WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 2nd Semester Examination, 2019

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 flip-flop movement?

   (b) Give an example of biomolecules synthesized in peroxisomes.

   (c) What is Viroid? Name one disease caused by it.

   (d) Name one RNA virus and one DNA virus.

   (e) What are cell cycle check points?

   (f) State the differences between nucleoid and nucleus.

   (g) What is Zonula Occludens? State its function.

   (h) Name one microfilament and one microtubule with their function.

   (i) Name two components of extracellular matrix (ECM).

   (j) What is MPF? State its function.

   (k) What are MTOC and Kinetochore?

   (l) Write two functions of Mitochondria.

2. Answer any *three* questions from the following: 3×3 = 9

   (a) Differentiate between light and gap junctions with proper diagrams.

   (b) How DNA is packed in a nucleosome? What is a linker DNA?

   (c) Write a note on endosymbiotic theory of organelles.

   (d) Explain in brief how prions cause diseases with suitable examples.

   (e) Differentiate between protooncogene, oncogene and tumour suppressor gene.

3. Answer any *three* questions from the following: 5×3 = 15

   (a) Differentiate between lytic and lysogenic cycles of virus. Mention their importance as infections strategy. Give an example of viral oncogene. 3+1+1

   (b) Differentiate between intrinsic and extrinsic pathways of apoptosis. Mention the functions of caspases in this process. 3+2

   (c) Discuss briefly how proteins are synthesized, modified and secreted through GERL system. 5

   (d) Discuss the role of cAMP as second messenger in cell signal transduction. 5

   (e) Describe in brief the most accepted model of plasma membrane with a proper diagram. Name the scientist(s) who proposed the model. 2+2+1

——×——

1