2015

(5th Semester)

ZOOLOGY

Paper : ZL–VII

(Biochemistry)

Full Marks : 55

Time : 2½ hours

(PART : B—DESCRIPTIVE)

(*Marks* : 35)

The figures in the margin indicate full marks for the questions

1. Define lipid. Describe different types of lipids. Add a note on the biological significances of lipids. 1+4+2=7

Or

Give an account on different types of amino acids. Add a note on peptide. 5+2=7

2. What is enzyme? Give a detailed note on the different types of enzymes. 1+6=7

Or

Define vitamin. Describe different types of vitamins with their significance. 1+6=7

3. Describe the process of gluconeogenesis in detail. 7

Or

What is glycogenolysis? Describe various steps of glycogenolysis with a well-labeled diagram. 1+6=7

4. Give a detailed note on tricarboxylic acid. 7

Or

What is oxidative phosphorylation? Give a detailed note on ATP synthesis. 1+6=7

5. Give a detailed account on β-oxidation of fatty acids with a well-labeled flowchart of the mechanism. 7

Or

Describe the mechanism of ketogenesis with a note on its importance. 7

★★★

2015

(5th Semester)

ZOOLOGY

Paper : ZL–VII

(Biochemistry)

(PART : A—OBJECTIVE)

(*Marks* : 20)

The figures in the margin indicate full marks for the questions

SECTION—A

(*Marks* : 5)

Put a Tick (✓) mark against the correct answer in the brackets provided : 1×5=5

1. Which one of the following statements is correct for saturated fatty acids?

(a) Bond between the carbons in the hydrocarbon chain is single bond ( )

(b) Bond between the carbons in the hydrocarbon chain is double bond ( )

(c) Bond between the carbons in the hydrocarbon chain is triple bond ( )

(d) There is no bond between the carbons in the hydrocarbon chain ( )

2. In the functional structure of an enzyme, the protein part is known as

(a) apoenzyme ( )

(b) holoenzyme ( )

(c) coenzyme ( )

(d) cofactor ( )

3. When one molecule of glucose undergoes glycolysis

(a) 1 pyruvic acid is formed ( )

(b) 2 pyruvic acids are formed ( )

(c) 3 pyruvic acids are formed ( )

(d) 4 pyruvic acids are formed ( )

4. Which one of the following is the correct sequence of cytochromes in electron transport chain?

(a) Cytochrome b, cytochrome c_1, cytochrome c, cytochrome a, cytochrome a_3 ( )

(b) Cytochrome c, cytochrome b, cytochrome a, cytochrome a_3, cytochrome c_1 ( )

(c) Cytochrome c_1, cytochrome b, cytochrome c, cytochrome a_3, cytochrome a ( )

(d) Cytochrome b, cytochrome c_1, cytochrome a, cytochrome c, cytochrome a_3 ( )

5. Urea is the end product metabolism of

(a) protein ( )

(b) lipid ( )

(c) carbohydrate ( )

(d) None of the above ( )

SECTION—B

(*Marks* : 15)

Write short notes on the following in *5* to *8* sentences each : 3×5=15

1. Steroids

2. Ribozymes

3. Glycogenesis

4. HMP shunt

5. Urea cycle

★ ★ ★