



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY

FIFTH SEMESTER – APRIL 2019

16UPB5MC02 / PB 5522 – GENETICS AND PLANT BREEDING

Date: 16-04-2019
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

PART- A

Answer the following, each within 50 words.

(10 x 2=20marks)

1. Define epigenetics.
2. Define codominance
3. What is haemophilia?
4. Define linkage.
5. Define cistron.
6. What are operons?
7. Define transposon.
8. What are thymine dimmers?
9. Define clonal selection.
10. Define heterosis.

PART- B

Answer the following, each within 500 words. Draw diagrams wherever necessary.

(5 x 7=35 marks)

11. a) Define and explain the laws of Mendel.
(OR)
b) What are lethal genes, describe with an example.
12. a) Define and explain complementary gene interaction with an example.
(OR)
b) Describe how *Neurospora* helps in tetrad analysis.

13. a) What is a genetic code? Describe its properties.

(OR)

b) Explain the process of DNA replication.

14. a) Briefly describe the types of DNA mutation.

(OR)

b) Brief explain about mutagens.

15. a) Explain the significant role of polyploidy in plant breeding.

(OR)

b) Explain pure line selection in plant breeding.

PART- C

Answer any three of the following, each within 1200 words. Draw diagrams wherever necessary.

(3 x 15=45 marks)

16. Define and describe dihybrid cross with suitable example

17. Write an essay on sex determination in plants.

18. Describe the system of *Lacoperon* .

19. Detail the chromosomal disorders of Human.

20. Explain the method of hybridization in plant breeding
