

(6 pages)

Reg. No. :

Code No. : 7596

Sub. Code : KZOM 11/
PZOM 11

M.Sc. (CBCS) DEGREE EXAMINATION,

NOVEMBER 2019.

First Semester

Zoology

BIOCHEMISTRY

(For those who joined in July 2016 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Indivisibility of an atom was proposed by _____.

- | | |
|-------------|----------------|
| (a) Dalton | (b) Rutherford |
| (c) Thomson | (d) Bohr |

2. _____ is a solution that can resist pH change upon the addition of an acidic or basic components.

- | | |
|------------|-------------------|
| (a) Buffer | (b) Liquid |
| (c) Water | (d) None of these |

3. One of the following is not an aldose

- | | |
|-------------|---------------|
| (a) Glucose | (b) Galactose |
| (c) Mannose | (d) Fructose |

4. Hexose monophosphate shunt (HMP) is the direct oxidative pathway of _____.

- | | |
|--------------|---------------------|
| (a) Glucose | (b) Glycolysis |
| (c) Proteins | (d) Polysaccharides |

5. Proteins are the polymers of _____.

- | | |
|----------------------|------------------|
| (a) L α amino acid | (b) D amino acid |
| (c) Both (a) and (b) | (d) Aminoacid |

6. Phenylketoneuria is the most common metabolic disorder in _____ metabolism.

- | | |
|------------------|-----------------|
| (a) Carbohydrate | (b) Cholesterol |
| (c) Aminoacid | (d) Fat |



7. Saturated fatty acids have no ————— double bonds.

- (a) C-C (b) C=C
(c) Both (a) and (b) (d) C=O

8. High Density Lipoprotein (HDL) are mostly synthesized in —————.

- (a) Liver (b) Pancrease
(c) Both (a) and (b) (d) Dueodenum

9. Which one of the vitamin A functions as a steroid hormone.

- (a) Retinal (b) Retinol
(c) Provitamin A (d) Carotene

10. The functional enzyme is referred as holoenzyme which is made up of a protein part called —————.

- (a) Apoenzyme (b) Coenzyme
(c) Both (a) and (b) (d) Isoenzyme

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Write the Henderson and Hasselbalch equation.

Or

(b) Write a note on acidosis and alkalosis.

12. (a) Describe the glucose tolerance test.

Or

(b) Give an account on Electron Transport System.

13. (a) Write short notes on structure and functions of proteins.

Or

(b) Describe the structure and functions of amino acids.

14. (a) Write short notes on ketogenesis.

Or

(b) Describe the biosynthesis of fatty acids.

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15. (a) List out the functions of enzymes.

Or

- (b) Explain any one enzyme inhibition.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe the water and electrolytic dissociation.

Or

- (b) Give an account on thermodynamic laws.

17. (a) Discuss the glycogen synthesis from glucose.

Or

- (b) Explain the three steps involved in the path way of glycolysis.

18. (a) Enumerate the metabolism of phenylalanine and tyrosine.

Or

- (b) Discuss the metabolism of proteins.

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19. (a) Give an account on cholesterol metabolism.

Or

- (b) Explain briefly about the structure, function and properties of sterol.

20. (a) Give an account on classification of enzymes and mechanism of enzyme action

Or

- (b) Discuss the vitamin deficiencies and its role on metabolism.

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