



Jain College, Jayanagar
I PUC MOCK PAPER I – JAN 2020
Subject: Biology (36)

Duration: 3hr15 minutes

Max.Marks: 70

GENERAL INSTRUCTIONS:

- i) This question paper consists of four parts A, B, C and D. Part D consists of two parts, Section-1 and Section-II.
- ii) All the parts are compulsory.
- iii) Draw the diagrams whenever necessary. Unlabelled diagrams or illustrations do not attract any marks.

Part-A

Answer the following questions in *one* word or *one* sentence each:

10x1=10

1. What is Gemma?
2. What is stroke volume?
3. What is toxicity of Micronutrients?
4. What is polysome?
5. Give an example of an animal with notochord present only in the larval tail.
6. What is Vernalization?
7. What is aestivation?
8. Why is ADH necessary in our body?
9. What is Facilitated diffusion?
10. Why does carbonic acid form at a faster rate within RBC than in plasma during transportation of respiratory gases?

Part-B

Answer any **FIVE** of the following questions in **3-5** sentences each, wherever applicable: **5x2=10**

11. Explain clotting of blood in human being.
12. Differentiate lactic acid fermentation from alcoholic fermentation.
13. List four economic importance of family Solanaceae with one example in each.
14. Differentiate between early wood and late wood.
15. Name the hormones secreted by atrial wall of heart and JGA cells of kidneys in humans.
Mention one function for each hormone.
16. List the physiological role of Cytokinins and Gibberellic acid.
17. List any two famous botanical gardens.
18. Draw neat labelled diagram of skeletal muscle.

Part-C

Answer any FIVE of the following questions in 40-80 words each, wherever applicable: 5x3=15

19. Explain Terminal oxidation process / Electron transport system.
20. Write one example each of the following:
 - a) Cold blooded animal
 - b) Warm blooded animal
 - c) Animal possessing dry and cornified skin.
21. a) Write short note on autotrophic bacteria.
b) What is “contagium vivum fluidum”.
22. Explain the terms:
 - a) differentiation
 - b) dedifferentiation and
 - c) re differentiation.
23. Draw a neat labelled diagram of areolar connective tissue.
24. Explain the types of life cycle pattern with respect to Alternation of generation in plants.
25. Explain different types of flowers based on position of floral parts with example.
26. Write a symptomatic feature of each of the following disorder.
 - a) Gout
 - b) Jaundice
 - c) Asthma

Part- D

Section-I

Answer any FOUR the following questions in 200-300 words each, wherever applicable: 4x5=20

27. a) Describe the fluid mosaic model of cell membrane.
b) List any four important characters of gymnosperms.
28. What is Glomerular filtrate? Write the functions of PCT and DCT in urine formation.
29. Give the schematic representation of glycolysis.
30. Draw a neat labelled diagram of Endoplasmic reticulum.
31. Explain Biological nitrogen fixation with suitable diagrams of root nodule formation.
32. Write five salient features of phylum Arthropoda.

Section-II

Answer any THREE of the following questions in 200-250 words each, wherever applicable: 3x5=15

33. Draw a neat labelled diagram of human respiratory system.
34. Explain Hatch and Slack pathway with neat labelled sketch.
35. Differentiate between mitosis and meiosis.
36. a) List any 4 role of fungi in our daily life. **(2)**
- b) Which are the four major groups of protozoans? **(2)**
- c) Define taxon. **(1)**
37. Explain how carbon dioxide is transported from the tissues to the lungs in human beings.
