



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FIFTH SEMESTER – NOVEMBER 2017

PB 5516/PB 5510/PB 5506 – GENETICS, PLANT BREEDING AND EVOLUTION

Date: 03-11-2017

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART – A

ANSWER THE FOLLOWING, EACH WITHIN 50 WORDS.

(10 x 2 = 20 Marks)

1. List the laws of Mendel?
2. What are multiple alleles? Give examples.
3. What is conservative and semiconservative model of DNA replication?
4. What is a triplet codon?
5. What is down's syndrome?
6. What is thymine dimer?
7. What is clonal selection?
8. What is emasculation?
9. What is coacervate?
10. What is meant by speciation?

PART – B

ANSWER THE FOLLOWING, EACH WITHIN 500 WORDS. DRAW DIAGRAMS AND FLOWCHARTS WHEREVER NECESSARY.

(5 x 7 = 35 Marks)

- 11.a. Write the modifications of monohybrid cross.
[OR]
b. Describe sex determination in plants.
- 12.a. Write about the transcription in Prokaryotes.
[OR]
b. Give an account on transposable elements in plants.
- 13.a. Give a brief account on mutations and its significance.
[OR]
b. Briefly describe the types of chromosomal aberrations.
- 14.a. Write an account on mass selection and pureline selection.
[OR]
b. Describe the importance of plant breeding in India.
- 15.a. Write an account on origin of life.
[OR]
b. How speciation occurs? Describe the mechanisms.

PART – C

ANSWER ANY THREE OF THE FOLLOWING, EACH WITHIN 1200 WORDS. DRAW DIAGRAMS AND FLOWCHARTS WHEREVER NECESSARY. (3 x 15 = 45 Marks)

16. Write an essay on cytoplasmic inheritance and its significance.
17. Describe replication and the enzymes involved in the process.
18. Write an essay on repair mechanism adopted in DNA.
19. Describe the events in hybridization.
20. Describe the laws put forth by Lamarck.
