QUESTION BANK

Write short answers

1. Briefly describe the various branches of biotechnology
2. Write short notes on different colour codes for different branches of biotechnology
3. What are all the objectives of animal biotechnology ?
4. What are all the applications of animal biotechnology?
5. Briefly describe different aspects of animal biotechnology
6. What are all the features of a prokaryote?
7. What are all the features of a eukaryotic cell?
8. What are all the differences between prokaryotes and eukaryotes?
9. Briefly write on macromolecules
10. What are all the Purines?
11. What are all the Pyrimidines?
12. How the bases of each chain basepair with the opposite chain of DNA?
13. Describe the features of RNA structure
14. Genetic code and wobble hypothesis
15. How the codons interact with anticodons?
16. What are all the common post-translational modifications of prokaryotes?
17. Briefly write on the initiation of protein synthesis in eukaryotes
18. Purpose and applications of recombinant DNA techniques
19. What is an ideal cloning vector?
20. What are all the differences between an expression vector and a cloning vector?
21. How to do transformation?
22. Briefly write on transfection
23. Write on applications of PCR
24. Write the uses of Genomic and cDNA libraries
25. Write the principles of Maxum-Gilbert method
26. Write the applications of Southern blotting

27. Write the applications of Western blotting
28. Write the applications of Northern blotting
29. What are all the difference between Southern blotting and Northern blotting?
30. What are all the types of DNA probes?
31. Write the advantages and disadvantages of using radioactive probes?
32. Write the criteria for selecting a donor cow for embryo transfer programme
33. What are all the methods of superovulation?
34. How to cryopreserve the embryos?
35. What are all the applications of embryo transfer technique?
36. Write on in vitro fertilization
37. Write the different ways to detect sex of gametes and embryos
38. Write the advantages and disadvantages of micro injection method
39. What are all the applications of transgenic animals?
40. Write on benefits and risks of biopharming
41. What are all the methods of genome mapping?
42. Molecular markers
43. Write the purposes of gene banking
44. What are all the applications of biotechnology in nutritional physiology and rumen biology?
45. What are all the tumor markers? and what is the importance of tumor markers?
46. Write the applications of acute phase proteins
47. What are all the advantages and disadvantages of subunit vaccines?
48. Write on recombinant vectored vaccines
49. What are all the recombinant vaccines available for animal use?
50. Write on fermented meat
51. Write on fermented milk products
52. What are all the categories of intellectual properties?
53. What are all the components of bioinformatics?

Write Essay on

1. Animal biotechnology and its applications in improving the livestock production and health
2. Macromolecules and their functions
3. Write in detail about the features of DNA structure
4. Write in detail about the different steps and events of transcription in prokaryotes
5. Write in detail about the different steps and events of translation in prokaryotes
6. Write in detail about the different steps involved in recombinant DNA technique
7. Write the features of different cloning vectors
8. Write in detail about expression vectors
9. Write in detail about PCR
10. Write in detail on Genomic and cDNA library construction
11. What are all the methods of DNA sequencing available? Write in detail about the automated DNA sequencing
12. Write in detail on the Southern blotting technique
13. Write in detail on the Western blotting technique
14. Write in detail on the Northern blotting technique
15. Write in detail on different methods of DNA finger printing
16. Describe in detail on different steps involved in the embryo transfer technique
17. Write in detail on micro injection method
18. How to do animal cloning?
19. Write in detail on BAC method of gene sequencing and wholegenome shot gun method
20. Describe the techniques used to assess molecular markers in detail
21. What are all the steps involved in optimization of rumen digestion?
22. Write in detail about primary cell culture and list the commonly used cell lines and their origin
23. Write the applications of PCR in disease diagnosis
24. Write the applications of DNA probes in disease diagnosis
25. Write in detail on the production of monoclonal antibodies
26. Write in detail on upstream and downsteam processes of fermentation
27. Write in detail on biotechnological processes involved in leather making
28. Write the ethical and regulatory issues of biotechnology
29. Write on intellectual property rights in biotechnology
30. Write on various branches of bioinformatics