

1. Some symptoms of a disease are given:

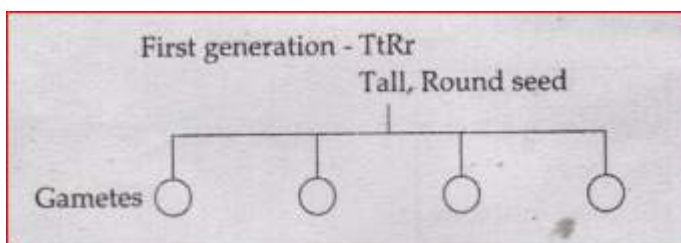
- (i) Loss of memory
- (ii) Inability to recognize friends and relatives

- a. Identify the disease
- b. What is the cause of the disease?

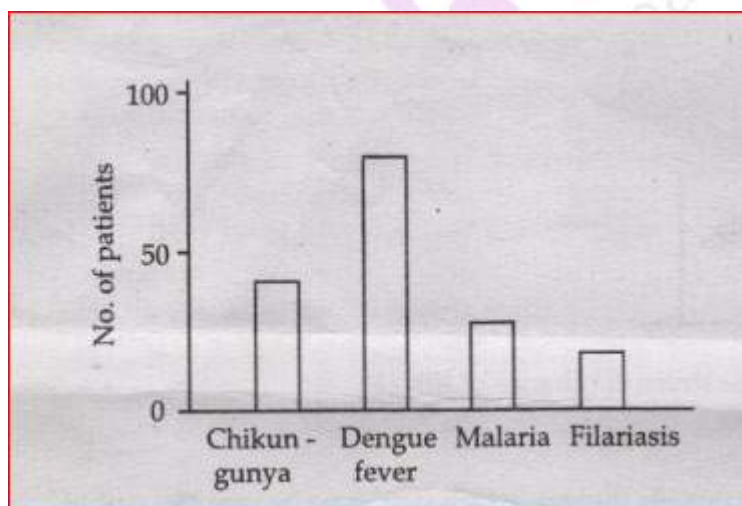
2. A person severely injured in an accident needs blood. Antigen A is detected in his blood on blood test.

- (i) Identify the blood group of the person
 - (ii) From the following persons, whose blood can be received by him?
- a. X - A group (b) Y- B group (c) Z- AB group

3. First generation raised from the hybridisation experiment of Mendel is given. Write the gametes formed from this generation.



4. Analyse the graph and answer the following questions:

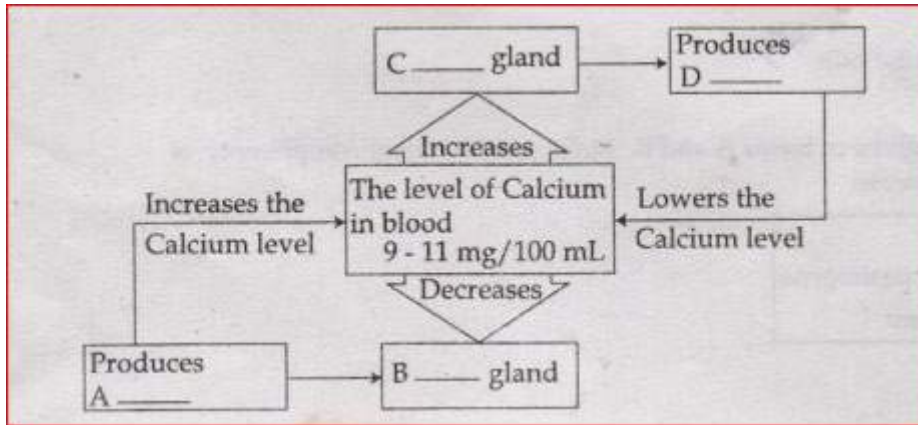


- a. Name the pathogen of the disease that is mostly affected
- b. Name the vector of the disease shown in the graph
- c. What measures should be adopted to prevent the spreading of these diseases

5. Give reasons for the following:

- a. Persons with colour blindness cannot distinguish Red and Green colour
- b. Deficiency of vitamin A causes night blindness
- c. Maximum visual clarity is there in yellow spot

