

**2 0 1 7**

( 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. What are lipids? Describe the different types and significance of lipids. 7

Or

What are amino acids? Give a detailed note on the classification of amino acids.

2. Discuss the properties and types/ classification of enzymes. 7

Or

Write short notes on the following :  $3\frac{1}{2}+3\frac{1}{2}=7$

- (a) Enzyme inhibition  
(b) Water-soluble vitamins

3. What do you understand by gluconeogenesis? Give a detailed account of the process of gluconeogenesis. 7

Or

What is glycogenolysis? Explain the various steps involved in glycogenolysis.

4. What is TCA cycle? Describe in detail the tricarboxylic acid cycle. 7

Or

Write a detailed note on ATP synthesis.

5. What is ketogenesis? Discuss the significance, various steps and reactions of ketogenesis. 7

Or

Explain  $\beta$ -oxidation of fatty acid in detail.

★★★

**Subject Code : ZOO/V/07**

**Booklet No. A**

Date Stamp .....

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**To be filled in by the Candidate**

DEGREE 5th Semester  
(Arts / Science / Commerce /  
..... ) Exam., **2017**

Subject .....

Paper .....

**INSTRUCTIONS TO CANDIDATES**

- 1. The Booklet No. of this script should be quoted in the answer script meant for descriptive type questions and vice versa.**
- 2. This paper should be ANSWERED FIRST and submitted within 45 minutes of the commencement of the Examination.**
- 3. While answering the questions of this booklet, any cutting, erasing, over-writing or furnishing more than one answer is prohibited. Any rough work, if required, should be done only on the main Answer Book. Instructions given in each question should be followed for answering that question only.**

**To be filled in by the Candidate**

DEGREE 5th Semester  
(Arts / Science / Commerce /  
..... ) Exam., **2017**

Roll No. ....

Regn. No. ....

Subject .....

Paper .....

Descriptive Type

Booklet No. B .....

*Signature of  
Scrutiniser(s)*

*Signature of  
Examiner(s)*

*Signature of  
Invigilator(s)*

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**ZOO/V/07**

**2 0 1 7**

( 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.** Neutral amino acid contains

(a) one amino group and one carboxyl group (    )

(b) two amino groups and two  
carboxyl groups (    )

(c) one amino group and two  
carboxyl groups (    )

(d) two amino groups and one  
carboxyl group (    )

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( 2 )

**2.** Beriberi is a disease caused by deficiency of

- (a) vitamin 1 ( )
- (b) vitamin 2 ( )
- (c) vitamin 3 ( )
- (d) vitamin 5 ( )

**3.** The conversion of glucose-6-phosphate to fructose-6-phosphate is catalyzed by

- (a) phosphofructokinase ( )
- (b) phosphoglucose isomerase ( )
- (c) phosphoglycerate kinase ( )
- (d) phosphoglyceromutase ( )

**4.** How many ATP molecules are produced from the complete oxidation of a single molecule of glucose?

- (a) 4 ( )
- (b) 6 ( )
- (c) 24 ( )
- (d) 36 ( )

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( 3 )

5. In urea cycle,  $\text{NH}_3$  and  $\text{CO}_2$  reacts in the presence of ATP to form

- (a) ornithine ( )
- (b) arginine ( )
- (c) aspartic acid ( )
- (d) carbamoyl phosphate ( )

( 4 )

SECTION—B

( Marks : 15 )

Write short notes on the following in not more than  
5 to 8 sentences each : 3×5=15

1. Disaccharides

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( 5 )

**2. Coenzymes**

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( 6 )

**3. Significance of glycolysis**

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( 7 )

**4. HMP shunt**

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( 8 )

**5. Synthesis of triglycerides**

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8G—350/**229**

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