



विद्या सर्वार्थ साधिका

**ANANDALAYA**  
**PERIODIC TEST - 1**  
Class: XI

Subject: Biology (044)  
Date : 18-07-2024

MM : 40  
Time: 1 Hr. 30 min.

**General Instructions:**

1. There are 20 questions in all. All questions are compulsory.
2. This question paper has five sections: Section A, Section B, Section C, Section D and Section E. All the sections are compulsory.
3. Section A consists of ten MCQs and two Assertion and Reason questions of 1 mark each, Section B consists of two questions of 2 marks each, Section C consists of two questions of 3 marks each, Section D consists of two long questions of 5 marks each and Section E consists of two case study-based questions of 4 marks each.
4. There is no overall choice. Draw neat diagrams wherever necessary.

**SECTION A**

1. An attribute found in plants but not animals is \_\_\_\_\_. (1)  
(A) Metabolism (B) Sexual reproduction  
(C) Autotrophy (D) Asexual reproduction
2. Birds have undergone many structural adaptations to suit their aerial life. Find the odd one out from the given features: (1)  
(A) Streamlined body for rapid and smooth movement  
(B) Covering of feathers for conduction  
(C) Presence of pneumatic bones to reduce weight  
(D) Presence of additional air sacs to supplement respiration
3. Identify the incorrect statement on Euglenoids: (1)  
(A) They do not have a cell wall (B) They have two flagella  
(C) They have photosynthetic pigment (D) They can fix atmospheric nitrogen
4. Which among the following is involved in the naming of the animals scientifically? (1)  
(A) ICBN (B) ICPN (C) ICAN (D) ICZN
5. Select the hermaphrodite animals from the list: (1)  
(i) Cockroach (ii) Leech (iii) Housefly (iv) Tapeworm (v) Earthworm  
(A) (i); (iii) and (ii) (B) (iii) and (iv) only  
(C) (ii); (iv) and (v) (D) (i); (iv) and (v)
6. Which one of the following was not used by R. H. Whittaker for biological classification? (1)  
(A) Physiological characters (B) Thallus organisation  
(C) Phylogenetic relationships (D) Cell structure
7. Coenocytic refers to \_\_\_\_\_. (1)  
(A) Sharing of a common cytoplasmic region with multiple nuclei  
(B) Sharing of the common plasma membrane and cell wall  
(C) Sharing of a common hyphal wall through plasmodesmata  
(D) Sharing of a common nucleus and cell membrane
8. The common characteristics between tomato and potato will be maximum at the level of their \_\_\_\_\_. (1)  
(A) Family (B) Order (C) Division (D) Genus

9. Pick the correct statement about Ctenophores: (1)  
 (A) Ctenophores are bilaterally symmetrical (B) They are triploblastic  
 (C) They reproduce sexually (D) They have ciliated comb plates on their body
10. Water vascular system is the characteristic of \_\_\_\_\_. (1)  
 (A) Porifera (B) Ctenophora (C) Echinodermata (D) Chordata

For questions 11 and 12, two statements are given, one labelled Assertion and the other labelled Reason. Select the correct answer to these questions from the codes (A), (B), (C) and (D) as given below.

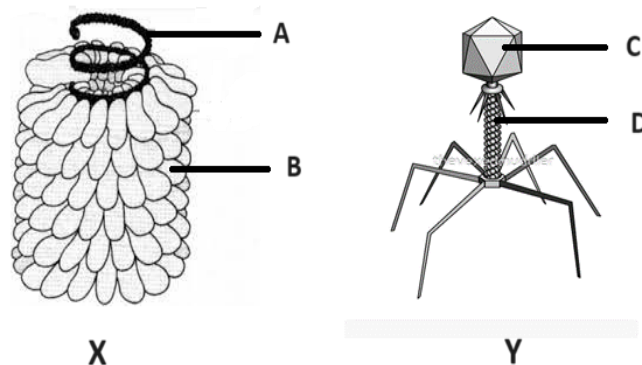
- (A) Both Assertion and Reason are true and Reason is the correct explanation of Assertion.  
 (B) Both Assertion and Reason are true but Reason is NOT the correct explanation of Assertion.  
 (C) Assertion is true but Reason is false.  
 (D) Assertion and Reason are false.
11. Assertion: Living organisms are self-replicating, evolving, and self-regulating unit. (1)  
 Reason: Living organisms are capable of responding to external stimuli.
12. Assertion: Anabaena inhabits root nodules of leguminous plants. (1)  
 Reason: Leguminous plants are an example of symbiotic nitrogen fixation.

