

SH-III/ZOO/303/C-7/19

B.Sc. 3rd Semester (Honours) Examination, 2019-20**ZOOLOGY****Course ID : 32613****Course Code : SH/ZOO/303/C-7****Course Title: Fundamentals of Biochemistry****Time: 1 Hour 15 Minutes****Full Marks: 25**

*The figures in the right hand side margin indicate full marks.
Candidates are required to give their answers in their own words
as far as practicable.*

1. Answer *any five* of the following: 1×5=5
 - (a) What is hn RNA?
 - (b) What are glycolipids?
 - (c) Name two non-essential amino acids.
 - (d) Draw the structure of deoxyribose sugar.
 - (e) What is the empirical formula of carbohydrates?
 - (f) What is co-enzyme?
 - (g) What is oxydative phosphorylation?
 - (h) What is glycolysis?

2. Answer *any two* of the following: 5×2=10
 - (a) State the differences between DNA and RNA with suitable diagram(s). 3+2=5
 - (b) Why Citric Acid Cycle is designated as an open cycle? Distinguish between Transamination and Deamination with suitable examples. 1+3+1=5
 - (c) What is Km? Mention four factors those determine the velocity of enzyme reaction. 1+4=5
 - (d) What is Chargaff's rule? Draw the transcribed structure of the following DNA segment 5'-CGTTCGGTC-3'. If GC content of a DNA molecule is 64% (per cent), then what will be the percentages of the four bases (A, T, G and C) in this molecules? 1+2+2=5

3. Answer *any one* of the following: 10×1=10
 - (a) How does nucleosides differ from nucleotides? Mention the bonds responsible for the stabilization of protein structures. Describe the urea cycle and why does it occurs in liver. 2+2+4+2=10
 - (b) What is SIDS? What is the final step in the β -oxidation of fatty acids? Mention the scopes of biochemistry in Medical Science. Describe the role of Cholesterol in hormone synthesis. 1+2+4+3=10