

C 24025

(Pages : 2)

Name.....

Reg. No.....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2017

(CUCSS—PG)

Botany

BO 02C T06—CYTOGENETICS, GENETICS, BIostatISTICS, PLANT BREEDING AND
EVOLUTION

Time : Three Hours

Maximum : 36 Weightage

Answer the questions briefly.

1. What is Robertsonian translocation ?
2. What is meant by chromosome micro-dissection ?
3. Comment on Cmp site transposon.
4. What is meant by transgressive variation ?
5. Write an account of intersex.
6. Comment on SPSS.
7. What is RBD ?
8. What is meant by replication in ANOVA ?
9. Write an account of Flavr Savr tomato.
10. What is pure line selection ?
11. Differentiate between horizontal and vertical resistance.
12. Differentiate between primary and secondary data.
13. What are moulds and casts ?
14. Write note on theory of pangenesis.

(14 × 1 = 14 weightage)

Answer any seven questions in not more than 100 words.

15. Explain the breeding behaviour and genetics of structural heterozygote.
16. Comment on computer assisted chromosome analysis.
17. Describe mapping of genes in bacteriophages.
18. What is the modern concept of gene ?
19. Write notes on molecular markers and their uses.

Turn over

20. Write a note on *in situ* and *ex situ* conservation.
21. What are the designs used in field experiments in Botany? Mention the conditions under which each design is selected.
22. Explain random sampling and stratified sampling.
23. Explain evidences of evolution from genetics.
24. Describe the evidences to support the notion that cell-free molecular systems are evolved by natural selection.

(7 × 2 = 14 weightage)

Answer any two questions in 300 words each.

25. Explain the structure of Lampbrush chromosomes and polytene chromosomes. Add a note on their cytogenetic importance.
26. Explain Hardey Weinberg law. Describe its application in genetics.
27. Discuss the role of mutation in plant breeding. Add a note on the merits and demerits. Mention the achievements made in India.
28. Write an essay on collection and classification of data.

(2 × 4 = 8 weightage)