



JAIN COLLEGE, J C Road, Bangalore
Mock Paper January - 2017
I PUC – Biology (36)

Time: 3 Hours 15 Minutes

Max. Marks: 70

PART A

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

1. What is metagenesis?
2. Name the embryonic part of the seed which produces the root system.
3. Where do you find bulliform cells?
4. What is the name of colourless plastid?
5. In which phase of cell cycle does DNA synthesis occur?
6. Define guttation.
7. Name the site of glycolysis.
8. Define reflex action.
9. Name the pigment that gives colour to urine.
10. Name the basic unit of classification.

PART B

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

11. Write any four rules of binomial nomenclature.
12. Define A. Metamerism. B.Cephalisation.
13. What is inflorescence? Mention two main types of inflorescence.
14. Sketch and label a striated muscle fibre.
15. Write any two differences between male and female cockroach.
16. What are ergastic substances? Give two examples.
17. Define water potential. Mention its components.
18. Explain sigmoid growth curve in plants.

PART C

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

19. Mention a function each of a.ACTH b.ADH c.Thymosin.
20. Sketch and label v.s of human kidney.
21. Write schematic representation of non-cyclic photophosphorylation.
22. Define the following terms: a. Cardiac cycle. b. Stroke volume c. Pulse.
23. Write a note on biological nitrogen fixation.
24. What is vascular bundle? Explain different types of vascular bundles.
25. Write a brief note on Ctenophora.
26. What is heterospory? Comment on its significance.
27. Explain the role of Keys and Herbaria as taxonomic aids.
28. Give a brief account of classification of kingdom Mycota.

PART D SECTION I

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

29. Describe the various types of Life cycles in plants.
30. Assign the following structures to their respective phyla.
a. Nematocysts. b. Setae. c. Tubefeet. d. Colloblasts .e. Solenocytes.
31. Draw a neat diagram of neuron, label the parts and explain.
32. Mention the steps of glycolysis with the help of schematic representation.

SECTION II

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

3 × 5 = 15

33. Explain the practical applications of auxins.
34. Describe the various pathways of Carbon di oxide transport in blood.
35. Transpiration is a necessary evil. Discuss.
36. Explain external features of cockroach with a neat labelled diagram.
37. Describe the important properties of enzymes.