

16P230

(Pages: 2)

Name

Reg. No

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, MAY-2017
(Regular/Supplementary/Improvement)
(CUCSS - PG)

CC 15P B02 C06- CYTOGENETICS, GENETICS, BIostatISTICS,
PLANT BREEDING AND EVOLUTION
(Botany)

(2015 Admission Onwards)

Time: Three Hours

Maximum: 36 Weightage

I Answer *all* questions briefly:

1. Write a note on histocompatibility antigens
2. Explain broad and narrow sense heritability
3. B -chromosomes
4. Tetrad analysis
5. QTL mapping
6. SPSS
7. Robertsonian translocation
8. Aneuploidy
9. Uses of trinomics
10. Petrification
11. Degrees of freedom
12. Lamarkism
13. Tn elements
14. Write a note on Bt cotton.

(14 x 1 = 14 weightage)

II Answer *any seven* questions each in not more than 100 words:

15. Describe flow cytometry.
16. Describe the structure of polytene chromosome.
17. Describe the mapping of genes in bacteria and bacteriophages.
18. Describe the factors affecting population equilibrium.
19. Explain the modern concept of gene.

20. Explain Latin square design.
21. Explain biased and non-biased errors.
22. Explain Karyotype concept and its importance.
23. Describe *in-situ hybridization* concept and its importance.
24. Elucidate the application of statistics in biological research.

(7 x 2 = 14 weightage)

III Answer **any two** questions in **300** words:

25. Critically evaluate the role of aneuploidy and euploidy in evolution.
26. Describe the transfer of alien genes. How will you detect and characterize them after transfer?
27. Give a detailed account of different forms of graphical representation of data.
28. Explain briefly the various theories and experimental evidences on the origin of life evolution.

(2 x 4 = 8 weightage)
