

SECOND TERMINAL EVALUATION - 2016-17
BIOLOGY

Standard - X

Total Score: 40

Time: 1½ Hours

Instructions

1. First 15 minutes is given as cool off time. This time is to be used for reading and understanding the questions.
2. Write down answers for all questions.
3. The score and time for each question should be considered while answering.

1. Analyse the statement given below and answer the question. (2)
'Human blood group is classified into two-positive and negative.'
a) On the basis of which factor is it classified like this?
b) Where is this factor seen in blood?
2. Which of the following diseases cannot be prevented through vaccination? (1)
A. Cholera B. Sickle cell anaemia C. Tetanus D. Hepatitis B
3. Observe the illustration related to gene action and answer the questions. (3)



- a) What does 'X' and 'Y' indicate?
 - b) Which organelle is involved in the process of the formation of 'Y'? Which are the various RNAs involved in this process?
- 4A. Answer the following questions related to the defense mechanism of our body: (4)
- a) Name the lymphocytes that destroy pathogens in specific defense.
 - b) Where do these lymphocytes mature?
 - c) Why does the AIDS infection destroy the immune system of the body?

OR

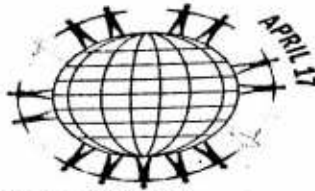
4B. Analyse the statement given below and answer the questions:

White blood cells respond to pathogens in different ways in nonspecific defense.

- Which are the white blood cells involved in non specific defense?
- Describe the defense activity of any two of these white blood cells.

5. Observe the figure and answer the following questions:

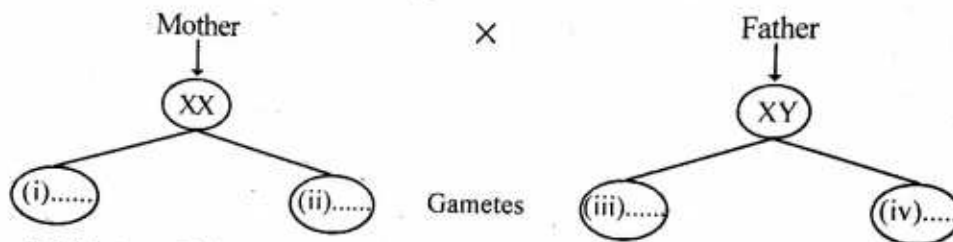
(3)



- Which disease does the figure indicate?
- How does this disease differ from contagious diseases?

6A. Observe the illustration and answer the questions.

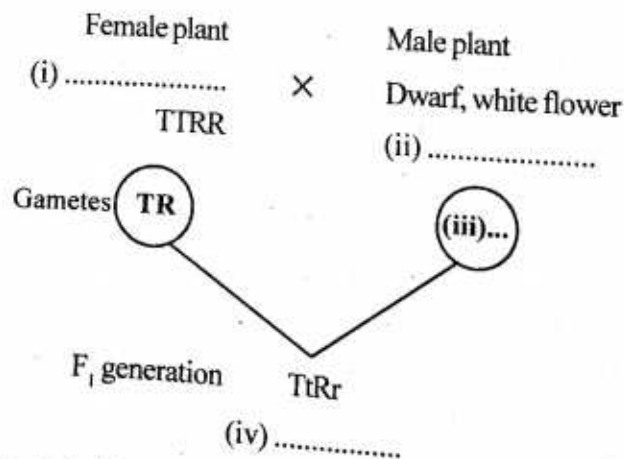
(4)



- Which type of chromosomes do the letters XX, XY indicate?
- Fill up i, ii, iii, iv.
- Illustrate the possibility of formation of male or female child.

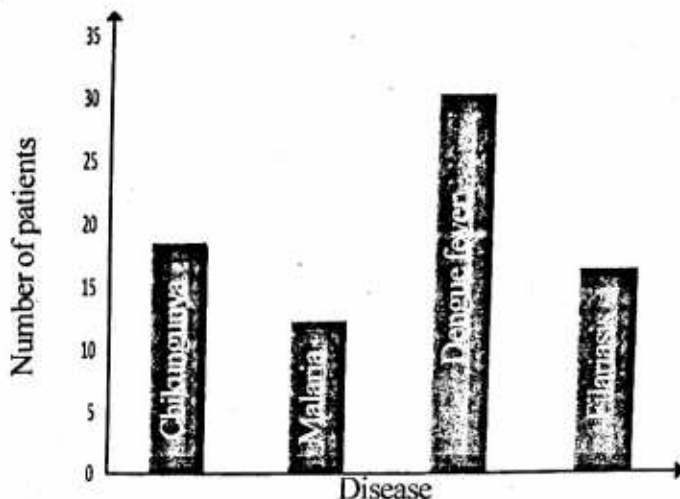
OR

B. Analyse the illustration on the hybridization of two different traits and answer the following questions:



- Fill in the blanks in the illustration.
- Write down the allele combination of the dwarf pea plants having red flowers and tall pea plants having white flowers when the F_1 generation plants were subjected to self pollination.