### SECTION B

13. Some symbiotic organisms are very good pollution indicators composed of chlorophyllous and non-chlorophyllous members. Describe them. (2)
14. Distinguish between Virus and Viroid. (Two points only) (2)

### SECTION C

15. The diagram X and Y given below shows the non-cellular organisms. (3)



- (a) Identify 'X' and 'Y'.  
 (b) Name the parts labelled as A, B, C and D.  
 (c) Describe the structure of Y.

16. Which animal would you associate with the structures/ features given below and write its phylum? (3)  
 Carapace, Spiny body, Medusa, Mantle, Flame cells, Parapodia

### SECTION D

17. (a) List two major characteristic features of Protista. (5)  
 (b) Explain the four major groups of protozoans with suitable examples
18. (a) "All vertebrates are chordates but all chordates are not vertebrates." Justify the statement. (5)  
 (b) How important is the presence of air bladder in Pisces?  
 (c) What are the parasitic features observed in Platyhelminthes?

## SECTION E

Questions 19 and 20 are Case Study-Based questions. Each question carries 4 marks.

19. Read the following passages and answer questions: (4)
- Coelom is a fluid-filled space between the body wall and digestive tract. The presence or absence of a body cavity or coelom plays an important role in the classification of animals. Animals that possess a fluid-filled cavity between the body wall and digestive tract are known as coelomates. On the other hand, the animals in which the body cavity is not lined by mesoderm are known as pseudocoelomates. In such animals, mesoderm is scattered between ectoderm and endoderm. The animals in which the body cavity is absent are called acoelomates.
- (i) Which among the following statements is incorrect about acoelomates? (1)
- (A) Body cavity is absent in these types of organisms
  - (B) Coelenterates are the best examples of acoelomates
  - (C) Mesoderm holds the internal organs in its place
  - (D) Nematodes also belong to acoelomates
- (ii) Find the odd one out from the given: (1)
- (A) *Ascaris*                      (B) *Fasciola*                      (C) *Wuchereria*                      (D) *Ancylostoma*
- (iii) Phylum that includes cellular, asymmetrical and acoelomate organisms is \_\_\_\_\_. (1)
- (A) Porifera                      (B) Cnidaria                      (C) Ctenophora                      (D) Platyhelminthes
- (iv) Classify *Pheretima*, Sea-pen and *Planaria* in sequence based on their coelom: (1)
- (A) Coelomate;                      Acoelomate;                      Pseudocoelomate
  - (B) Acoelomate;                      Coelomate;                      Pseudocoelomate
  - (C) Coelomate;                      Pseudocoelomate;                      Coelomate
  - (D) Pseudocoelomate;                      Coelomate;                      Pseudocoelomate
20. The members of the Fungi kingdom are eukaryotic, heterotrophic and achlorophyllous. They are either unicellular or multicellular forms that are made up of hyphae. The network of hyphae forms the mycelium. These organisms reproduce in both sexual and asexual modes. Based on spore formation, fungi are classified as Phycomycetes, Ascomycetes, Basidiomycetes and Deuteromycetes. Based on the mode of nutrition, fungi are classified as saprophytic and parasitic forms. These are also found in symbiotic associations with plants. (4)
- (i) \_\_\_\_\_ is used as a biological tool by the scientists to understand plant genetics. (1)
- (A) *Neurospora*                      (B) *Aspergillus*                      (C) *Claviceps*                      (D) *Puccinia*
- (ii) Fungal cell wall is composed of \_\_\_\_\_. (1)
- (A) cellulose and pectin                      (B) chitin and glycoprotein
  - (C) chitin, glycoprotein and glucans                      (D) pectin, chitin and cellulose
- (iii) Mycorrhiza is correctly described as \_\_\_\_\_. (1)
- (A) Parasitic association between roots and some fungi
  - (B) Symbiotic relationship between fungi and roots of some higher plants
  - (C) Symbiosis of algae and fungi
  - (D) Relation of algae with the stem of some trees
- (iv) Sexual reproduction in Ascomycetes occurs through \_\_\_\_\_. (1)
- (A) somatogamy of zoospores                      (B) isogamy of zoospores
  - (C) anisogamy of ascospores                      (D) Both (B) and (C)