ZOO 301.1 **Reg. No. .....**

CREDIT BASED THIRD SEMESTER B.Sc. DEGREE EXAMINATION – OCTOBER 2013

ZOOLOGY

PHYSIOLOGY, BIOCHEMISTRY AND IMMUNOLOGY

Duration: 3 hours **Max marks: 80**

Note: Answer any TEN Questions from Part-A
Answer SIX questions from Part-B choosing any two questions from each unit.

PART A

I. Answer any <u>TEN</u> of the following: **2x10=20**

13. What are euryhaline organisms? Give two examples.
14. Name any two amino acids involved in Kreb's Urea Cycle.
15. What chloride shift?
16. Write the R.Q. of (i) Lipids (ii) Proteins
17. What is hypertension? Mention two causative factors for hypertension.
18. Mention any two functions of bile.
19. Draw a neat labeled diagram of smooth muscle fibre.
20. Define 'resting potential' in a neuron.

21. What are essential amino acids? Give two examples.
22. What are hydrolases? Give two examples.
23. What is pellagra?
24. What is MALT?

PART-B

UNIT-I

II. a) Explain counter current multiplier system in humans. 07

b) Write any three adaptations of Kangaroo rat for osmoregulation. 03

III. a) Define osmoregulation. Differentiate osmoregulation in marine and freshwater teleosts. 07

c) Write a short note on haemocyanin. 03

IV. a) Comment on different branches of physiology. 05

b) Explain oxygen dissociation curve with a graphic illustration. 05

UNIT-II

V. a) Explain the composition of human blood. 07

b) Name the enzymes present in pancreatic juice. 03

VI. a) Explain the structure of multipolar neuron with a neat labeled diagram. 07

b) What is the significance of double circulation? 03

VII. a) Give an account of sliding filament theory. 05

c) Explain the role of sodium in the absorption of carbohydrates. 05

UNIT-III

VIII. a) Explain the mechanism of enzyme catalysed reaction. 07

c) Write a short note on lipoproteins. 03

IX. a) Classify monosaccharides with examples. 07

b) Differentiate between innate and acquired immunity. 03

X. a) What are the biochemical functions of Vitamin C? Comment on its deficiency

disorders. 05

b) Give an account of primary lymphoid organs in human . 05

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ZOO 301.1 **Reg. No. .....**

CREDIT BASED THIRD SEMESTER B.Sc. DEGREE EXAMINATION – OCTOBER 2014

ZOOLOGY

PHYSIOLOGY, BIOCHEMISTRY AND IMMUNOLOGY

Duration: 3 hours **Max marks: 80**

Note: Answer any TEN Questions from Part-A
Answer SIX questions from Part-B choosing any two questions from each unit.

PART A

I. Answer any <u>TEN</u> of the following: **2x10=20**

25. Define physiology. Explain any two branches of physiology.
26. What are chloride secreting cells? Mention its function.
27. What is counter-current Mechanism?
28. What are respiratory pigments? Give an example.
29. What is double circulation? Mention its significance.
30. Mention any two functions of bile.
31. Draw a neat labeled diagram of smooth muscle fiber.
32. What are afferent and efferent neurons?
33. Define homoplysaccharides. Give an example.
34. What are enzyme inhibitors? Give an example.
35. What is antiracitic Vitamin? Mention its important function.
36. Name the types of lymphocytes and their places of maturity.

PART-B

UNIT-I

II. a) Explain the physiology of urine formation in humans. 07

b) What are osnoconformers? Name the types with two examples each. 03

III. a) Explain the Physiology of transport of Co_2 by blood. 07

d) Write a short note on respiratory quotient. 03

IV. a) Define osmoregulation. List out the adaptations of camel for desert life. 05

b) Classify animals based on the types of excretory materials with examples. 05

UNIT-II

V. a) Explain origin and conduction of heart beat with suitable illustrations. 07

b) Define synaptic trensminion . Mention its types. 03

VI. a) Explain the Mechanism of muscle contraction. 07

b) Name the components of blood. 03

VII. a) What is resting potential? Explain the properties of a neuron during resting potential. 05

d) Explain the digestion of proteins in humans. 05

UNIT-III

VIII. a) Explain IUB system of classification of enzymes. 07

d) Explain the characteristics features of an antigen. 03

IX. a) Give an account of structure and functions of JgG. 07

b) Classify proteins based on their structure . 03

X. a) Write explanatory notes on thymus and spleen. 05

b) What are the functions and deficiency disorders of vitamin ‘C’. 05

ZOO 301.2 Reg. No. .....

CREDIT BASED THIRD SEMESTER B.Sc. DEGREE EXAMINATION
OCTOBER 2016

ZOOLOGY

PHYSIOLOGY, BIOCHEMISTRY AND IMMUNOLOGY

Duration: 3 hours **Max Marks: 80**

Note: Answer any TEN Questions from Part-A
Answer SIX questions from Part-B choosing any two questions from each unit.

PART A

I. Answer any TEN of the following: **10x2=20**

1. Define physiology.
2. Give two examples for osmoconformers.
3. Define glomerular hydrostatic pressure.
4. Give two examples for respiratory pigments.
5. Mention two causative factors for hypertension.
6. Name any two enzymes present in gastric juice.
7. Name the proteins found in thin filament.
8. What is a synapse?
9. Define heteropolysaccharides. Give two examples.
10. What are hydrolases? Give two examples.
11. Mention any two symptoms of cheilosis.
12. What are natural killer cells?

PART-B

UNIT-I

II. a) Explain desert adaptation exhibited by kangaroo rat and camel for osmoregulation. 07

b) Draw a neat labelled diagram of human kidney. 03

III. a) Write an explanatory notes on carbon dioxide transport and chloride shift. 07

b) Write any three adaptations of fresh water teleosts for osmoregulation. 03

IV. a) Comment on the different branches of physiology. 05

b) Write a note on hibernation and aestivation. 05

UNIT-II

V. a) Explain the composition of human blood. Add a note on functions of blood cells. 07

b) Write a note on intestinal villus. 03

VI. a) Explain protein digestion in man. 07

b) Explain the structure of cardiac muscle. 03

VII. a) Draw a labelled diagram of a neuron. 05

b) Give an account of sliding filament theory. 05

UNIT-III

VIII. a) Classify proteins with examples. 07

b) Write the functions of retinol/Vitamin A. 03

IX. a) Describe the mechanism of enzyme catalyzed reactions. 07

b) Differentiate between innate and acquired immunity. 03

X. a) Describe briefly the structure of IgG. 05

b) Explain the formation of peptide bond . 05

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