

First PUC Annual Examination - February - 2020

Time : 3-15 Hrs.

Subject - Biology (36)

Max. Marks : 70

Instructions :

1. This question paper consists of four parts A, B, C and D. Part 'D' consists of two parts. Section I and Section II.
2. All the parts are compulsory
3. Draw diagrams wherever necessary un labelled diagrams or illustrations do not attract any marks.

PART - A

Answer the following questions in one word or one sentences each.

10x1=10

1. Define metabolism.
2. Which cell can fix atmospheric nitrogen in some of the cyanobacteria.
3. What is venation?
4. Mitochondria are called 'Power houses' of the cell. Why?
5. Name the phase of cell cycle which involves DNA replication.
6. What is guttation?
7. Mention the technique of growing plants in a nutrient solution.
8. Name the antibacterial agent present in saliva.
9. What is tetany?
10. Define hormones.

PART - B

Answer any FIVE of the following questions in three to five sentence each wherever applicable.

5x2=10

11. List any two difference between chordates and non-chordates.
12. What are tendons and ligaments?
13. Why the Golgi apparatus remains in close association with endoplasmic reticulum.
14. Differentiate hypotonic and hypertonic solution.
15. Abscissic acid (ABA) is called 'Stress hormone'. Justify.
16. Mention two types of circulatory system.
17. Write antigens on RBC's and antibodies in plasma of the universal donor blood group and universal recipient blood group.
18. Bile juice contains no digestive enzymes. Then how does it helps for digestion?

PART - C

Answer any FIVE of the following questions in 40-80 words wherever applicable.

5x3=15

19. What is Binomial nomenclature? Write any two universal rules of nomenclature.
20. 'Flower is modified shoot'. Substantiate your answer.
21. Write about significances of meiosis.
22. How is mycorrhizal association helpful in absorption of water and minerals in plants?
23. List any three physiological roles of cytokinins.
24. Briefly explain disorders of Respiratory system.
25. Mention three types of body movements.
26. Classify the animals based on nitrogenous wastes excreted by them.

PART - D - SECTION - I

Answer any FOUR of the following questions in 200-250 words each.

4x5=20

27. Write five salient features of Bryophytes.
28. a) Describe three types of simple epithelial tissues based on structural modification of the cells.
b) Write any two functions of bones.
29. Draw a neat labelled diagram of T.S. of Dicot Root.
30. Explain any five classes of enzymes based on the type of reactions they catalyse.
31. Mention any one importance of the following macro nutrients.
a) Nitrogen b) Phosphorus c) Potassium d) Calcium e) Magnesium
32. Draw neat labelled diagram of multipolar Neuron.

3+2

SECTION - II

Answer any THREE of the following questions in 200-250 words wherever applicable.

3x5=15

33. List any five characters of class Aves.
34. Draw a neat labelled diagram of Animal cell.
35. a) State Blackman's law of limiting factors.
b) Mention external factors affecting photosynthesis.
36. Give the schematic representation of Glycolysis.
37. Name any five hormones secreted by the pituitary gland and mention any one function of each.

1 + 4

