LOYOLA COLLEGE (AUTONOMOUS), CHENNAI - 600 034



B.Sc. DEGREE EXAMINATION - ADVANCED ZOOLOGY AND BIOTECHNOLOGY

FIFTH SEMESTER - NOVEMBER 2018

16UZO5MC02- MOLECULAR GENETICS

| Date: 27-10-2018 | Dept. No. | Max. : 100 Marks |
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Time: 09:00-12:00

Part A

ANSWER ALL QUESTIONS:

 $(10 \times 2 = 20)$

- 1. What is linkage?
- 2. Define Euploidy.
- 3. Write a note on types of cancer.
- 4. Define oncogene.
- 5. What is transduction?
- 6. Write a note on mutational hot spots.
- 7. What are promoters.
- 8. Explain feedback inhibition.
- 9. Describe second messengers.
- 10. Write a note on membrane proteins.

Part B

ANSWER ANY FOUR QUESTIONS:

(4X 10=40)

- 11. Give a short notes on extranuclear inheritance pattern and quantitative inheritance.
- 12. Write a paragraph on oncogenesis.
- 13. What are the different types of mutations and add a note on biochemical basis of mutants.
- 14. Write short notes on
- a) Turner syndrome
- b)Klinefelter syndrome
- 15. Explain the chromosome mapping in man.
- 16. Give an account on active and passive transport across cell membranes.

Part C

ANSWER ANY TWO QUESTIONS:

(2X 10=20)

- 17. Give an account on population genetics and evolution.
- 18. Discuss in detail chromosomal variations based on number and structure.
- 19. Explain a. conjugation and transformation.
 - b. Generalized and specialized transduction
- 20. Define signal transduction and explain the role of signal molecules and their detection by receptors.
