

BIO-TECHNOLOGY – PRINCIPLES AND APPLICATIONS

1. Mention three characteristics of a plasmid.
2. What is the principle behind gel electrophoresis?
3. Explain the essential features of a vector?
4. How did Eli Lilly prepare humulin?
5. Differentiate simple stirred tank and sparged tank bioreactor.
6. Name the sequence identified by EcoRI. What kind of cuts do they produce? Mention its significance.
7. List the steps of DNA isolation
8. Why is *Bacillus thuringiensis* considered a boon to agriculturists?
9. How do we make a cell competent?
10. What is biopatenting and biopiracy?
11. Draw and label PBR 322
12. What is gene therapy?
13. What is the role of *Meioidigyne incognita* in plants? How is the activity suppressed in tobacco plants?
14. What is insertional inactivation?
15. Give 4 uses of PCR.
16. Expand GEAC
17. What are the different methods of transferring DNA into host cells?
18. Give the diagrammatic representation of RDNA technique.
19. How is a segment of DNA amplified? which is the major tool required for this process?
20. What is downstream processing?
21. Why is molecular diagnosis considered better than conventional methods?
22. How is a probe used in detecting cancer?
23. Give two examples of misuse of biopatenting.
24. Six uses of genetically modified plants and animals.