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SUBJECT CODE NO: - SS-6667
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Zoology) (Sem-I)
Examination May / June - 2023
Biochemistry ZOO-102

[Time: 3:00 Hours]

[Max. Marks: 80]

Please check whether you have got the right question paper.

N. B

- i) Part 'A' is compulsory.
- ii) Attempt any five questions from part 'B'
- iii) Draw neat labelled diagram wherever necessary.

Part 'A'

Q.1 Attempt the following multiple choice questions.

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- 1) The H₂O molecule has a bent geometry with an H-O-H bond angle or _____
 a) 100.8° b) 110.5° c) 103.1° d) 104.5°
- 2) The strength of an acid is specified by its _____ constant.
 a) Association b) dissociation c) Recombination d) None of the above
- 3) The overall three dimensional structure of a polypeptide is called it's _____
 a) Primary structure b) Secondary structure
 c) Tertiary structure d) Quaternary structure
- 4) If a solution has to be a buffer, it's pH should be _____
 a) At its pKa value b) At its Ka value c) At 7 d) At p value
- 5) The primary structure of glycogen resembles that of amylopectin, but glycogen is more highly branched, with branch points occurring every _____ glucose residues.
 a) 6 to 10 b) 8 to 14 c) 4 to 8 d) 6 to 12
- 6) Which of the following amino acid is common in beta bend ?
 a) Glycine b) Cysteine c) Methionine d) Serine
- 7) Fructose is an example or _____
 a) Triose b) Hexose c) Hexoketose d) Pentoketose
- 8) A hydrocarbon compound that ends with carboxylic group is _____
 a) Fatty acid b) Sterol c) Saccharolipids d) Glycerophospholipids
- 9) Individuals with the genetic disease phenylketonuria, who are unable to metabolise _____
 a) Mannose b) Xylose c) Arabinose d) Phenylalanine

10) In glycolysis the enzyme which converts glucose 6-phosphate into fructose -6-phosphate is _____

- a) Hexokinase
 b) Phosphofructokinase
 c) 1,6 bisphosphatase
 d) phosphoglucoisomerase

Part 'B'

- Q.2** What are co-enzymes ? Give the list of co-enzyme forms of vitamin B complex with thus significance **12**
- Q.3** Give a detail account on structure, bonding and special properties of water. **12**
- Q.4** What are lipids ? Explain the classification with suitable example. **12**
- Q.5** Explain Watson and crick model of DNA and give a short note on DNA types. **12**
- Q.6** Explain in detail the regulation of glycogenesis and glycogenolysis **12**
- Q.7** Give a detail account an types of classification of amino acids. **12**
- Q.8** Write short notes on (any two) **12**
- a) Nucleocides
 b) Hydrogen bonding
 c) Primary structure of proteins.