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Roll No. ..... Total Pages: 03

6244

M.Sc. (ZOOLOGY) 1st SEMESTER EXAMINATION, 2019

Paper - IV

CELL AND MOLECULAR BIOLOGY

Time: Three Hours

Maximum Marks: 80

PART – A (खण्ड – अ) *[Marks: 20]*

Answer all questions (50 words each).

All questions carry equal marks.

सभी प्रश्न अनिवार्य हैं। प्रत्येक प्रश्न का उत्तर 50 शब्दों से अधिक न हो।

सभी प्रश्नों के अंक समान हैं।

PART – B (खण्ड – ब) *[Marks: 40]*

Answer five questions (250 words each).

Selecting one from each unit. All questions carry equal marks.

*प्रत्येक इकाई से **एक–एक** प्रश्न चुनते हुए, कुल **पाँच** प्रश्न कीजिए।*

प्रत्येक प्रश्न का उत्तर 250 शब्दों से अधिक न हो।

सभी प्रश्नों के अंक समान हैं।

PART – C (खण्ड – स) *[Marks: 20]*

Answer any two questions (300 words each).

All questions carry equal marks.

*कोई **दो प्रश्न** कीजिए। प्रत्येक प्रश्न का उत्तर 300 शब्दों से अधिक न हो।*

सभी प्रश्नों के अंक समान हैं।

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PART – A

Q.1 (i) What is passive transport? Give examples.

(ii) What is Robertson's Model?

(iii) What is desmosome?

(iv) What is CAMP?

(v) What is apoptosis?

(vi) What are check points?

(vii) What is heterophagosome?

(viii) What is protein trafficking?

(ix) What is C-value paradox?

(x) What is cell fusion?

PART – B

UNIT –I

Q.2 Explain co-transport with suitable examples.

Q.3 Write short note on -

(a) Facilitated diffusion

(b) Membrane potential

UNIT –II

Q.4 Explain tight junction and gap junction.

Q.5 Describe cell surface receptor and intra cellular receptors.

UNIT –III

Q.6 Explain Cycline-dependent kinases.

Q.7 Give the causes of aging.

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UNIT –IV

Q.8 Discuss the Golgi sorting.

Q.9 Describe lysosomal polymorphism.

UNIT –V

Q.10 Describe human karyotype.

Q.11 Give the applications of Hybridoma technology.

PART – C

Q.12 Describe basic structure of bio membrane with the help of fluid mosaic model.

Q.13 Explain cell-cell signaling with suitable examples.

Q.14 Describe cell death.

Q.15 Discuss regulation of intracellular transport.

Q.16 Explain euchromatin and heterochromatin.

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