AMRITA VIDYALAYAM

SECOND TERMINAL EXAMINATION 2018 -'19

Class : XI **Marks : 70**

Time : 3 hrs

BIOLOGY (044)

GENERAL INSTRUCTIONS:

1. All questions are compulsory. There are a total of 26 questions.
2. This question paper consists of five sections - A, B, C, D and E.
3. Section A contains very short answer questions carrying 1 mark each.
4. Section B contains short answer questions carrying 2 marks each.
5. Section C contains also short answer questions carrying 3 marks each.
6. Section D is a value based question carrying 4 marks.
7. Section E contains long answer questions carrying 5 marks each.
8. There is no overall choice. However, an internal choice has been provided in one question of 2 marks, one question of 3 marks and all questions of 5 marks. Attempt only one of the alternatives in such questions.

SECTION - A

1. Name the two major groups of Bryophytes.
2. Give the empirical formula of trichloroacetic acid.
3. What is heterophylly?
4. Name a technique that can be used to separate leaf pigments.
5. Write the equation of breakdown of glucose during respiration.

SECTION - B

6. Write the four important characteristics of pteridophytes.
7. Differentiate between green algae and red algae.

   OR

   Draw a Haplontic life cycle.
8. Mention any four physiological effects of gibberellins on plant growth.
9. What is ECG? Draw a standard ECG.
10. Differentiate between photoperiodism and vernalisation.

SECTION - C

11. Describe the secondary and tertiary structures of proteins.

    OR

    What are phosphor lipids? Name a phospholipid found in cell membrane and give its structural formula.
12. Define.

    a) Differentiation. b) Dedifferentiation. c) Redifferentiation.
13. Give a brief account of counter current mechanism.
14. What are Amino acids? Represent its Zwitter Ionic form.
15. Draw a diagrammatic sketch of a longitudinal section of kidney and label any six parts of it.
16. Explain the mechanism through which a sound produces a nerve impulse in the Inner Ear.
17. Write down the steps of Glycolysis.
18. Briefly describe the important steps of 'Sliding filament theory' of muscle contraction.
19. Explain the mechanism of generation and conduction of nerve impulse.

20. Represent a Citric Acid Cycle.
21. Explain the structure of Contractile proteins.
22. What are the major pathways of Anarerobic Respiration?

SECTION - D

23. Vidhi attended the guest lecture on photosynthesis with her biology teacher. Guest for the seminar explained the basic functioning of chloroplast in the photosynthetic processes. As students from different schools attended the seminar, the guest for the lecture asked all students to put forward their queries regarding the topic. Vidhi stood up and asked him that, she is unable to understand the division of labour in the chloroplast. He appreciated her doubts and explained her about the same.
    a) What do you understand by the division of labour in chloroplast?
    b) How the different pigments are involved in photosynthesis?
    c) What is the significance of photosynthesis for animals?
    d) Elucide the value shown by Vidhi as a good biology student.

SECTION - E

24. What are Nucleic Acids? Describe the double helix structure of DNA.

    OR

    What are enzymes? Describe the factors affecting enzymatic activity.
25. Describe the structure of human heart.

    OR

    Draw a diagram to show internal structure of human heart.
26. Describe the different stages of Calvin Cycle.

    OR

    Differentiate between Photosystem I and Photosystem II.