



DELHI PUBLIC SCHOOL NEWTOWN
SESSION 2023-2024
FINAL EXAMINATION

CLASS: IX
SUBJECT: BIOLOGY [SET A]

FULL MARKS: 80
TIME: 2 HOURS

*Answers to this paper must be written on the paper provided separately.
You will not be allowed to write during the first 15 minutes.
This time is to be spent in reading the question paper.
The time given at the head of this paper is the time allowed for writing the answers.*

*Section A is compulsory. Attempt any four questions from Section B.
The intended marks for questions or parts of questions are given in brackets [].
This question paper consists of 6 printed pages.*

SECTION A (40 Marks)
(Attempt all questions from this section)

Question 1

Select the correct answers to the questions from the given options. (Do not copy the question. Write the correct answer only): [15]

- i. Assertion (A): China rose is a Monadelphous flower.
Reason (R): In Monadelphous flowers, the filaments are united in several groups.
- | | |
|-----------------------------|-----------------------------|
| a. Both A and R are false | b. A is true and R is false |
| c. A is false and R is true | d. Both A and R are true |
- ii. Sumit was studying about an organization which suggests quarantine measures to prevent spread of disease to others, and lays pharmaceutical standards for important drugs. Identify the organization:
- | | |
|----------------------|-----------|
| a. Red Cross Society | b. WHO |
| c. UNESCO | d. UNICEF |
- iii. Raman learnt about the functions of bile juice, but he forgot the components present in bile. Help Raman to identify the components present in bile:
1. Bilirubin, 2. Biliverdin, 3. Sodium bicarbonate, 4. Calcium chloride.
- | | |
|------------|---------------|
| a. 1 and 4 | b. 2, 3 and 4 |
| c. 3 and 4 | d. 1, 2 and 3 |
- iv. Organisms which have an exoskeleton and a spiny surface are:
- | | |
|---------------|-----------|
| a. Starfish | b. Slug |
| c. Liverfluke | d. Nereis |

- A/2**

- xv. Andy was talking while eating his lunch. After a while, he choked on his food and started coughing. This happened because:
- Closure of oesophagus
 - Collapsing of trachea
 - Incomplete closure of epiglottis
 - Closure of stomach

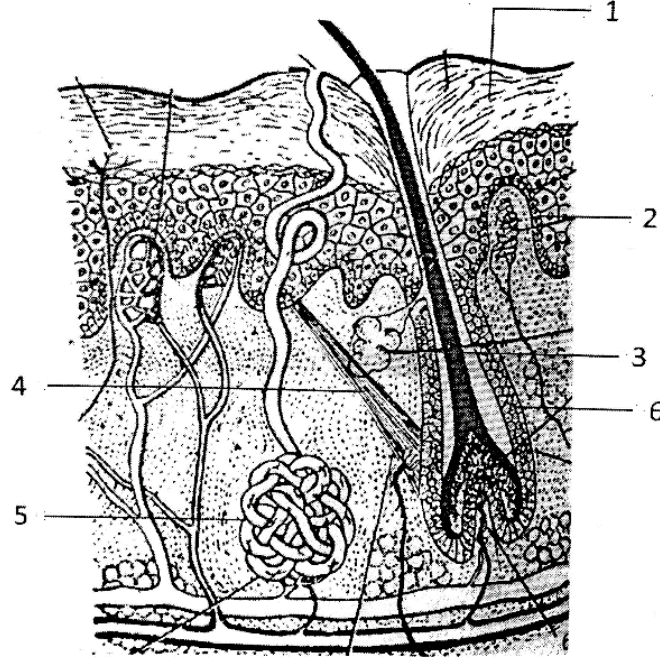
Question 2

- (i) Name the following: [5]
- The category of plant tissues that have lost their ability to multiply.
 - The 11th and 12th pairs of ribs.
 - The thigh bone.
 - Two membranes which cover our lungs.
 - The sound box.
- (ii) Choose the odd one out and write the correct category to which the others belong: [5]
- Horse, Camel, Rabbit, Shark.
 - Vessels, Tracheids, Xylem fibres, Sieve tubes.
 - Striated muscles, Unstriated muscles, Cardiac muscles, Blood.
 - Gliding joint, Pivot joint, Hinge joint, Immoveable joint.
 - Nose, Pharynx, Trachea, Stomach.
- (iii) Fill in the blanks with suitable words: [5]
- _____ (a) _____ is the part which projects from the skin and may extend slightly below the surface of the epidermis. In normal situations, they lie obliquely on the skin. _____ (b) _____ is the part embedded within the dermis. The lowest part of the hair root is expanded to form a _____ (c) _____ which contains a projection of the dermis called _____ (d) _____, with capillary blood supply. The _____ (e) _____ is a structure enclosing the hair root.
- (iv) Arrange and rewrite the terms in each group in the correct order so as to be in a logical sequence beginning with the term that is underlined. [5]
- Cervical, Sacrum, Thoracic, Lumbar.
 - Nostrils, Bronchioles, Pharynx, Alveoli.
 - Pollen grain, Embryo sac, Pollen tube, Ovary.
 - Oesophagus, Rectum, Stomach, Duodenum.
 - Cell wall, Cytoplasm, Nuclear membrane, Cell membrane.
- (v) Match the correct answers of Column I with Column II. Please rewrite the correct pairs: [5]
- | Column I | Column II |
|---------------------------------|-----------------|
| a. Patella | a. Small pox |
| b. 16 teeth in each jaw | b. Plastic |
| c. <i>Plasmodium</i> | c. Tetanus |
| d. Maize flowers | d. Knee joint |
| e. Living fully poisonous germs | e. Adult man |
| | f. Malaria |
| | g. Anemophilous |

