WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 2nd Semester Examination, 2020

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 synaptonemal complex?

(b) What do you mean by GERL system?

(c) What is tumor suppressor gene? Give example.

(d) Write two differences between genomic DNA and mitochondrial DNA.

(e) Differentiate between desmosome and hemidesmosome.

(f) Differentiate between SER and RER.

(g) Differentiate between primary and secondary lysosome.

(h) What is "unit membrane" according to Robertson?

(i) What is chromatosome?

(j) Name the amino acids present in histone protein.

(k) How do viroids differ from viruses?

(l) What do you mean by polarization of Golgi body?

(m) What is restriction point in cell cycle?

(n) What is autocrine and juxtacrine signalling?

(o) Why plasma membrane is called amphipathic?

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

(a) Why p53 is considered as the guardian of the genome?

(b) Differentiate between microtubules, microfilaments and intermediate filaments.

(c) Write the role of facilitated transport in taking up glucose into cell.

(d) State the chemical structure of bacterial cell wall.

(e) Why mitochondria are considered as semiautonomous organelles?

(f) Compare between desmosome, tight junction and gap junction.

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

(a) What is mitoribosome? Briefly describe the structure of ATP synthase. 1+4

(b) What do you mean by extra and intra cellular receptor? State the structure of G protein coupled receptor. 2+3

(c) What is MPF? Schematically explain G2-M check point regulating mechanism. 2+3

(d) What is oncogene? Describe how protooncogenes can be converted into oncogenes. 1+4

(e) What is nuclear pore complex? State the nucleosome concept briefly. 2+3

(f) Why mitochondrion is known as power house of cell? Explain the electron transport chain (ETC) with a diagram. 2+3

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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