



ANANDALAYA  
SUMMATIVE ASSESSMENT – 1  
Class : XI

Subject: BIOLOGY  
Date : 23/ 09/ 2016

M.M: 70  
Time: 3 Hours

**General Instructions:**

1. All questions are compulsory.
2. This question paper consists of four Sections A, B, C and D. Section A contains 5 questions of 1 mark each. Answer them very briefly. Section B contains 5 questions of 2 marks each. Section C contains 12 questions of 3 marks each and one value based question of 4 marks. Section D contains 3 questions of 5 marks.
3. There is no overall choice. However, an internal choice has been provided in one of the questions of 3 marks and one question of 5 marks. Attempt only one of the choices in such questions.
4. Wherever necessary, the diagrams drawn should be neat and properly labelled.

**SECTION A**

1. Assign the following organisms possessing the following structures to their respective groups. (1)  
a) parapodia b) comb plates.
2. How do Botanical Gardens serve as Taxonomical Aids? (1)
3. What is the function of air bladder in fishes? (1)
4. What do the red tydes signify? (1)
5. Name an exotic animal that you have observed in the nearest zoological park. (1)

**SECTION B**

6. “Metabolism is the defining feature of all the organisms”. Justify the statement. (2)
7. A Taxonomist on an expedition discovered an unknown plant. What would be the procedure that would be followed to assign it different taxa and the scientific name? (2)
8. Explain the function of the following organs in the organisms that possess it. (2)  
a) Malpighian tubules b) Green Glands
9. Brian was studying different types of muscles in his school lab. He was confused between the structure of cardiac muscle and skeletal muscle. How would you help him? (2)
10. Mrunal was given a plant material to identify during the practical exam. It had conjoint vascular bundles with sclerenchymatous bundle sheath. What is the correct identification? (Add two more points of identification) (2)

**SECTION C**

11. What are Bulliform cells? What is its function in leaves? (3)
12. What are Annual rings? How are they formed? What is its significance to a student of Botany? (3)
13. What are the advantages of seed habit in Angiosperms, as the most evolved group? (3)
14. After studying Whittaker’s 5Kingdom classification, what drawbacks do you observe which needs rectifications? (3)
15. “Taxonomy involves the classification of organisms”. What different criteria would you use to study the Human population around you? (3)

16. Why is Deuteromycetes called Fungi Imperfecti? What led to the change in their taxonomic position? Give one example. (3)
17. Define the term "Phyllotaxy". Which are the three common types of phyllotaxy? Explain with examples. (3)
- (OR)
- Differentiate between Actinomorphic and Zygomorphic flowers with examples.
18. Migratory birds undertake long distance flight to reach a place of better climate. What adaptations do they possess which enable them to do so? (3)
19. How is the Phylum Arthropoda of great Economic importance to us? (3)
20. Mention the functions of the following: (3)
- a) Malpighian tubule      b) green glands
21. What are the salient features of Chordata? Which are its subphyla? (3)
22. What do the terms Phycobiont and Mycobiont signify? What is the latest addition to this? (3)
23. After learning about the various Taxonomical Aids, how will you sensitize the people in your surrounding area on the need to protect the flora and fauna? How would you spread awareness amongst your junior students on the same in the school? (4)

#### SECTION D

24. Explain alternation of generation in Bryophytes giving emphasis to Haplo-diplontic life cycle. (5)
- (OR)
- Explain the Sporophytic and Gemetophytic generations in Pteridophytes.
25. Which are the five major criteria considered for classifying animals? Explain them with examples. (5)
26. Why the connective tissues are called so? Explain the major types, locations and functions of the same. (5)