SECTION B (40 Marks)
(Attempt any four questions from this section)

Question 3

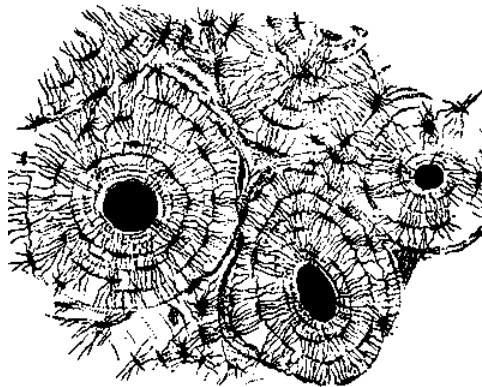
- (i) Name the disease caused by *Salmonella typhi*. [1]
- (ii) Differentiate between Vasoconstriction and Vasodilation on the basis of definition. [2]
- (iii) State any two criteria for a good antibiotic. [2]
- (iv) Write two characteristic features of Phylum Platyhelminthes. [2]
- (v) Observe the diagram given below and answer the following questions. [3]



- a. Label the part marked as '1'.
- b. Name the protein present in the part labelled '1'.
- c. Name the pigment that gives colour to the skin.

Question 4

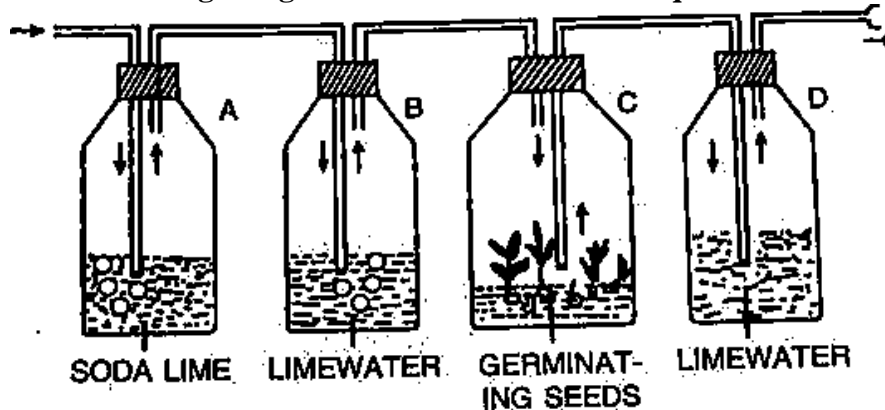
- (i) Define Acquired Immunity. [1]
- (ii) Mention any two symptoms of Cholera. [2]
- (iii) Identify the tissue shown below. Name the living cells present in this tissue. [2]



- (iv) Define Anaerobic Respiration in plants. Write the complete chemical equation. [2]
- (v) Draw a well labelled diagram of an animal cell. [3]

Question 5

- (i) Define Piloerection. [1]
- (ii) Mention two characteristic features of Amphibians. [2]
- (iii) Write two roles of bacteria in industry. [2]
- (iv) Name two mushroom varieties which are widely cultivated in India. [2]
- (v) Observe the diagram given below and answer the questions that follow: [3]



- a. What is the purpose of keeping soda lime in bottle A?
- b. What change do you expect in bottle D?
- c. What would you observe in bottle D if the germinating seeds in bottle C are replaced with dead seeds?

Question 6

- (i) Name the two simple sugars which are present in Sucrose. [1]
- (ii) Name the first discovered antibiotic. Also write the scientific name of the organism from which it was obtained. [2]
- (iii) Mention the scientific name of the pathogen which causes Bacillary Dysentery. Mention one preventive measure for this disease. [2]
- (iv) State any two disadvantages of self-pollination. [2]
- (v) Draw a neat labelled diagram to show the longitudinal section of a bisexual flower. [3]

Question 7

- (i) Define Composting. [1]
- (ii) Mention the name of the deficiency disease caused due to the lack of Vitamin B₁ and name any two sources of food from which we derive Vitamin B₁. [2]
- (iii) Mention the name of the diseases which has the following symptoms: [2]
 - a. Deficiency of haemoglobin in blood.
 - b. Bones lack calcium and turn soft in children.
- (iv) Give reasons: [2]
 - a. Strenuous exercise for some time causes muscular cramps.
 - b. At a higher altitude, a person feels dizzy and experiences temporary loss of hearing.

- (v) Observe the image given below and answer the questions that follow: [3]



- a. Identify the disease from the child is suffering.
- b. Write any two symptoms of the above mentioned disease.

Question 8

- (i) Name the outermost hard layer of seed coat. [1]
- (ii) "Seeds sown very deep in soil fail to germinate." Give two reasons to justify this statement. [2]
- (iii) Write the changes that occur in the Diaphragm during Inspiration and Expiration. [2]
- (iv) Write the fate of the following parts of a flower after fertilization takes place: [2]
 - a. Ovary
 - b. Ovule

- (v) Observe the diagram given below and answer the following questions. [3]



- a. Identify the Phylum to which this organism belongs.
- b. Name two animals belonging to this Phylum.