



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Honours 3rd Semester Examination, 2019

**ZOOACOR07T-ZOOLOGY (CC7)**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.  
All symbols are of usual significance.*

1. Answer any **eight** questions from the following: 2×8 = 16
- What are eicosanoids and terpenoids?
  - Explain E.C. number of an enzyme with an example.
  - Write difference between anabolism and catabolism (basic) with example.
  - Draw the structure of a triglycerol.
  - What is glycosidic bond? Give example.
  - Define buffer. Name two buffer systems found in living organisms.
  - What do you mean by saponification number?
  - Distinguish between nucleotides and nucleosides.
  - Differentiate between essential and non-essential amino acids.
  - What is Lineweaver-Burk plot?
  - What are isoenzymes? Give examples.
  - How many ATP molecules are generated at each step after complete oxidation of one glucose molecule?
2. Answer any **three** questions from the following: 3×3 = 9
- Draw a flow diagram of electron transfer through the components of ETC.
  - Describe the clover leaf structure of t-RNA with diagram.
  - Distinguish between alpha-helix and beta-pleated sheet.
  - Mention the biological significance of pH.
  - Give a comparative account of A, B and Z-DNA.
3. Answer any **three** questions from the following: 5×3 = 15
- Classify major classes of enzymes citing example of each. 5
  - Elucidate the pathway of  $\beta$ -oxidation of saturated fatty acids. 5
  - Explain urea cycle in animals. 5
  - Explain the citric acid cycle along with its energetics. 4+1
  - State the effect of temperature on enzyme action. What are allosteric enzymes? Differentiate between competitive and non-competitive enzyme inhibition. 2+1+2

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