

**Second Year B.Sc., Degree Examination****August/September 2010***(Distance Education) New Scheme**(Freshers)***ZOOLOGY****Paper II: Histology, Comparative Anatomy, Biochemistry,  
Biotechnology and Physiology**

Time: 3 hrs]

[Max.Marks: 85

**Instructions to Candidates :**

1. All questions are compulsory.
2. Answer one mark questions in the first two pages of the main answer book.
3. Draw diagrams wherever necessary.

**I. Simple Questions.****Answer in a word, phrase or in a sentence:**

12 X 1 = 12 Marks

1. What are Nephrons?
2. Where do you find Femur Bone?
3. What are Monosaccharides?
4. Mention the water soluble vitamins.
5. What are plasmids?
6. Define enzymes.
7. What is meant by Gene-therapy?
8. State the law of Q<sub>10</sub>.
9. What is meant by a Multipolar Neuron?
10. What is Sarcomere?
11. Give an example for Neurotransmitter.
12. Define Bioluminescence.

**II. Short Answer Questions.****Answer any SIX of the following:**

6 X 3 = 18 Marks

13. Draw a neat labelled diagram of T.S. of Skin.
14. Write three biological importance of carbohydrates.

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15. Write a note on deficiency diseases of Vitamin C.
16. What is meant by Genome Library? Write two uses.
17. Write the composition of Blood.
18. Explain synaptic transmission.
19. Draw a neat labelled diagram of Reflex-Arc.
20. Write the functions of placenta.

**III. Medium Answer Questions.**

*Answer any SEVEN of the following:*

7 X 5 = 35 Marks

21. Describe the histology of Testis.
22. Explain the evolutionary trends in the structure of Heat of Shark and Frog.
23. Classify proteins with examples.
24. Mention any five biological importance of Lipids.
25. Write the classification of enzymes.
26. Explain the deleterious effects of Tobacco smoking.
27. Explain Osmoregulation in freshwater Teleosts.
28. Explain Bioluminescence in Noctiluca. Add a note on significance of Bioluminescence.
29. Explain the functions of Islets of Langerhans.

**IV. Long Answer Questions.**

*Answer any TWO of the following:*

2 X 10 = 20 Marks

30. Describe histology of stomach with a neat labelled diagram.
31. What are Vitamins? Explain the structure and functions any two fat soluble vitamins.
32. What is DNA Fingerprinting? Explain the technique with diagrams. Write on its applications.
33. Describe the ultrastructure of a striated muscle fibre with diagrams.

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