16P427 (Pages:2) Name…….

Reg. No…….

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, MARCH 2018

(Regular/Supplementary/Improvement)

(CUCSS - PG)

CC15 PBO4 E14 – GENETIC ENGINEERING

(Botany)

(2015 Admission onwards)

Time: Three Hours Maximum: 36 Weightage

Part A

Answer ***all*** questions briefly. Each question carries ***1*** weightage.

1. What is gene gun method?
2. What is DNA finger printing?
3. What is AFLP?
4. Explain transgenic plants with example.
5. Describe Repetitive DNA.
6. What is bioremediation?
7. What are the applications of southern blotting?
8. What is the importance of DNA sequencing?
9. Bt cotton.
10. What is DNA profiling?
11. What are opines?
12. What are DNA drugs?
13. PAGE.
14. What is microsatellite?

(14 x 1 = 14 Weightage)

Part B

(Each question should not exceed more than ***100*** words.)

Answer any ***seven*** questions. Each question carries ***2*** weightage.

15. What is a plasmid vector? What are its disadvantages?
16. What are restriction enzymes? Describe their properties.
17. What is PCR? Explain its advantages and limitations.
18. Explain Maxam-Gilbert method of DNA sequencing.
19. Write a short note on Agrobacterium mediated transfer technique in plants.
20. What is genomic library? What are the different types of DNA library?
21. How Golden rice is produced?
22. Explain Gel electrophoresis. What are its merits?

23. Explain viral approaches in gene therapy.
24. Comment on the importance of genetically modified micro organisms in environmental cleaning problems.

(7 x 2 = 14 Weightage)

Part C

(Each question should not exceed ***300*** words.)
Answer any ***two*** questions. Each question carries ***4*** weightage.

25. Explain various methods of creating r-DNA molecules.
26. Explain how genetic engineering can be applied to crop improvement with special reference to transgenic plants.
27. What is the role of gene therapy in curing diseases? Explain the various approaches of gene therapy.
28. Explain how gene cloning can be used for the well being of mankind.

(2 x 4 = 8 Weightage)

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