

First PUC Annual Examination, January-February - 2019

Time:- 3-15 Hours

Subject: Biology (36)

Max. Marks:- 70

General Instructions:

- This question paper consists of four parts - A, B, C and D. Part - D consists of two sections - Section - I and Section - II.
- All the parts are compulsory.
- Draw diagrams wherever necessary. Unlabelled diagrams or illustrations do not attract any marks.

PART - A

I Answer the following questions in one word or in one sentence each.

10 x 1 = 10

1. Define species.
2. What is hypogynous flower?
3. Who proposed 'fluid mosaic model' of plasma membrane?
4. What is mycorrhiza?
5. Mention any two nitrifying bacteria.
6. What is Asthma?
7. Which part of the brain contains corpora quadrigemina?
8. How trichomes are helpful to plants?
9. At the end of meiosis how many haploid cells are formed?
10. What is resting potential?

PART - B

II Answer any FIVE of the following questions in 3 to 5 sentence each. Wherever applicable.

5 x 2 = 10

11. What are lichens? Mention its components.
12. List any four physiological effects of Auxins.
13. Write the role of pepsin and rennin in the stomach.
14. Mention the proteins found in thick and thin filaments of myofibrils.
15. Differentiate between exocrine and endocrine glands.
16. Write any four salient features of phylum Ctenophora.
17. Mention the factors which help in binding of O_2 with haemoglobin.
18. Classify chromosomes based on the position of centromere.

PART - C

III Answer any FIVE of the following questions in 40 to 80 words each. Wherever applicable.

5 x 3 = 15

19. Assign the following plants to their respective families.
a) Groundnut b) Tomato c) Onion
20. Write the events of Telophase of mitosis.
21. Write any three uses of ethylene.
22. Briefly explain the process of coagulation of blood.
23. Mention and explain any three taxonomical aids.
24. Dicot root do not possess cambium, yet it shows secondary growth. Comment on.
25. Bile juice, enterokinase and HCl are essential for digestion. Give reasons.
26. Why transmission of impulse across an electrical synapse is always faster?

PART - D

SECTION - I

IV Answer any FOUR of the following questions in 200 to 250 words. Wherever applicable.

4 x 5 = 20

27. Give an account of sporophytic generation in Pteridophytes.
28. Explain the structure of chloroplast with a diagram.
29. Describe the functions of any five essential nutrient elements in the plant cells.
30. Sketch and label the L.S. of human kidney.
31. What are proteins? Describe the four levels of protein structure.
32. Differentiate between Chondrichthyes and Osteichthyes.

SECTION - II

V Answer any THREE of the following questions in 200 to 250 words. Wherever applicable.

3 x 5 = 15

33. Explain apoplast movement of water.
34. State Blackman's 'Law of Limiting Factors' and explain the four factors affecting photosynthesis.
35. Draw a neat labelled diagram of alimentary canal of Cockroach.
36. Give the schematic representation of citric acid cycle.
37. Write one function each of the following hormones:
a) TSH b) ACTH c) ADH d) PTH e) Progesterone.

