

Short answer question

- 1 what is restriction site
2. Recognition site for Eco RI is
3. Full form of PCR
- 4 full form of p and Br in case of PBR 322
5. Any two chemical methods for gene transfer is..... and
- 6 RT PCR in this RT stands for an enzyme isolated from
- 7.crown gall disease is caused by.....
- 8 hairy root disease is caused by
- 9.give example for one PCR and one hybridization based marker
10. What is exonuclease
- 11.full form of GFP is
- 12.Agrobacterium mediated transformation is called
- 13 opine is derivative of ,.....
- 14.what are different types of PCR
15. What is cDNA library
- 16 Cells capable of undergoing transformation are called
- 17 PBr322 is E. coli plasmid based vector system(true or false)
- 18.cDNA is intr on free DNA
- 19.restriction endonuclease produces only sticky end DNA(true or false)
20. DNA polymerase used in PCR is called ,.....
21. Taq is obtained from..... Bacteria
- 22Biolistics method of gene transfer is also known as
23. Give example for any two methods of gene transfer..... And
- 24.Lac Z gene codes for an enzyme called as
- 25.source of GFP is
26. DNA formed by using RNA as a template is called as
- 27.YAC stands for
- 28.if you want to clone single standard DNA Vector system will be used
- 29.components/ gene present in T-DNA is called as
- 30.size of Ti plasmid is
- 31.state true or false colour blindness is a sex linked inheritance
- 32Full form of Bt is ?.....
- 33Total number of amino acids present in insulin is
- 34what is therapeutic agent
35. Give example for growth hormone
36. What is reporter gene
- 37 structure of IPTG
- 38give example for one in planta method of gene transfer
- 39 source of lux gene is
40. Dye used for staining DNA after electrophoresis is
41. Two types of probes used in PCR is.....
- 42.restriction endonuclease always gives blunt end DNA (true or false)
- 43.Types of TI plasmid on the basis of types of plasmids.....

44. what are two common techniques used in gene therapy
45. what is antisense RNA technology
46. enzyme adds new nucleotide to the free -OH end of DNA is
47. Enzyme that can remove phosphorus from 5' end of DNA is called
48. sickle cell anemia is a nutritional deficiency disorder
49. In case of colour blindness closely placed green and red point objects can't be identified
50. full form of PCR is ?.....

Part b 5 marks questions

51. Explain the basic steps of PCR reaction
52. with a suitable diagram explain PCR
53. What is dideoxynucleotidetriphosphate method of DNA sequencing
54. What are the basic steps for isolation of genomic DNA from plant cell
55. What is site directed mutagenesis
56. how insulin is expressed in E. coli
57. What is gene therapy
58. What is recombinant vaccine
59. How blood clotting factor VIII is produced using recombinant DNA technology
60. what is agarose gel electrophoresis
61. what is RFLP
62. list out the quality of an ideal vector
63. how phage DNA is isolated
64. What is cDNA libraries
65. What are the medical applications of DNA fingerprinting
66. how recombinant DNA technology can be used for diagnosis of disease
67. what are different classes of restriction endonuclease
68. explain binary vector system of disarmed Ti plasmid
69. What is leaf disc method of gene transfer
70. what is micro injection and microprojectile.
70. what is gel retardation technique
71. what are the applications of site directed mutagenesis
72. what do you mean by weak promoter and strong promoter
73. what do you mean by reporter gene give two examples along with selection methods
74. explain micro injection
75. What is electroporation
70. what is leaf disc method of gene transfer
71. list out any five differences between cloning and expression vector
72. explain the basic steps of gene cloning with a suitable example
73. what is BAC.
70. describe the structure of Ti Plasmid with particular emphasis on T-DNA

1. Give example for two natural source of nitrogen in industrial media is
2. Give example for one anti foaming agent used in media
- 3 for aeration in a bioreactor Is used
- 4 Two types of production methods used for industrial production is
- 5..... Is used in the bioreactor for mixing media
- 6.microbial growth curve is
7. Phases of microbial growth curve are.....
- 8.example for two carbon source used in industrial media is And
- 9 for thermolabile components of media such as antibiotic..... method is used for sterilisation
- 10..... is used for immobilisation of whole cells
- 11state true or false in case of industrial media sterilization two reactive components should not be sterilization together
- 12.In case of animal cell culture media baffle is not present
- 13 baffle may damage animal cell culture
- 14 indicator is added to the media in order to monitor the PH change during fermentation process
- 15 thermolabile components of media are sterilized by filtration
- 16 sodium alginate is used for immobilisation of cell
- 17 due to immobilisation of cell yield will increase
when number of death cells and number of new cell formed is same it is called death phase
- 19..... Is used to check cell density
20. Give example for one antibiotic and it's mechanism of action

Part b long answer questions

- 21.list out ten ideal characters of industrial media
- 22 what are the carbon source used for industrial media preparation
- 23 what do you mean by thermal death time
24. What is continuous fermentation
25. With a suitable diagram explain the structure of bioreactor
26. Explain various methods of whole cell immobilisation
- 27what is oxygen uptake rate
- 28.what are industrial applications of whole cell immobilisation
- 29.how scaling up is done in case of industrial production
- 30 explain the basic steps of down stream processing
31. What do you mean by batch fermentation process
- 32 how different parameters such as temperature , pH etc are monitored in a bioreactor
33. With a suitable diagram explain the structure of airlift fermenter
34. List out limitations of batch fermentation
- 35 what do you mean by fed batch fermentation
36. List out the environmental factors affecting microbial cell growth