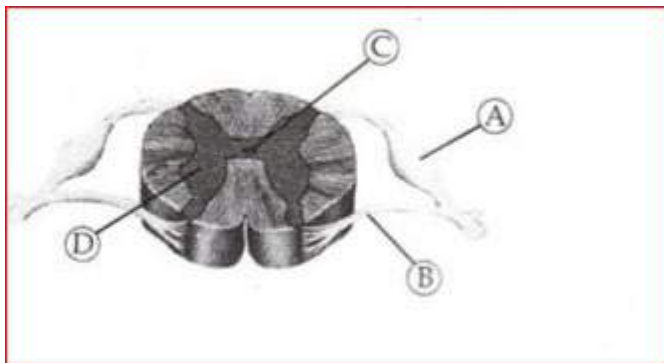
6. Observe the illustration showing the maintenance of calcium level in blood and answer the following questions:



- Name the hormones A and D
- Name the glands C and B
- How A and D maintain the level of calcium in blood

7. List out 4 concepts that can be included in the pamphlet to be distributed in an awareness programme against dengue fever.

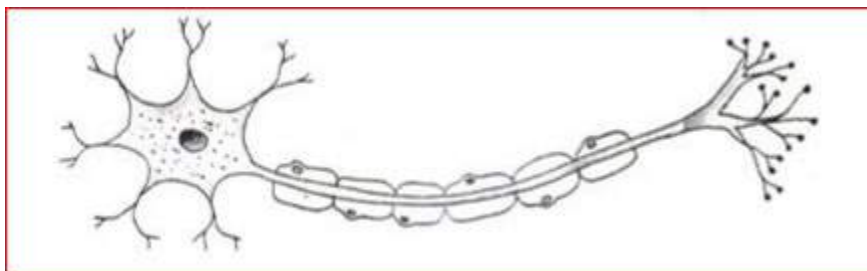
8. (a) Identify the below diagram:



(b) Name the parts labelled as A, B, C and D

- (a) Name the factors that lead the transformation of normal cells into cancer cells.
(b) Name the two methods used for treatment of cancer

10. Redraw the diagram. Name and the label the parts indicated below:



- Carries impulses away from the cell body
- Secretes neurotransmitter
- Branches of dendrons

11. Write any two major reasons for the population explosion in this world.

12. Draw neat labelled diagrams of the cross section of an artery and vein

13. Differentiate between:

- a. Osmosis and Diffusion
- b. Mitosis and Meiosis
- c. Chromosome and Chromatid

14. Draw a neat diagram of the stomatal apparatus found in the epidermis of leaves and label stoma, guard cell chloroplast, epidermal cells, cell wall and nucleus

15. Define the following:

- a. Tubectomy
- b. Guttation
- c. Genes
- d. Diastole
- e. Pulse

16. Answer the following:

- a. Enumerate the steps of blood clotting
- b. What is serum?
- c. State two functions of lymph

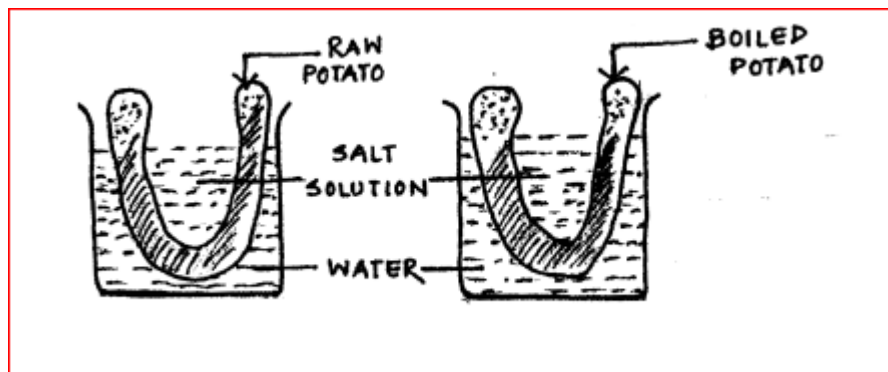
17. Give scientific reasons for below given scenarios:

- a. The wooden frames of doors get jammed in rainy seasons
- b. If you sprinkle some common salt on a grass growing on a lawn, it is killed at the spot
- c. The arteries are deep seated in the body
- d. Rapid increase of population in India

18. Define the following:

- a. Centromere]
- b. Ultrafiltration
- c. Osmotic pressure
- d. Resource
- e. Portal Vein

19. See the figure below of an experiment setup of a particular phenomenon in plants:



- a. What is the aim of the experiment
- b. What is the purpose of taking boiled potato?
- c. Mention one biological importance of this physical process to each of the following?
(i) Animals (ii) Plants

20. How do the following substances protect the plant from diseases?

- a. Lignin
- b. Callose
- c. Cuticle

