

SAMAGRA SHIKSHA, KERALA
SECOND TERMINAL EVALUATION 2022-23
BIOLOGY

STD- X

Time : 1½ hrs.

Total Score : 40

Instructions:

- 15 minutes is given as cool off time. This time is to be used for reading the question paper.
- Attempt the questions according to the instructions.
- Keep in mind the score and time while answering the questions.

Answer any 5 from questions 1-6. One score each

(5x1=5)

1. Which of the following is the natural vector of Nipah virus? (1)

- a) Pig b) Bat c) Mosquito d) Rat

2. Which of the following is not correct? (1)

- a) Hypothalamus $\xrightarrow{\text{TSH}}$ Pituitary
- b) Hypothalamus $\xrightarrow{\text{ADH}}$ Pituitary
- c) Hypothalamus $\xrightarrow{\text{Releasing hormone}}$ Pituitary
- d) Hypothalamus $\xrightarrow{\text{Oxytocin}}$ Pituitary

3. Observe the laboratory test report and find out the factor which is not normal. (1)

Test Details	Test Result
Red blood cells	47 Lakh/ ml blood
White blood cells	8500 / ml blood
Platelets	2.8 Lakh/ ml blood
Haemoglobin	9.2 g /100 ml blood

4. Correct mistakes if any in the underlined part of the given statements. (1)

- a) Filariasis is transmitted by female anopheles mosquito.
- b) Pathogen of malaria is plasmodium.
- c) Athlete's foot is a viral disease.
- d) Rat fever is a bacterial disease.

5. Write the use of the apparatus shown in the figure. (1)



6. The genetic make up of a plant, produced by hybridization experiment conducted by Mendel on two pair of contrasting traits (Height, Shape of seed), is given below.

TTRr

(Tall plant Round seed)

Write the factors which can be present in the gametes formed from this plant. (1)

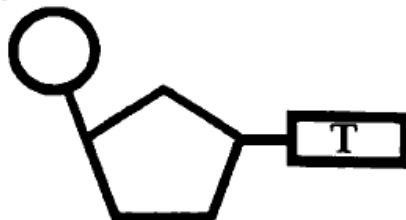
(Answer any 6 from questions 7-13. 2 score each) (6 x 2 = 12)

7. Analyse the given statement and answer the question.

“Skin and mucus membrane which cover and protect the body, destroy germs also”

How does each of these destroy germs? (2)

8. Analyse the figure and answer the questions.



a) What does the figure indicate? (1)

b) Which nucleic acid does it belong to? Why? (1)

9. "Possibility of the birth of male and female child is equal."

Do you agree with this statement? Why? (2)

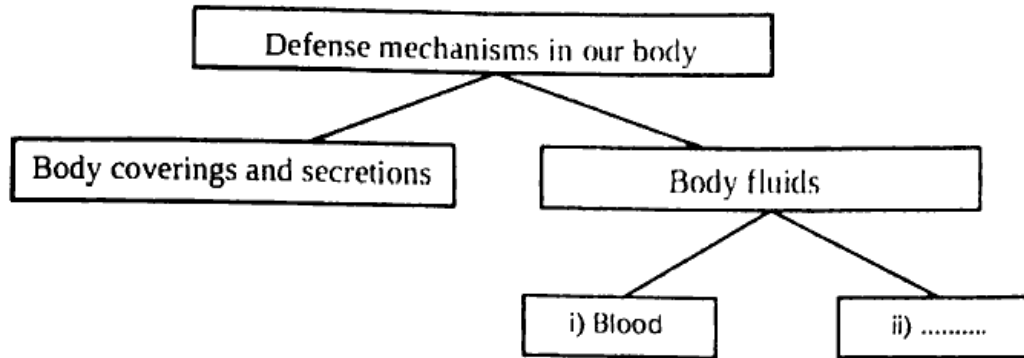
10. Hints related to a disease is given below. Analyse it and answer the questions.

