Q.P. Code No.31227

# Second Semester B.Sc., Degree Examinations

## May / June 2026

(CBCS NEP Scheme)

## Zoology Core Course - II

### NSB0270 : Paper II : Biochemistry and Physiology

Time: 2 hrs.] [Max.Marks:60

Instructions to the candidates

1. *The students should legibly write Section number along with question numbers within the margin only.*
2. *The answers without Section number and question numbers will not be valued.*
3. *Draw neat and labelled diagrams wherever necessary.*
4. *Answer Section – I Multiple Choice questions should be answered in the first page of the main answer book and same questions shall not be answered repeatedly.*
5. *Any identifications like marking, ticking, dots etc., in the options of MCQ (SECTION - I) on the question paper is strictly prohibited. Do not write anything (except Reg No.) on the question paper.*

## SECTION – I

I. *Select the most appropriate answer from the options provided :* *10X 1= 10 Marks*

I -1) Agranulocytes responsible for immune response of the body are

a) Neutrophils b) Basophils

c) Eosinophils d) Lymphocytes

I -2) A gland not associated with the alimentary canal is

a) Pancreas b) Liver

c) Adrenal glands d) Gastric glands

I -3) Which of the following hormone is secreted from kidney ?

a) Erythropoietin b) Rennin

c) Calcitonin d) Aldosteron

I -4) Sucrose is a

a) Monosaccharide b) Disaccharide

c) Polysaccharide d) None of the above

I -5) All of the following amino acids are essential except

a) Phenylalanine b) Tryptophan

c) Valine d) Glutamate

*Contd...2*

I -6) Which of the following hormones is synthesized by the intermediate lobe of pituitary gland ?

a) TSH b) MSH

c) ADH d) FSH

I -7) Characteristics of smooth muscle fibres are

a) Spindle shaped, unbranched, uninucleate unstraited and invoentary

b) Spindle shaped, unbranched, multinucleate, unstraited and involentary

c) Cylindrical, unbranched, unstraiated, uninucleate and volunatary

d) Cylindrical, unbranched, unstraiated, multinucleate and voluntary

I -8) Which of the following is produced with the combination of a apoenzyme and co-enzyme

a) Holoenzyme b) Prosthetic group

c) Enzyme subetrate complex d) Enzyme product complex

I -9) In adult man, normal BP is

a) 100 / 80 mm Hg b) 80 / 120 mm Hg

c) 100 / 10 mm Hg d) 120 / 80 mm Hg

I -10) Chemicals which are released at the syntaptic junction are called

a) Hormones b) Cerebrospinal fluid

c) Neurotransmitters d) Lymph

## SECTION – II

**II.** ***Answer /Write short notes on any FIVE of the following. :*** ***5X 3= 15 Marks***

II -1) Write a note on respiratory volumes.

II -2) Explain Deamination.

II -3) Give an account on specificity of enzyme action.

II -4) Explain the hormones of posterior lobe of pituitary gland.

II -5) Describe types of synapse.

II -6) Write a note on cardiac cycle.

II -7) Explain characteristics of muscle twitch.

II -8) Give an account on Allosteric enzymes.

## SECTION –III

**III.** ***Answer any THREE questions from the following.*** ***3X 5= 15 Marks***

III-1) Explain V.S. of mammalian heart with a neat labeled diagram.

***Contd...3***

III-2) Give an account on saturated and unsaturated fatty acids with examples.

III-3) Explain the regulation of enzyme action.

III-4) Describe the structure of neuron with a neat labeled diagram.

III-5) Explain transport of carbon dioxide in blood.

## SECTION - IV

IV. ***Answer the following:*** ***2 X 10= 20 Marks***

IV- 1) Explain the digestion and absorption of proteins and carbohydrates in stomach and small intestine.

**OR**

Explain citric acid cycle with schematic representation.

IV- 2) Explain the process of pulmonary ventilation.

**OR**

Describe the ultrastructure of skeletal muscle and explain molecular and chemical basis of muscle contraction.

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