



WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 2nd Semester Examination, 2023

ZOOACOR04T-ZOOLOGY (CC4)

CELL BIOLOGY

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.*

GROUP-A

1. Answer any **eight** questions from the following: 2×8 = 16
- What is Zellweger syndrome?
 - What do you mean by PPLO?
 - Distinguish between apoptosis and necrosis.
 - Name any four types of enzymes that are found inside lysosomes.
 - What is nuclear matrix?
 - State the role of Troponin in muscle contraction.
 - What is tumor suppressor gene? Give an example. 1+1
 - What do you mean by ERGIC?
 - Distinguish between G₂ and M check point.
 - What is an example of a DNA virus and an example of a RNA virus? 1+1
 - Briefly comment on receptor mediated endocytosis.
 - What is prion? What is the most common form of prion disease that affects human? 1+1

GROUP-B

2. Answer any **three** questions from the following: 3×3 = 9
- Why p53 is considered as the guardian of genome?
 - Discuss Na⁺ / K⁺ ATPase activity with suitable diagram.
 - State the functions of peroxisomes.
 - What is GLUT? Name the factors that affect the rate of facilitated diffusion. 2+1
 - Distinguish between protooncogene, oncogene and tumour suppressor gene.

GROUP-C

3. Answer any **three** questions from the following: 5×3 = 15
- What is RB protein? How does it influence the eukaryotic cell cycle? 1+4
 - Discuss the best fitted model of plasma membrane with proper diagram. 3+2
 - What are second messengers? Explain the role of cAMP as second messenger. 2+3
 - What is focal adhesion? Why does actively transcribing nucleus have more pores in nuclear membrane? 2+3
 - Elaborate the functions of Lysosomes. Comment on Tay-Sachs disease. 3+2

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