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 F_1 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   3+2
        model of Singer Nicholson differ from the unit membrane model of Robertson?
    (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   3+2
        caspase-8 in inducing cell apoptosis.
    (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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