



JAIN COLLEGE, Bangalore
Mock Paper January - 2016
I PUC – Biology (36)

Time: 3 Hours 15 Minutes

Max. Marks: 100

PART A

I. Answer the following questions in one word or one sentence each: 10 × 1 = 10

1. What are taxonomic aids?
2. What are cofactors?
3. What is phyllotaxy?
4. How does diffusion differ from facilitated diffusion?
5. What are thylakoids?
6. Define water potential.
7. In which muscular tissue intercalated discs are found?
8. Name the stage of cell cycle where DNA replication takes place?
9. Name the nodule forming bacteria in nonleguminous plants.
10. Define inspiratory reserve volume.

PART B

II. Answer any five of the following questions in about 3-5 sentences each wherever applicable. 5 × 2 = 10

11. Write the difference between virus and viroids.
12. What are radial and conjoint vascular bundles?
13. What is binomial nomenclature? Who proposed it?
14. Draw a neat labeled diagram of Nostoc filament.
15. Write any two physiological effects of cytokinins on plants.
16. Mention the significance of Mitosis.
17. List the functions of HCl in digestion.
18. What are myofibrils? Name two important proteins present in myofibrils.

PART C

III. Answer any five of the following questions in about 40-80 words each wherever applicable. 5 × 3 = 15

19. Explain the mechanism of blood clotting.
20. Define the following: a) Differentiation b) Dedifferentiation c) Redifferentiation
21. What is Hydroponics? Briefly explain the technique involved in it..
22. Explain the process of Carbohydrate digestion in human alimentary canal.
23. Write a note on sclerenchyma tissue.
24. a) Draw a neat labeled diagram of stomatal apparatus.
b) Mention one difference between Dicot and Monocot stomatal apparatus.
25. Draw a neat labeled diagram of T 4 bacteriophage.
26. With reference to lipids, state what are,
a) oils b) fats c) waxes

PART D SECTION I

IV. Answer any four of the following questions in 200-250 words each, wherever applicable. 4 × 5 = 20

27. List the general characters of phylum Annelida.
28. Explain the Fluid mosaic model of the plasma membrane with a neat labeled diagram.
29. Explain the classification of Enzymes.
30. List the differences between chondrichthyes and osteichthyes.
31. Describe the conducting system of heart.
32. List any five hormones of pituitary gland and write one function of each.

SECTION II

V. Answer any three of the following in about 200-250 words each wherever applicable:

3 × 5 = 15

33. Write the schematic representation of Calvin cycle..
34. a) Briefly explain alcoholic fermentation.
b) What is R.Q? Name the respiratory substrate whose R Q value is one.
35. Mention the types of placentation with an example.
36. Draw a neat labeled diagram of Neuron.
37. What are Macronutrients? Mention the role of any four macronutrients.