



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 2nd Semester Examination, 2022



ZOOACOR04T-ZOOLOGY (CC4)

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.*

1. Answer any **eight** questions from the following: 2×8 = 16
 - (a) What is chromatosome?
 - (b) What do you mean by desmosome?
 - (c) What are aquaporins?
 - (d) What do you mean by MPF?
 - (e) What is linker histone?
 - (f) Distinguish between passive transport and facilitated diffusion?
 - (g) Describe ABC transporter.
 - (h) Name a few intermediate filament proteins. Which one is found in nucleus?
 - (i) What are functions of smooth endoplasmic reticulum?
 - (j) Distinguish between mitochondrial DNA and nuclear DNA.
 - (k) What is the function of peroxisome?
 - (l) What is F₁ particle?

2. Answer any **three** questions from the following: 3×3 = 9
 - (a) Distinguish between SER and RER.
 - (b) Mention the functional significance of two faces of Golgi complex.
 - (c) What do you mean by capsomere?
 - (d) Distinguish between tight junction and gap junction.
 - (e) Write the intrinsic pathway of Apoptosis with suitable diagram.

3. Answer any **three** questions from the following: 5×3 = 15
 - (a) Write the chemical composition of a Plasma membrane. How does the Fluid Mosaic model of Singer Nicholson differ from the unit membrane model of Robertson? 3+2
 - (b) Explain the role of nitric oxide as a cellular signalling molecule.
 - (c) Describe the structure of myosin filament with labelled diagram. State the role of caspase-8 in inducing cell apoptosis. 3+2
 - (d) Write the chemical structure of a bacterial cell wall. Distinguish between Gram positive and Gram negative bacteria.
 - (e) Explain, how the flow of electrons through the electron transport chain is translated into ATP synthesis.

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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