

BSCZOCN 201

II Semester B.Sc. Degree Examination, September 2022 ZOOLOGY

Biochemistry and Physiology (DSCC) (NEP – 2020) (2021-22 Batch Onwards)

Time: 2 Hours Max. Marks: 60

Instruction: Draw diagrams wherever necessary.

PART – A

I. Answer **any six** questions from following questions :

 $(6 \times 2 = 12)$

- a) What are disaccharides? Give two examples.
- b) Write the equation of Michaelis-Menton.
- c) Name any four enzymes of citric acid cycle.
- d) What are peptide linkages?
- e) Define inspiratory capacity and expiratory capacity.
- f) Define cardiac output.
- g) Name any four hormones secreted by anterior pituitary gland.
- h) What is a motor unit?

PART - B

Unit - I

II. Answer **any two** of the following:

 $(2 \times 3 = 6)$

- a) Write a note on isozymes.
- b) What are steroids and phospholipids? Give example.
- c) Write any three biological importances of carbohydrates.

III. Answer any one of the following:

 $(1 \times 6 = 6)$

- a) Explain the general properties of amino acids.
- b) Give an account of classification of enzymes.

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Unit - II

IV. Answer any two of the following:

 $(2 \times 3 = 6)$

- a) Enumerate any three enzymes involved in the biosynthesis of palmitic acid.
- b) Explain briefly transamination.
- c) Write a short note on ketogenesis.

V. Answer any one of the following:

 $(1 \times 6 = 6)$

- a) With schematic representation, explain urea cycle.
- b) Give the schematic representation of glycolysis.

Unit - III

VI. Answer any two of the following:

 $(2 \times 3 = 6)$

- a) Explain briefly digestion of fat in humans.
- b) Explain counter current multiplier system.
- c) Write a note on ABO blood group.

VII. Answer any one of the following:

 $(1 \times 6 = 6)$

- a) Define oxygen dissociation curve. Explain with suitable illustration. Add a note on factors affecting it.
- b) Draw a neat labelled diagram of V.S. of mammalian heart.

Unit – IV

VIII. Answer any two of the following:

 $(2 \times 3 = 6)$

- a) Write a short note on smooth muscles.
- b) What is action potential? Explain.
- c) Name adrenal medullary hormones. Write their functions.

IX. Answer **any one** of the following:

 $(1 \times 6 = 6)$

- a) Explain briefly the mechanism of hormone action.
- b) With the aid of neat labelled diagram, explain the ultrastructure of a striated muscle.