

Annual Examination 2015-16

Science - Biology

Class – XI

Time allowed: 3 hours Maximum Marks: 70

General instructions:

- a) All questions are compulsory.
- b) There are 26 questions in total. Q. Nos. 1 to 5 carry 1 mark each, Q. nos. 6 to 10 carry 2 marks each, Q. nos. 11 to 22 carry 3 marks each, Q. no. 23 carry 4 marks and Q. nos. 24 to 26 OTBA questions carry 3, 3 and 4 marks respectively.
- c) The diagram should be neatly and properly drawn, wherever necessary.

Section A

- 1. What are lysosomes?
- 2. Name the conductive tissue responsible for the conduction of water in plants.
- 3. What will happen to a plant cell if kept in a solution having higher water potential?
- 4. Define venation.
- 5. Which organism have intranuclear mitosis.

Section B

- 6. (i) What is an enzyme?
(ii) Cite an example for apoenzyme.
- 7. Distinguish between
 - (i) Microfilaments and microtubules
 - (ii) Chromatin and chromosomes.
- 8. What are medullary rays? Also mention their functions?
- 9. Deficiency of which element leads to the formation of yellowish edges appearance in leaves **OR** Of what tissues endoskeleton is made up of? Give its main parts.
- 10. (i) What is an enzyme?
(ii) Give one example of a proenzyme.

Section C

11. How are thick and thin filaments arranged in a muscle fibre?
12. What is the difference between 'florigen' and other growth hormones?
13. What is aestivation? Describe its various types found in petals,
14. Give details about functional unit of kidney.
15. Give an account of intercellular junctions.
16. Name the types of cells found in aerolar tissue. Also give the functions of each type.
17. Explain why?
 - (i) Chlorophyll-a occurs in different forms.
 - (ii) Chloroplast are generally located at the outer margins of mesophyll cells.
 - (iii) Photorespiration is considered as wasteful process.
18. Name the organism involved in symbiotic nitrogen fixation. What are the components needed for this purpose? Explain their roles?
19. What are the advantages of anaerobic respiration in living beings?
20. State the physiological functions of three water soluble vitamins.
21. What is the utility of an enzyme in a cell?

Or

Write a note on types and structures of proteins.

22. Explain the process of biosynthetic phase of photosynthesis occurring in the chloroplast?

Section D

23. During a lecture, a biology teacher makes the statement that, "Brain is the master of all nerve actions". After class, Vijay was confused about role of brain in nerve action and asked the teacher to elaborate the statement. Teacher smiled and explained him.
 - (i) What is a brain?
 - (ii) Name the parts of brain.
 - (iii) Also mention its functions.
 - (iv) What are the values shown by Vijay?

Section E

24. OTBA
25. OTBA
26. OTBA