

Attempt **all** questions

**Question 1**

Choose the correct answer to the questions from the given options.

[1]

(Do not copy the question. Write the correct answer only.)

(i) The major group to which the following organism belongs to:



(a) Arthropoda (b) Annelida (c) Porifera (d) Cnidaria

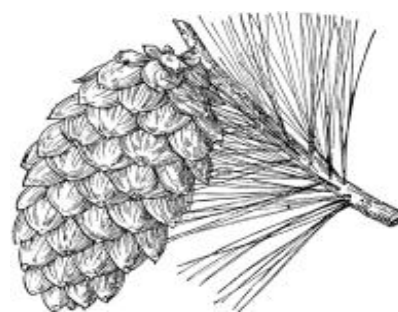
(ii) The bony protective covering of the brain:

(a) Meninges (b) Cranium (c) Pericardium (d) Pleura

(iii) The term for systemic allergic response:

(a) Prophylaxis (b) Asphyxiation (c) Anaphylaxis (d) Hypoxia

(iv) Identify the plant group to which the given trees and reproductive structure belongs to:



(a) Angiosperms (b) Gymnosperms (c) Bryophytes (d) Pteridohytes

**Question 2**

(i) Name the following:

[1]

- (a) The thread like structures that form the body of fungi
- (b) The locomotory structure of Echinoderms
- (c) The substance that cause allergies
- (d) The part of brain that controls voluntary movements

(ii) Fill in the blanks:

[1]

- (a) The chemical produced in our body in response to allergy is -----.
- (b) The number of branches formed at the end of axon are called-----.

- (c) ----- is the gelatinous protective covering of the bacterial cell.
- (d) The point of contact between two nerve cells is termed as-----.

(iii) Match the items given in column A with the most appropriate ones in column B and rewrite the correct matching pairs: [1]

Column A

Column B

- |                 |                  |
|-----------------|------------------|
| (a) Pine        | 1. Algae         |
| (b) Sugarcane   | 2. Fungi         |
| (c) Spirogyra   | 3. Gymnosperms   |
| (d) Penicillium | 4. Angiosperms   |
|                 | 5. Pteridophytes |

### Question 3

- (i) Give reason: [3]
- (a) Bryophytes are called Amphibians of the plant kingdom.
  - (b) Fungi is a heterotrophic organism.
  - (c) The skin is a prominent entry route for allergies.
  - (d) The bodies of aves are well adapted to fly.
  - (e) An alcoholic person is unable to coordinate his muscular movements.
  - (f) Children who consume food with unwashed hands or eat unwashed fruits and vegetables are more susceptible to small intestinal diseases.
- (ii) Explain the following terms: [4]
- (a) Allergy      (b) Nerve      (c) Vertebrates      (d) Classification
- (iii) Write true or false, if false correct and rewrite the false statement: [1]
- (a) The long process which extends from the cell body of neuron is termed as a dendron.
  - (b) Slimy scales are found on the body of reptiles.
  - (c) Reserved food material in bacteria is starch.
  - (d) Ascaris is a segmented flatworm.

### Question 4

- (i) Mention the exact location of the following: [1]
- (a) Spinal cord      (b) Cerebrospinal fluid
- (ii) Choose the odd one out from the following terms given and name the category to which others belong: [1]
- (a) Turtle, tortoise, crocodiles, frog
  - (b) Typhoid, COVID-19, Cholera, Tuberculosis
- (iii) Distinguish between the following pairs based on the instruction given in brackets: [3]
- (a) Prokaryotes and Eukaryotes [Organization of nucleus]
  - (b) Pisces and Amphibia [Organ of breathing]
  - (c) Vertebrates and Invertebrates [Presence of backbone]

(iv) Mention the function of the following structures: [3]

- (a) Tentacles      (b) Association neuron      (c) Gills

### Question 5

(i) Distinguish between mixed nerve and motor nerve. [2]

(ii) Give a feature of Arthropoda with one example and mention its classes. [2]

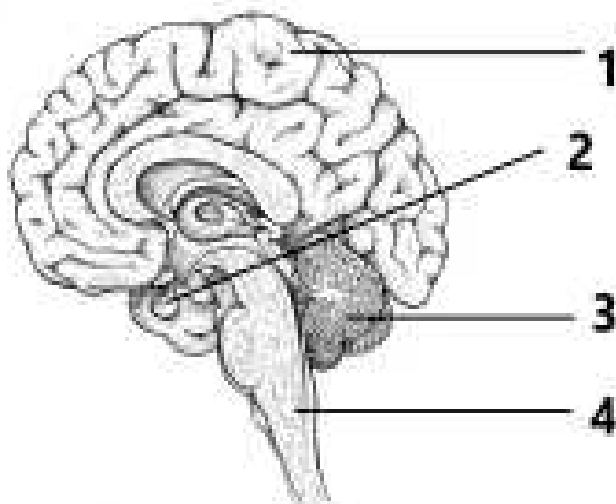
(iii) A person entered into a garden with variety of flowers. After a while he suddenly started sneezing and sniffing. [4]

(a) Identify the condition of the above person based on the given symptoms. Explain the underlying cause of the symptoms.

(b) Suggest two diagnostic tests that can be used to confirm the occurrence of this condition.

(c) Which is the most commonly preferred test for diagnosing this condition? Why?

(iv) Study the diagram given below and answer the following questions:



(a) Identify the diagram. [1]

(b) Label the parts 1,2,3 and 4. [1]

(c) Mention the significance of the part labelled 4. [2]

(d) Mention the organ system to which it belongs. [1]

(v) A student Rahul is conducting a microbiology experiment in his high school lab. He observes a sample of bacteria under the microscope and he writes down his observations: [2]

A: The rod-shaped bacteria seem to have a smooth surface

B: A cluster of spherical bacteria

(a) Name the types of bacteria as per the observations given by Rahul in A and B.

(b) Write any two uses of bacteria in daily life.

(vi) A student of grade 7 during the field visit collected the following plants:

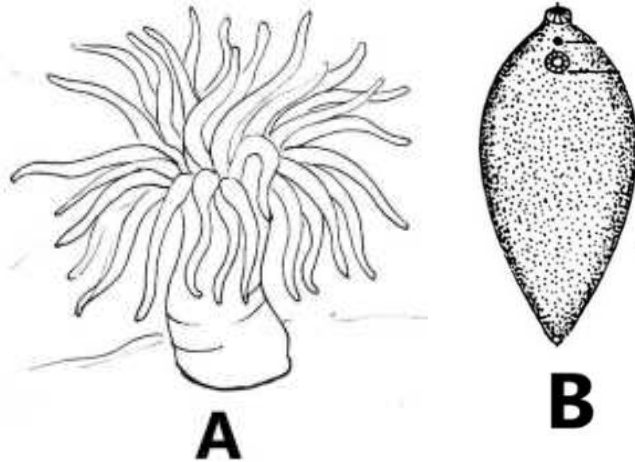
Rice, Pea, Brinjal, Grass, Rose, Maize

(a) Classify the following plants based on the number of cotyledons. [2]

(b) State any two differences between the mentioned groups.

[1]

(vii) Given below are the images of organisms observed by a student during a science exhibition. Study the same and answer the following questions:



(a) Identify the phylum to which the organism A and B belongs to.

[1]

(b) Write the distinguishing features of the two phyla mentioned in (a).

[1]

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