

(6 pages)

Reg. No. :

Code No. : 8777

Sub. Code : KZOM 11

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2016.

First Semester

Zoology

BIOCHEMISTRY

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Neutral pH is
(a) pH 5 (b) pH 6
(c) pH 7 (d) pH 8
2. The atomic theory was proposed by _____
(a) Dalton (b) Robert Brown
(c) Liebig (d) Shelton

3. The ultimate product of pentose phosphate pathway is _____
(a) ATP (b) Pyruvate
(c) NADPH (d) Lactate
4. Hexose sugar is not present in _____
(a) Ribose (b) Glucose
(c) Fructose (d) Galactose
5. Essential amino acid is _____
(a) Phenylalanine (b) Proline
(c) Glytamine (d) Serine
6. The source of nitrogen in urea cycle is _____
(a) Glutamate and Aspartate
(b) Glutamate and NH_3
(c) Arginine and Aspartate
(d) NH_3 and Aspartate
7. Reducing agents used in lipogenesis is derived from _____
(a) Pentose phosphate pathway
(b) Glycolysis
(c) TCA cycle
(d) Gluconeogenesis



8. Primary bile acid synthesized in liver is ———
- (a) Lithocholic acid
 - (b) Cholic acid
 - (c) Deoxycholic acid
 - (d) All the above
9. Which of the following is an important marker for myocardial?
- (a) LDH
 - (b) CK-MB
 - (c) Troponins
 - (d) All the above
10. Scurvy is caused by the deficiency of vitamin
- (a) A
 - (b) B
 - (c) C
 - (d) E

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Write a short note on the importance of water for life.
- Or
- (b) What is physiological pH? What is a weak acid compared to a strong acid.

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12. (a) Write about the chemical composition of carbohydrates.

Or

- (b) Discuss about glycogenolysis.

13. (a) How will you separate amino acids using paper chromatographic technique?

Or

- (b) Describe the metabolic pathway of tryptophan.

14. (a) Write about structure, properties and functions of sterols.

Or

- (b) Explain the role of liver in fat metabolism.

15. (a) What are Isozymes? Give an example with short note.

Or

- (b) Write short notes on Vitamin D.

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[P.T.O.]



PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Explain about various types of bonds which hold atoms together in a biological molecule.

Or

- (b) Discuss about buffer s and their application in biology.

17. (a) Give a detailed note on Kreb's cycle. Discuss about its energetics.

Or

- (b) Explain GTT.

18. (a) Discuss about the structural organizations of proteins and how they are maintained.

Or

- (b) Discuss in detail about the metabolism of phenylalanine.

19. (a) Classify fatty acids.

Or

- (b) Define β - oxidation. Enumerate the reactions of β - oxidation with energetics.

20. (a) Discuss about the role of co-enzymes in various enzymatic reactions.

Or

- (b) Give a detailed note on allosteric enzymes.
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