

Second Year B.Sc., Degree Examinations

December 2017

(Directorate of Distance Education)

ZOOLOGY

DSB310: Paper II : Histology, Comparative Anatomy, Biochemistry, Biotechnology & Physiology

Time: 3 hrs.]

[Max.Marks:75/85

Instruction to the Candidates :

- 1. Students who have attended 25 Marks IA scheme will have to answer for total of 75 marks.*
- 2. Students who have attended 15 Marks IA scheme will have to answer for total of 85 marks.*
- 3. One mark questions should be answered in first two pages of the answer book.*
- 4. Draw neat diagram wherever necessary.*
- 5. All questions are compulsory.*
- 6. Q.No. V is compulsory for 85 marks scheme.*

I. *Simple answer questions :*

10 X 1= 10 Marks

Answer in a word, or a phrase or a sentence.

- 1. Expand F.S.H.*
- 2. What is venous heart ?*
- 3. What are enzymes ?*
- 4. Define Blood pressure.*
- 5. Define synapse.*
- 6. Name the deficiency disease of Vitamin A.*
- 7. What is the function of Sertoli cells?*
- 8. What are fibrous proteins?*
- 9. Define Biotechnology.*
- 10. What are endocrine glands ?*

II. *Short answer questions :*

Answer any FIVE of the following.

5X 3= 15 Marks

- 11. Draw a neat labeled diagram of multipolar neuron.*

Contd...2

12. Write the significance of Bioluminescence.
13. Classify carbohydrates with examples.
14. What are the scopes of Biotechnology?
15. Draw a labeled diagram of T.S. of Pancreas.
16. Write a note on the typical vertebra of Frog.
17. What are the types of fatty acids? Give examples.

III. *Medium answer questions :*

Answer any FIVE of the following.

5X6= 30 Marks

18. Describe the adaptive changes of animals in desert environment.
19. Write a note on plasmid vectors.
20. Describe the histology of small intestine.
21. Classify enzymes and give one example for each.
22. Explain osmoregulation in Teleosts.
23. Write the schematic representation of glycolysis.
24. Explain the mechanism of CO₂ transportation.

IV. *Long answer questions :*

2X10=20 Marks

Answer any TWO of the following.

25. Mention the hormones secreted by pituitary gland. Add a note on its functions.
26. Explain the evolutionary trends in the development of aortic arches in vertebrates.
27. Describe the ultra structure of striated muscle. Add a note on Neuromuscular Junction.
28. Explain the mechanism of conduction of nerve impulse. Add a note on reflex action.

V. *Compulsory question for 85 marks scheme only. Long answer questions.*

Answer any ONE of the following.

1X10=10 Marks

29. Describe histology of Adrenal gland with a neat labeled diagram. Add a note on its functions.
30. Briefly explain the following :
 - a) Bioluminescence in Noctiluca
 - b) Biological importance of proteins
