

BT207 Assignment Question for classes 7th, 8th, and from 14th, 15th and 16th Feb 2023

1. What are the differences and similarities of PCR with replication?
2. At which step we should use restriction enzyme for the first time.
3. How was Restriction Enzymes discovered?
4. Is the arrangement of DNA nucleotides random or are there any patterns?
5. How the probability of restriction site to be present in a DNA is determined.
6. How the bacteria protect their own genome from restriction enzyme.
7. Methylation happens at A and C. What does it tell you about the restrictions site?
8. What is methylation specific PCR?
9. To which class of enzyme nucleus belongs to?
10. Which is the most desirable for cloning purpose, blunt ends or sticky ends?
11. What are the uses of nuclease inside the cell?
12. What are the Properties of recognition site of restriction endonuclease?.
13. What are the types of restriction enzyme and how are they classified?
14. What is inframe fusion?
15. What will happen if we increase elongation time in PCR?
16. What is CT value?
17. When bacteriophage attacks bacteria, What does the restriction enzyme and its partner methylase enzyme target respectively?
18. What is SAM (S-Adenosyl methionine) and which functional group does it donate?
19. What is SNP?
20. How can you detect a SNP?
21. What is polymorphism?
22. What is restriction fragment length polymorphism?
23. How restriction enzyme can be exploited to detect SNP.
24. What is restriction pattern?
25. What is star activity of restriction enzyme?
26. What factors affect the star activity of restriction enzyme?
27. When you are removing contaminating DNA from a sample, What will be your choice of enzyme RE or DNase1? Explain logically.
28. What is a nick?
29. What is DNA footprinting?
30. What is EMSA and explain its use.
31. What is S1 nuclease and explain its use.
32. What is the use of RNase?
33. Which enzyme class does the nucleus belongs to? Name other enzymes which belongs to the same class.
34. Do nuclease have a partner enzyme or do they operate independently?
35. What are the requirement for DNA modifiers in genetic engineering?
36. Why polymerase is called DNA modifier?
37. What is the modification in the process of transcription?
38. Name an enzyme involved in RNA modification in transcription.
39. Write about the features of DNA polymerase?

40. What is the signal based on which the polymerase will stop working?
41. Explain how you can use combination of polymerase and Restriction Endonuclease to modify DNA.
42. What are the application of reverse transcriptase?
43. To which enzyme class phosphatase belongs to?
44. How can you stop your plasmid to self ligate?
45. What are the function of methylation of DNA?
46. What do terminal transfers do?
47. What is RACE PCR?
48. What is the function of PNK and ligase?
49. What is the mechanism of action of ligase?