- Bacterial disease
- Mainly affect lungs
- Can be prevented with BCG vaccine

a) Identify the disease. (1)

b) How does this disease get transmitted ? (1)

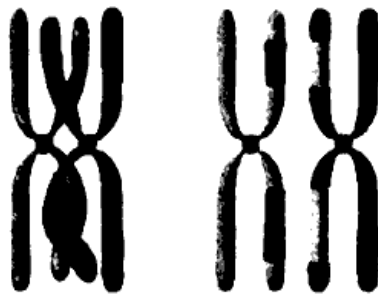
11. Analyse the illustration and answer the questions.



a) Name the fluid indicated as (ii). (1)

b) How does this fluid help in defending diseases? (1)

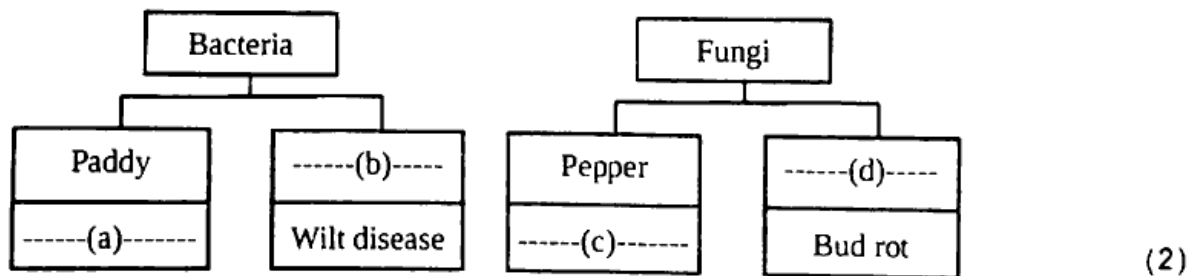
12. Observe the figure and answer the questions.



a) Which process is indicated in the figure? (1)

b) How does this process cause variations in offsprings? (1)

13. Complete the illustration related to plant diseases.



(Answer any 5 from questions 14 to 20. 3 score each)

(5x3=15)

14. How does smoking adversely affect the following organsystems.

(3)

- a) Nervous system
- b) Respiratory system
- c) Blood circulatory system

15. Analyse the informations in the box given below and match them according to the given model. (3)

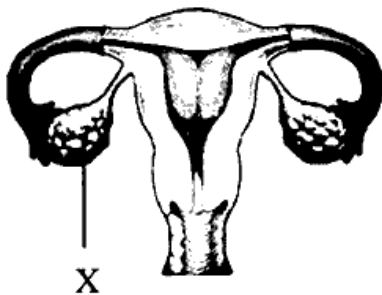
- Cell wall
- Prevents the entry of germs through leaves
- Protects the inner cells from direct contact of pathogens
- Callose
- Bark
- Wax covering, cuticle
- Well equipped resistant coat
- The germs that have crossed the cell wall are prevented from entering through the cell membrane

Model : Cell wall - Well equipped resistant coat

16. Side effects of the continuous use of a particular category of medicine extracted from micro organisms are given below. Analyse them and answer the questions.

- Destroys useful bacteria in the body.
- Reduces the quantity of some vitamins in the body.

- a) To which category the medicine mentioned above belongs? (1)
- b) Which type of micro organisms are destroyed using this medicine? (1)
- c) The continuous use of this medicine by an individual against a particular disease may not be effective in future. Why? (1)
17. Observe the figure and answer the questions.



