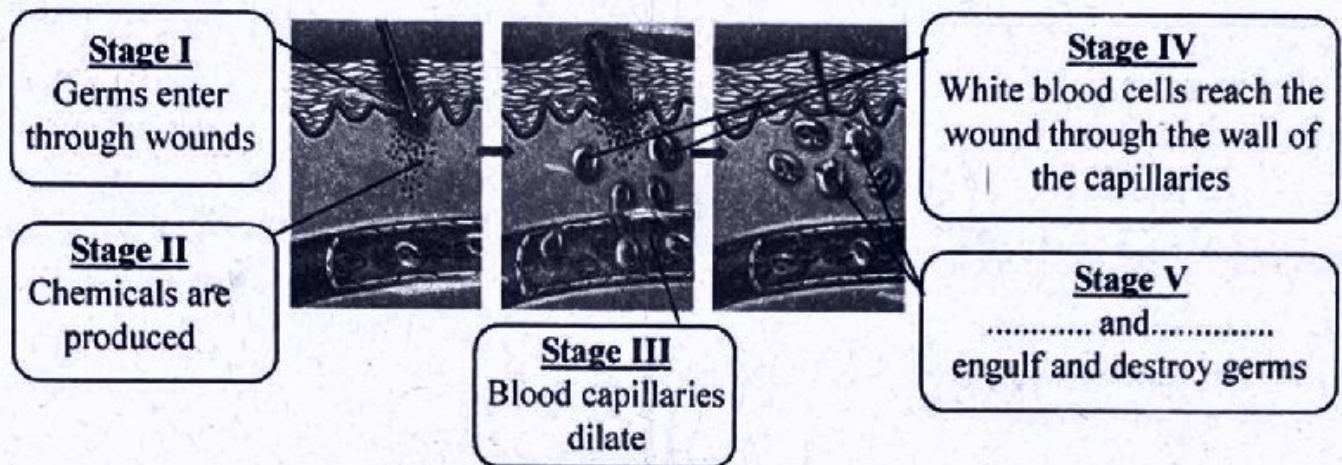
[2x4 = 8]

21. Analyse the given symptoms and answer the questions.

Fever, pain in the throat, inflammation in the lymph glands of the throat

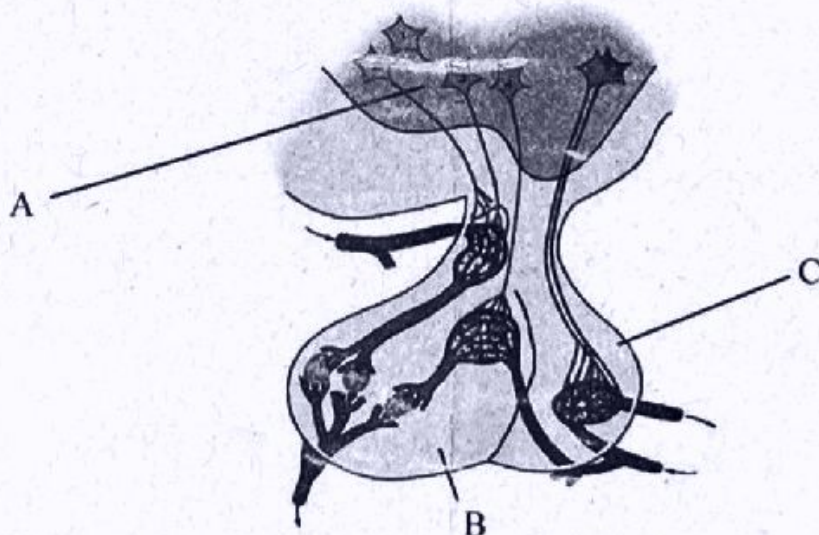
- a) Identify the disease. Name the causative bacterium? (1)
- b) What is the reason for the appearance of ash coloured thick coating in the throat of the patient? (1)
- c) What is the treatment for the disease? (1)
- d) Suggest any two ways to prevent the transmission of the disease. (1)

22. Observe the illustration and answer the questions.



- (a) Name the process. (1)
- (b) How does stage III help the process. (2)
- (c) Fill up stage V. (1)

23. Observe the illustration and answer the questions.



- a) Name the parts indicated as A and C. (1)
- b) The production of a hormone from A is high in summer and less in winter. Which is the hormone? How does its deficiency adversely affect our body? (2)
- c) Name another hormone produced from A and stored in C. Write its function. (1)