7. Given below is a graph showing the diseases that affected people of a village? Observe it and answer the question: (4)



- Which disease affected the least number of people? What is its causative organism?
 - Which disease affected the most number of people? What is its causative organism?
 - What is the reason for the spread of such diseases in the village? What remedy would you suggest to control the diseases?
8. Observe the newspaper report and answer the questions: (2)

Blood group detection camp organized.

A blood group detection camp and an awareness class were conducted under the auspices of the school Health Club.

- Name the different blood groups.
 - Why is it necessary to organize such programmes in school?
9. Which of the following situations given below utilizes modern biotechnology? What is the name of this technology? (2)
- Yeast for the preparation of bread.
 - Insulin producing bacteria
 - Curd from milk.
 - Fungi for converting sugar into alcohol.
10. Choose the correct answer from the options related to the inferences formulated by Mendel given below: (1)
- A trait is controlled by the combination of two factors.
 - All characters are expressed by offsprings of the F_1 generation?
 - The characters expressed in the F_1 generation remain hidden in the F_2 generation.
 - The ratio of the dominant characters and recessive characters in the F_2 generation is 3 : 1
- a) i, ii correct b) ii, iii correct c) i, iv correct d) ii, iv correct

11. Evaluate the statement and answer the questions: (2)

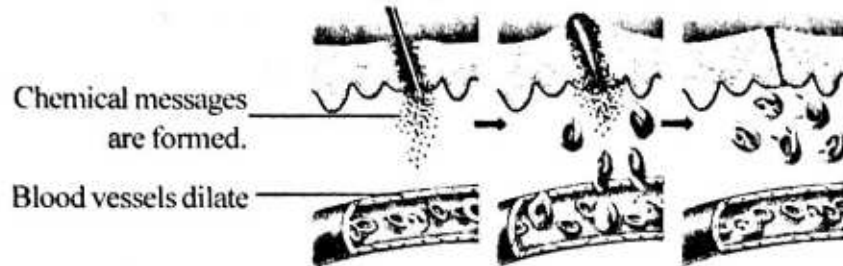
“The protein named thrombin has a vital role in blood clotting.”

- How is thrombin formed?
- What is the role of thrombin in blood clotting?

12. Complete the table choosing terms from B and C that match with A. (2)

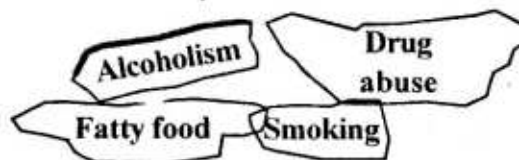
A	B	C
Banana	Blight	Protozoa
Paddy	Bunchy top	Bacteria
Coconut palm	Wilt	fungus
	Bud rot	Virus

13. Observe the illustration on inflammatory response and answer the questions: (3)



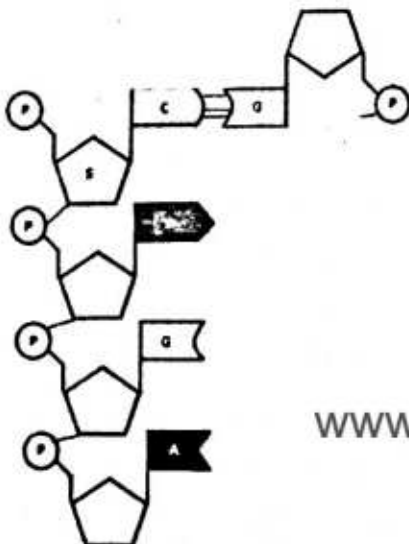
- What is the situation that causes the dilation of blood vessels?
- What is the advantage of the dilation of blood vessels?
- How does this process become helpful in defense against diseases?

14. Analyse the collage and answer the questions: (3)



- In which category do the diseases resulting from such bad habits fall?
- Are these bad habits to be avoided? Substantiate your answer.

15. An incomplete illustration on the strands of DNA is given below. (4)



- How many nucleotides are there in the illustration?
- Complete the second strand by filling in the blanks in the illustration.