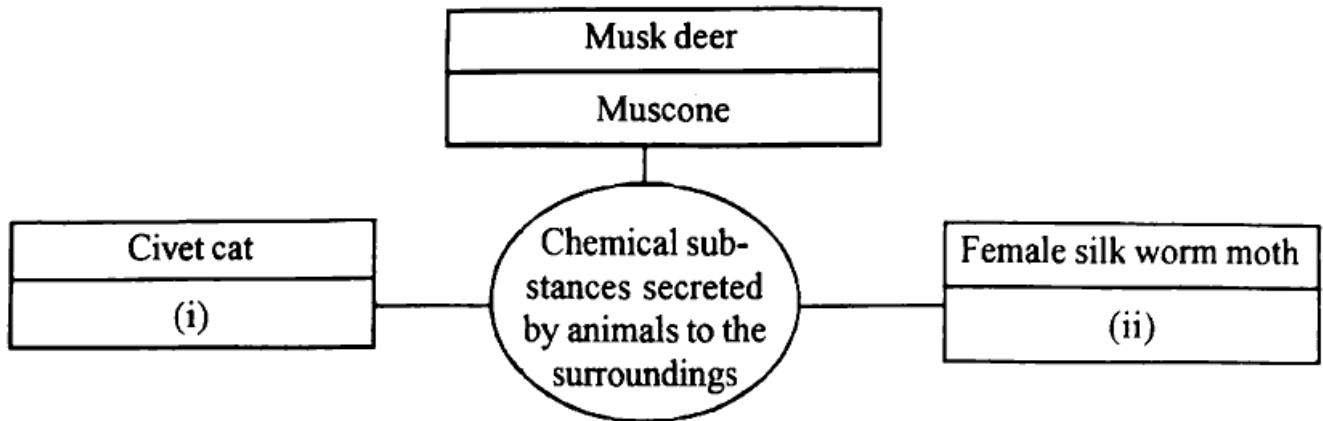
- a) Which endocrine gland is indicated as "X"? Name the hormone which stimulates this gland? (1)
- b) Write the name and functions of any one hormone secreted by this gland. (2)
18. Analyse the hints related to RNAs involved in protein synthesis and answer the questions.

(i) Carries messages for protein synthesis

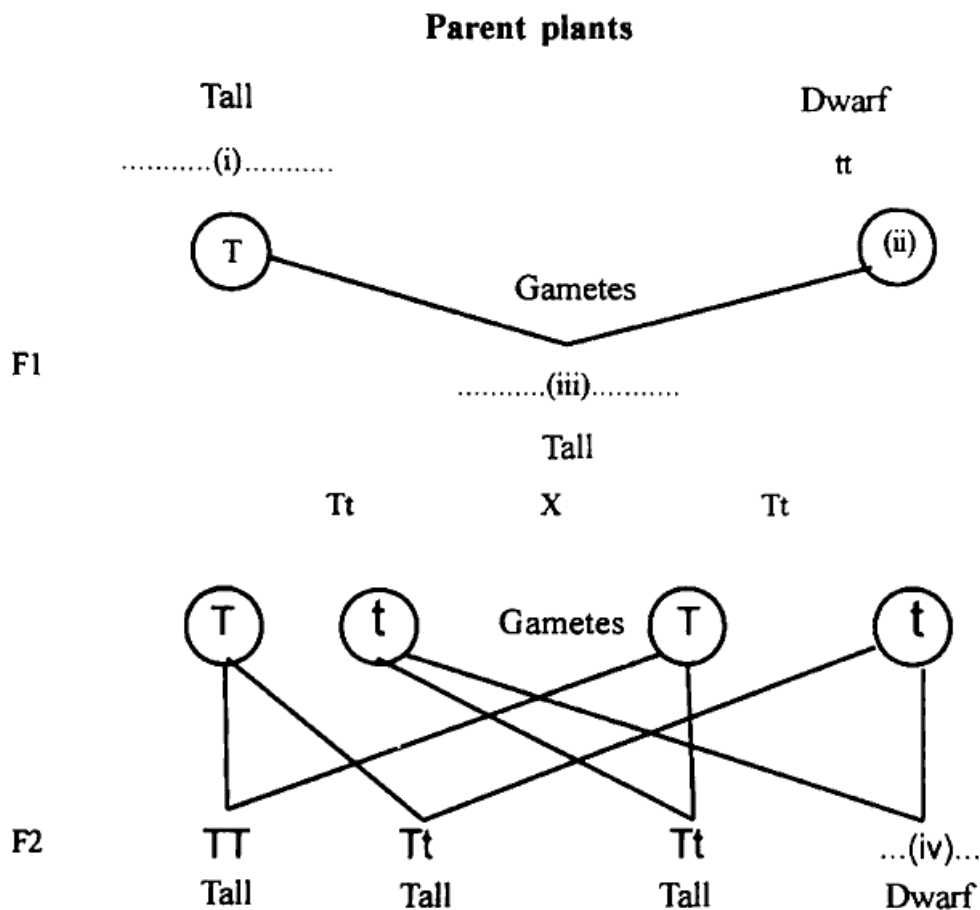
(ii) Carry amino acids to the ribosomes

- a) Which RNAs are indicated as (i) and (ii)? (1)
- b) From where the RNA indicated as (i) formed? (1)
- c) Which RNA is not mentioned here? Name the cell organelle in which this RNA is found? (1)

