

**Second Year B.Sc., Degree Examinations**

**September/October 2015**

*(Directorate of Distance Education)*

**ZOOLOGY**

**DSB310 : Paper II : Histology, Comparative Anatomy, Biochemistry,  
Biotechnology and 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 :***

***1X10= 10 Marks***

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

- 1. What is an endocrine gland?*
- 2. Define pace-maker.*
- 3. Name the deficiency disease of Vitamin D.*
- 4. Give an example for disaccharide.*
- 5. What are globular proteins?*
- 6. What are co-enzymes ?*
- 7. Define 'Vector'.*
- 8. What is hibernation ?*
- 9. Define reflex action.*
- 10. What is myogenic heart ?*

**II. *Short answer questions :***

***Answer any FIVE of the following.***

***5X 3=15 Marks***

- 11. Classify lipids with examples.*

***Contd...2***

12. Draw a labelled diagram of T.S. of Stomach.
13. What are conjugated proteins? Give an example.
14. Write any 3 functions of 'Vitamin 'A''
15. Differentiate between osmoconformers and osmoregulators.
16. Explain 'Chloride Shift'.
17. Mention the respiratory pigments and their functions.

**III. Medium answer questions :**

*Answer any FIVE of the following.*

**5X6= 30Marks**

18. Describe the adaptive changes of animals in cold environment.
19. Describe the ultra – structure of Striated muscle fibre.
20. Describe the histology of testis.
21. Explain 'Insulin synthesis'.
22. Write the properties of Enzymes.
23. Explain osmoregulation in 'Camel'.
24. Describe origin and conduction of nerve impulse.

**IV. Long answer questions :**

**2X10=20 Marks**

*Answer any TWO of the following.*

25. Describe the role of Bio-technology in human health.
26. Explain the evolutionary trends in the structure of vertebrate heart.
27. Explain muscle contraction and Neuro-muscular junction.
28. Explain the TCA cycle.

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

*Answer any ONE of the following.*

**1X10=10 Marks**

29. What is DNA fingerprinting? Explain the technique with diagrams. Write on its applications.
30. Define Bioluminescence. Explain its types and mechanism of light production. Add a note on its significance.