



K17U 0329

Reg. No. :

Name :

**VI Semester B.Sc. Degree (CBCSS – Regular) Examination, May 2017
(2014 Admn.)**

**CORE COURSE IN BOTANY/PLANT SCIENCE
6B12 BOT/PLS : Biotechnology and Crop Improvement**

Time : 3 Hours

Max. Marks : 40

SECTION – A

Answer all.

- Herbicide resistance can be conferred by over expression of
 - EPSPS gene
 - GFP
 - Chitinase gene
 - CryI* gene
 - cDNA is synthesized from
 - Double stranded DNA
 - Single stranded DNA
 - mRNA
 - rRNA
 - Crown Gall disease is caused by
 - E Coli
 - Salmonella typhimurium*
 - Agrobacterium tumefaciens*
 - Agrobacterium rhizogenes*
 - Genome mapping can be done by
 - RAPD marker
 - SSR marker
 - EST marker
 - All of these
- (4×1=4)**

SECTION – B

Answer any eight :

- Write a note on a nanoscaled bio molecule.
- Explain heterosis.
- Give your opinion about patenting of life forms.

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8. Explain targeted gene delivery.
9. What is mutation breeding ?
10. Explain PCR.
11. Write about objectives of plant breeding.
12. Write a note on replica plating.
13. What is plant introduction ?
14. What is terminator technology ?
15. Give an account on gene mapping.
16. Write about an important plant breeding institute in South India. (8×2=16)

SECTION – C

Answer **any four**.

17. Explain gene therapy with an example.
18. Write a note on pureline selection.
19. Write about application of nanotechnology in lifescience.
20. Give an account of markers for selection of recombinants.
21. Explain 'Farmers rights' and 'Plant Breeders Rights Act'.
22. Explain Sangers method of gene sequencing. (4×3=12)

SECTION – D

Answer **any one**.

23. Explain application of biotechnology in crop improvement.
24. Write about vectors used in recombinant technology.
25. Explain DNA finger printing and its applications. (1×8=8)