

IV. MATCH THE FOLLOWING.**(4 x 1 = 4)**

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| 15. Indole acetic acid | Cheese Production |
| 16. Ethyl methane sulfonate | Herbicide |
| 17. Glufosinate | Apical Dominance |
| 18. Chymosin | Mutation Breeding |

V. WRITE SHORT NOTES ON ANY SIX EACH IN ABOUT 50 WORDS. (6 x 3 = 18)

19. Define embryoid.
20. Mention any two chemofusagen.
21. Name any three molecular markers in crop improvement.
22. Expand GMO. Mention the importance of *Bt* Cotton.
23. How *Azolla* is useful in paddy cultivation.
24. What are edible vaccines? Give an example.
25. Define biohydrogen. Mention its advantages.
26. What are petroplants? Give examples.
27. Distinguish between beer and wine.

SECTION – B

ANSWER ANY FOUR OF THE FOLLOWING IN ABOUT 200 WORDS EACH. ALL ANSWERS CARRY EQUAL MARKS. DRAW DIAGRAMS WHEREVER NECESSARY. (4 x 6 = 24)

28. Define somaclonal variation. Briefly explain the mechanism involved in somaclonal variation.
29. Elaborate on the production of insect resistance transgenic plants.
30. What are Biofertilizers? With suitable examples, bring out the significance of biofertilizers in agriculture.
31. What are the steps involved in the production of biodiesel from plants?
32. Schematically represent the various steps involved in downstream processing.
33. Explain briefly the production of Vitamin B₁₂.

SECTION – C

ANSWER ANY TWO OF THE FOLLOWING IN ABOUT 1000 WORDS EACH. ALL ANSWERS CARRY EQUAL MARKS. DRAW DIAGRAMS WHEREVER NECESSARY. (2 x 20 = 40)

34. Explain in detail about somatic hybridization.
35. Give an account of genome mapping in crop improvement programme.
36. Briefly describe the methods for the production of recombinant vaccines in plants.
37. List out fermented products with industrial applications and explain the component parts of a fermentation process.
