21P215 (Pages: 2) Name: .....

Reg.No: .....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2022

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19P ZOL2 C05 - MOLECULAR BIOLOGY AND CYTOGENETICS

(Zoology)

(2019 Admission onwards)

Time : 3 Hours Maximum : 30 Weightage

Part-A

Answer any ***four*** questions. Each question carries 2 weightage.

1. Define okazaki fragments.
2. Discuss about genetic code.
3. Describe biogenesis in Xenopus laevis.
4. Explain special features of interrupted genes.
5. Explain role of Rec A protein in genetic recombination.
6. Explain the basic features of E.coli genome.
7. Explain the growth characteristics of cancer cells.

(4 × 2 = 8 Weightage)

Part-B

Answer any ***four*** questions. Each question carries 3 weightage.

8. Explain the various models of DNA replication.
9. Describe the role of enzymes in safeguard systems of DNA.
10. Explain mRNA transport and its mechanism.
11. Describe regulation of gene expression in bacteria.
12. Discuss about transposons.
13. Explain Alu family and LI.
14. Explain the Extrachromosomal inheritance.

(4 × 3 = 12 Weightage)

Part-C

Answer any ***two*** questions. Each question carries 5 weightage.

15. Describe post-translational modifications of proteins. Mention the role of molecular chaperones.

16. Explain about Eukaryotic genome.

17. Discuss the general aspects of Cancer.

18. Discuss about the abnormalities of chromosome number and resulting syndromes in human beings.

(2 × 5 = 10 Weightage)

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