



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
 - (a) What are eicosanoids and terpenoids?
 - (b) Explain E.C. number of an enzyme with an example.
 - (c) Write difference between anabolism and catabolism (basic) with example.
 - (d) Draw the structure of a triglycerol.
 - (e) What is glycosidic bond? Give example.
 - (f) Define buffer. Name two buffer systems found in living organisms.
 - (g) What do you mean by saponification number?
 - (h) Distinguish between nucleotides and nucleosides.
 - (i) Differentiate between essential and non-essential amino acids.
 - (j) What is Lineweaver-Burk plot?
 - (k) What are isoenzymes? Give examples.
 - (l) 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
 - (a) Draw a flow diagram of electron transfer through the components of ETC.
 - (b) Describe the clover leaf structure of t-RNA with diagram.
 - (c) Distinguish between alpha-helix and beta-pleated sheet.
 - (d) Mention the biological significance of pH.
 - (e) Give a comparative account of A, B and Z-DNA.

3. Answer any **three** questions from the following: 5×3 = 15
 - (a) Classify major classes of enzymes citing example of each. 5
 - (b) Elucidate the pathway of β -oxidation of saturated fatty acids. 5
 - (c) Explain urea cycle in animals. 5
 - (d) Explain the citric acid cycle along with its energetics. 4+1
 - (e) State the effect of temperature on enzyme action. What are allosteric enzymes? 2+1+2
Differentiate between competitive and non-competitive enzyme inhibition.

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