

General Instructions :

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

Part - A**Answer the following questions in one word or one sentences each.****10x1=10**

1. Define Metabolism.
2. What is Placentation?
3. What are Goblet Cells?
4. Gram negative Bacteria do not take stain - Give reason.
5. Name the Monomers of Protein molecule.
6. Define Imbibition.
7. What is 'critical concentration' of Essential elements?
8. Name the flat bone on Ventral midline of Thorax of Human body.
9. Define Hormone.
10. What are Polyribosomes?

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

11. Define Species. Write the biological names of any two plants.
12. Write any four characters of Virus.
13. Enumerate four salient features of Pteridophytes.
14. Mention the function of following organs.
 - (i) Malpighian tubules.
 - (ii) Comb plates.
15. Classify the chromosomes based on the position of Centromere.
16. What is Respiratory Quotient? Mention R.Q. Value of Proteins.
17. Distinguish between Dedifferentiation and Redifferentiation.
18. Name any four types of Synovial joints.

Part - C**Answer any FIVE of the following questions in 40 to 80 words each, wherever applicable.****5x3=15**

19. Pigments are the basis of classification in Algae - Justify the statement.
20. Give the meaning of the following - with an example each.
 - (i) Parallel venation
 - (ii) Opposite Phyllotaxy
 - (iii) Trimerous flower.
21. Mention any six secondary metabolites of Plants.
22. Discuss the steps and the major pathways of Anaerobic respiration.

23. Mention the three phases of Growth.
24. Describe the process of carbohydrate digestion in small intestine.
25. Summarise the mechanism of Transport of oxygen in Blood.
26. Mention any Three disorders of Human Excretory system.

Part - D

SECTION - I

Answer any FOUR of the following questions in 200-250 words each, wherever applicable. 4x5=20

27. Enumerate any four salient features of class Amphibia, giving any two examples.
28. Draw a neat labelled diagram of T.S. of Dorsiventral leaf.
29. Explain the structure of Chloroplast with a neat labelled diagram.
30. Write any five differences between Mitosis and Meiosis.
31. Explain Joseph Priestley's - experiments on photosynthesis using candle and a plant.
32. Mention any one Hormone secreted by the following glands.
 - (i) Adrenal gland
 - (ii) Thymus gland
 - (iii) Pineal gland
 - (iv) Ovary
 - (v) Testes

SECTION - II

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

33. Mention the function of following organs :-
 - (i) Forewings of Cockroach.
 - (ii) Crop in alimentary canal of Cockroach.
 - (iii) Typhlosole in alimentary canal of Earth worm.
 - (iv) Setae in Earthworm.
 - (v) Spiracles of Cockroach
34. Describe the structure of stomatal apparatus in Dicot plants.
35. Schematically represent Nitrogen Cycle and explain.
36. (a) Name the formed elements of Blood.
(b) Write a note on Erythroblastosis foetalis.
37. Draw a neat labelled diagram of sagittal section of Human Brain.

3
2