19. Some animals and the chemical substances secreted by them to their surrounding for communication are illustrated below. Analyse it and answer the questions.



- Fill (i), (ii). (1)
 - Write the term given to these chemicals mentioned. (1)
 - Write any two functions of such chemicals. (1)
20. Analyse the illustration and answer the questions.

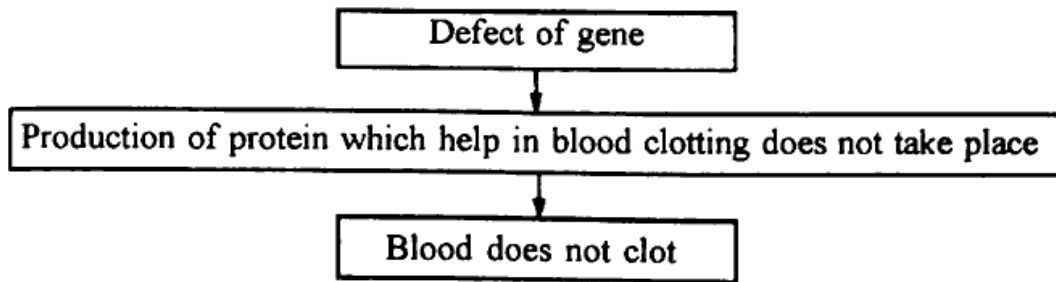


- Fill (i), (ii), (iii), (iv) . (2)
- Why the trait does not appear in the first generation, appears in the second generation? (1)

(Answer any 2 questions from questions 21-23. 4 scores each.)

(2 x 4 = 8)

21. Analyse the flow chart and answer the questions.



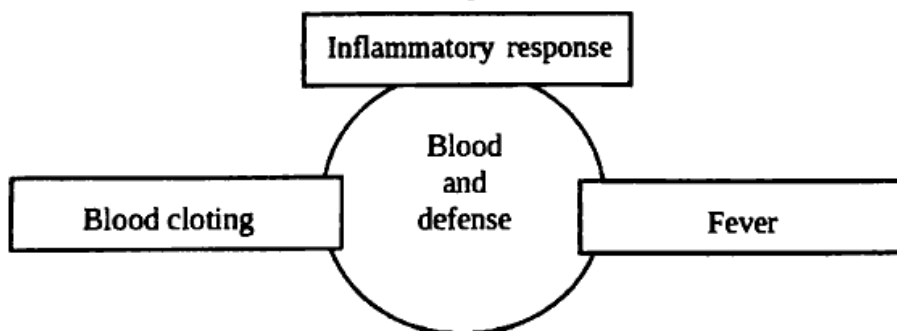
- a) Name the disease indicated in the flow chart? (1)
- b) Which type of disease is this? (1)
- c) Which is the main symptom of this disease? (1)
- d) How temporary relief is brought in these patients? (1)

22. Complete the table using the information given below.

- Acromegaly
- Production of somatotropin increases during growth phase
- Excessive growth of the body
- Gigantism
- Production of somatotropin decreases during growth phase
- Retardation of growth
- Production of somatotropin increases after the growth phase
- Growth of the bones on the face, jaws and fingers
- Dwarfism

Abnormalities	Cause	Symptoms
(i)	(ii)	Growth of the bones on the face, jaws and fingers
(iii)	(iv)	(v)
(vi)	(vii)	(viii)

23. Observe the illustration and answer the questions.



- a) Write the processes in which phagocytes are involved. (1)
- b) How phagocytes destroy germs? (1)
- c) Write the different steps of process in which phagocytes are not involved. (2)