

2019

B.Sc. (Hons.)

2nd Semester Examination

ZOOLOGY

Paper—C4T

Cell Biology

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

1. Answer any five questions from the following :

5×2=10

- (a) Mention the location and function of Ribophorine.
- (b) What is G protein ?
- (c) State the role of protein phosphatase in cell signaling.
- (d) Mention the location and function of F_1 particle.
- (e) What is prion ?

- (f) What is a desmosome junction ?
- (g) Mention the differences between heterochromatin and euchromatin.
- (h) What is retinoblastoma ?

2. Answer any *four* questions : 4×5=20

- (a) Describe the structure and functions of peroxisomes.
- (b) Discuss the process of N-linked and O-linked glycosylation.
- (c) Briefly state the outline structure of microtubules.
- (d) Give a comparative features of different types of cell junction.
- (e) What is the signal transduction pathway ?
Mention the stages of cell signalling. 3+2
- (f) Distinguish between :
 - (i) Histone and Nonhistone proteins.
 - (ii) Apoptosis and Necrosis.

3. Answer one question from the following : 1×10

(a) (i) Discuss the role of various check points in cell cycle to maintain a regulated cell-division.

(ii) Mention the function of P^{53} .

(b) (i) Describe the process active transport across the plasma membrane. How does it differ from passive transport.

(ii) Write a note on cell junction. $(4+2)+4$
