

(6 pages)

Reg. No. :

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**Sub. Code : KZOM 11/
PZOM 11**

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2020.

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. The six most common atoms in organic molecules are
 - (a) C,H,O,N,P and S
 - (b) C,H,O,N,P and K
 - (c) C,H,O,He,Ca and S
 - (d) C,H,O,Mg,Mn and S

2. Which one of the following buffer is to remove the CO_2
- (a) Carbonate (b) Bicarbonate
(c) Tris (d) All of the above
3. Which of these reactions is not irreversible in glycolysis
- (a) Hexokinase
(b) Glucokinase
(c) 3-Phosphoglyceratekinase
(d) Pyruvatekinase
4. First step in the glycolytic pathway in liver
- (a) Is catalysed by glucokinase
(b) Uses ATP and glucose as substrate
(c) Produces glucose 6-phosphate and ADP
(d) All of the above
5. Which of the following amino acids is not converted Acetyl Co A upon
- (a) Tyrosine (b) Leucine
(c) Valine (d) Lysine

6. Which of the following enzymes requires adenosine triphosphate to mediate its reaction?
- (a) Argino succinate lyase
 - (b) Arginase
 - (c) Glutaminase
 - (d) Argino succinate synthetase
7. Which of the following are ketone bodies?
- (a) Pyruvate and lactate
 - (b) Acetoacetate and betahydroxy butyrate
 - (c) Leictin and lysolecithin
 - (d) Succinyle Co A and Succinate
8. The enzyme thiolase catalyse the conversion of
- (a) 2 Acetyle Co A to Acetyle Co A
 - (b) Fatty acid to fatty acid Acyl CoA
 - (c) Succinyle Co A to Succinate
 - (d) Acetyle Co A to Malanyle Co A
9. Which one out of the following is a substrate specific enzyme
- (a) Hexokinase
 - (b) Thiokinase
 - (c) Lactase
 - (d) Decarboxylase

10. Group I Co enzyme participate in which of the reactions
- (a) Transamination
 - (b) Phosphorylation
 - (c) Oxidation- reduction
 - (d) All of the above

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Explain the acid base balance.

Or

- (b) Give an account on Buffers.

12. (a) Enumerate the Glycogenesis reaction.

Or

- (b) Enlist the reaction of gluconeogenesis.

13. (a) Write an account on principle of Paper chromatography.

Or

- (b) Enumerate the metabolism of Phenylalanine.

14. (a) Discuss the β oxidation cycle of Palmitic acid

Or

- (b) Describe the bio synthesis of fatty acids.

15. (a) Comment on Competitive inhibition of enzyme with an example.

Or

- (b) Given an account on Coenzyme A.

PART C — ($5 \times 8 = 40$ marks)

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

Each answer should not exceed 600 words.

16. (a) Enumerate the Chemical bonds.

Or

- (b) Write a comparative account on acidosis and alkalosis mechanism.

17. (a) Write the reactions of Citric acid cycle.

Or

- (b) Describe the regulation of Gluconeogenesis.

18. (a) Elucidate the Kynurenine pathway of tryptophan.

Or

- (b) Enumerate the Physical properties of amino acids.

19. (a) Give an account on Ketogenesis reactions.

Or

- (b) Explain about the cholesterol biosynthesis mechanism.

20. (a) Write an account on classification of enzymes.

Or

- (b) Explain the mechanism of enzyme action.
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