

MODEL QUESTION PAPER-2
FOR REDUCED SYLLABUS 2020-21
SUBJECT: BIOLOGY (36)
1st year PUC

Time: 3 Hours and 15 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-I and Section-II.**
- ii) All the Parts are Compulsory.**
- iii) Draw diagrams wherever necessary. Unlabeled 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 binomial nomenclature?
2. Name the family to which brinjal belongs.
3. Name a polymer of fructose.
4. Define Photosynthesis.
5. What is the average life span of RBCs?
6. Which part of the flower is brightly coloured to attract insects for pollination?
7. Why mitochondria are called “power houses of cell”?
8. In which part of the brain, you find ‘corpora quadrigemina’?
9. While observing an animal, it is found that the animal has single opening outside that serves as both mouth and anus. What type of digestive system does it represent?
10. Name the tissue which provides structural frame to our body.

PART-B

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

11. Mention four classes of Pteridophytes.
12. Mention any two types of simple epithelial tissue.
13. What is respiratory quotient? Write RQ value of fats.
14. Mention the stages involved in the mechanism of muscle contraction.
15. List any two characteristics of living organisms.
16. Write any two characteristics of visceral muscle.
17. Which cell division conserves specific chromosome number across generations in sexually reproducing organisms? How?
18. Draw a neat labeled diagram of nucleus.

PART-C

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

19. Define the following.
(i) Metagenesis (ii) Metamerism (iii) Bioluminescence
20. What is inflorescence? Mention two major types.
21. List the events of pachytene stage.
22. Classify the plastids based on the type of pigments they contain.
23. Which hormone deficiency is responsible for the following?
i) *Diabetes mellitus* ii) Goitre iii) Dwarfism
24. i) “Very often sea and its tides appear red”. Give biological reason.
ii) “Lichens are good pollution indicators”. Justify the statement.
iii) “Viruses did not find a place in Biological Classification”. Why?
25. “Some tissues of Heart, Kidney and Gastro Intestinal tract produce Hormones”.
Substantiate the statement by naming the hormones produced by them.
26. Draw a labeled diagrammatic presentation of ATP synthesis in Mitochondria.

PART-D

Section-I

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

27. Write the salient features of Bryophytes.
28. Mention one function for each of the following organelles:
 - i) ER ii) Golgi apparatus iii) Chloroplast iv) Lysosome v) Ribosome
29. List five main groups of natural plant growth regulators.
30. What are nephrons? Write the functions of nephron tubules in urine formation.
31. Enumerate the salient features of Class Amphibia.
32. Draw a neat labeled diagram of human respiratory system.

Section-II

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

33. Classify the enzymes based on the type of reactions they catalyse.
34. State Blackman's law of limiting factors. Explain the external factors affecting photosynthesis.
35. "In our body nerve impulses are generated and conducted by active transport of ions". Justify the statement with suitable explanation.
36. i) Draw a neat labeled diagram of areolar connective tissue (3).
ii) Sketch and label adipose tissue (2).
37. Explain blood clotting mechanism in human beings.

