

# AMRITA VIDYALAYAM

## ANNUAL EXAMINATION 2018 -'19

Class : XI

Marks : 70

Time : 3 hrs

### BIOLOGY (044)

#### GENERAL INSTRUCTIONS:

1. All questions are compulsory. There are a total of 27 questions.
2. This question paper consists of 4 sections A, B, C and D.
3. Section A are very short answer questions of 1 mark each.
4. Section B are short answer questions of 2 marks each.
5. Section C are also short answer questions of 3 marks each.
6. Section D are long answer questions of 5 marks each.
7. There is no overall choice, however an internal choice has been provided in two questions of 1 mark each, two questions of 2 marks each, four questions of 3 marks each and all questions of 5 marks each. A student has to attempt only one of the alternatives in such questions.

#### SECTION - A

1. Give one example each of
    - a) Unicellular green algae.
    - b) Colonial green algae.
- OR
1. Name a tallest species of Gymnosperm.
  2. Name a living fossil.
  3. Expand PPLO.
- OR
1. Name the wallless Prokaryotic Organism.
  4. What is trihydroxy propane commonly called? Write its formula.
  5. Which plant hormone causes closure of Stomata during intense radiation or severe drought.

#### SECTION - B

6. Write the economic importance of Bryophytes.
- OR
7. Draw a haplontic life cycle.
  7. What is crossing over? Name the enzyme involved in this process.
- OR
8. Describe the following.
    - a) Synapsis
    - b) Bivalent
  8. What are Hydroponics? Mention their uses.
  9. What is meant by 'Z' scheme of electron transport system in photosynthesis.
  10. Give a schematic representation of major pathways of breakdown of glucose.
  11. Name the two portions of Adenohypophysis. Name one hormone secreted by each of them.
  12. Distinguish between Afferent and Efferent Neuron.

#### SECTION - C

13. Define aestivation. Which type of aestivation is found in China Rose, Calotropis and Pea.

14. What is the significance of Meiosis?
15. Name the different types of Heterocyclic compound present in the nucleotides of Nucleic acid.  
OR  
Who proposed the double helix model of DNA? Why are the two strands of DNA described as antiparallel?
16. Match the following.
- |                   |                                |
|-------------------|--------------------------------|
| a) Amphibia       | Air bladder                    |
| b) Mammals        | Cartilaginous Notochord        |
| c) Chondrichthyes | Mammary gland                  |
| d) Cyclostomata   | Pneumatic bones                |
| e) Osteichthyes   | Dual habitat                   |
| f) Aves           | Sucking without circular mouth |
17. Explain the different types of Phyllotaxy. Give example.
18. Discuss 'The respiratory pathway is an Amphibolic pathway'.
19. Draw the regions of the Root tip. Label the parts.  
OR  
Differentiate between Reticulate and Parallel Venation.
20. Give a brief account of the Counter Current Mechanism.  
OR  
Explain the autoregulatory mechanism of GFR.
21. Define Cardiac Cycle and Cardiac Output.
22. Draw a labelled diagram of a Neuron.  
OR  
Draw a diagram V.S of human eye and label any four parts of it.
23. What do you mean by photoperiodism and vernalisation?
24. How do the various leaf modifications help plants?

### SECTION - D

25. Diagrammatically represent the types of chromosomes based on the position of centromere. What does chromatin contain?  
OR  
Draw a labelled diagram of an Animal Cell.
26. Write down the steps of Glycolysis.  
OR  
Represent a Citric Acid cycle.
27. Name the components of the 'formed elements' in the blood and mention one major function of each of them.  
OR  
Draw a Standard ECG and explain the different segments in it.