BT207 Assignment Question for classes 17th, 18th and 19th of January 2023

1. List the various applications of genetic engineering.
2. What are the different types of vaccines?
3. Differentiate between recombinant and non-recombinant proteins.
4. Explain Griffiths expt. What were the conclusions of the experiment?
5. Differentiate between prokaryotic and eukaryotic genes.
6. What is a gene? Explain the physical and chemical nature of a gene.
7. What are constitutive genes?
8. What are inducible genes?
9. Briefly explain ORFs.
10. What are operons?
11. What is an in-frame fusion protein?
12. How to predict a gene?
13. Explain the features of a eukaryotic gene.
14. Operons are an example of an efficient regulation. Explain.
15. What are the conserved regions in a enzyme?
16. What are the different gene prediction methods?
17. What is genome? Name the different types.
18. Genomes are packed in organisms. Why?
19. What are the differences between structural and functional genes?
20. What is supercoiling of DNA?
21. Explain eukaryotic DNA packaging.
22. Explain prokaryotic DNA packaging.
23. What is a nucleosome?
24. Name the components of a nucleosome.
25. What is the length of DNA coiled around a nucleosome complex?
26. What is a linker DNA?
27. Name the type of bonds observed in a nucleosome complex.
28. What is C-value. Explain its significance.
29. Explain the C-Value paradox.
30. What are splice variants?
31. What are transposons?
32. Explain coding and non-coding DNA.
33. List out the various steps involved in cloning.
34. Which type of RNA is the genetic material in viruses?
35. What are the different types of templates used in cloning? Explain.
36. What are the advantages of using mRNA as a template?
37. Explain in brief the protocol for gDNA isolation.
38. List out the components of a lysis buffer. Explain the role of each component.
39. Explain Beer-Lamberts Law.
40. What are the limitations of Beer-Lamberts Law
41. What is the absorbance maxima of DNA?
42. How do we check for the quantity and quality of DNA post isolation? Explain.
43. How to detect contaminates in DNA by spectrophotometric methods?