BT 301 M.C.Q Grand Quiz

i. DNA is amplified by the technique is called _____ **PCR**

ii. How many types of nucleotides are present in DNA? **4**

iii. LTR (Long terminal repeat) consists of _____ **250 – 600 bp**

iv. In cloning technique a plasmid with low **molecular weight** and **high copy** number is more suitable.

v. The number and size of the fragments generated by the restriction enzyme depends on the frequency of **occurrence of the target site in the DNA to cut**.

vi. Who gave the most important clue about the structure of DNA before 1953? **Chargaff**

vii. The bacterial chromosome is very long _____ **up to 1mm**

viii. By removing the cell wall from the bacteria the remaining cell is called _____ **protoplast**

ix. Nuclein was discovered in _____ **1869**

x. Southern blotting is used for the detection of _____ **specific DNA**

xi. pSC has _____ **tetracycline resistance gene**.

xii. The branch of biotechnology that deals with the production of drugs is called _____ **Red Biotechnology**

xiii. The used of salt of for the preservation of meat _____ **400BC**

xiv. Most of th useful R-M system is **Type II**

xv. Lambda have _____ **48502 bp**

xvi. Which one of the following is natural occurring plasmid? **Col E1 and pSC 101**

xvii. Structural instability is of plasmid may be arise due _____ **deletion or rearrangement of DNA**

xviii. Nucleotide with **14500 bp** is minisatellites and microsatellites up to **13 bp**

xix. The successive bond present between two nucleotides is called_____ **Phosodiester linkage**

xx. The DNA Ligase is repair by _____ **Nick**

21. **Type I** system was the first to be characterized by the E. coli K12.

22. Before _____ no rooted of cloning DNA. **1970**

23. **E. coli** often remains of the host of choice for cloning.

24. Most common SINSs in primate are called _____ **Alu sequences**

25. Mobile DNA moves within _____ **Genome**

Created by Amaan Khan

26. Pseudo genes are _____ copies of gene. **Non functional**

27. DNA combine with the histone are called _____ **Chromatin**

28. Which one of the following is a Purine? **Adenine and Guanine**

29. In Autoradiography _____ is used to visualize. **X-rays film**

30. _____refers to the conventional techniques that have been used for many centuries to produce beer, wine, cheese etc. **Conventional Biotechnology**

31. In 1829 the Urea is prepared in laboratory? **Fredrick Wohler**

32. Ti Plasmid is found in _____ **tumor**

33. Primary structure of protein is also known as _____ **covalent structure**

34. Retrovirus are used to produced infection _____ **cDNA**

35. The minor groove of the DNA have _____ **3.4 A**

35. I973 _____ brought the restriction enzyme. **Boyer**

36. _____ was the VC of Genentech. **Robert Swanson**

37. Complete genome study of Yeast was completed in _____ **1996**

38. Organisms that contains single circular organelle _____ **Bacteria**

39. A multisubunit protein _____ **Quaternary**

40. RNA act as a template _____ **mRNA**

41. A molecules that consist of three components are called _____ **Nucleotide**

42. RNA contains _____ sugar. **Ribose**

43. Schwann proposed cell theory in _____ **1839 AD**

44. DNA is visualize by the _____ **X-rays / Autoradiography**

45. The process of forming mRNA on a DNA template _____ **transcription**

46. Transfer RNA acts as _____ molecule in the protein synthesis process. **Adapter**

47. _____ ribosome are present in the rRNA. **60%**

48. The more extent form of DNA is called _____ **Euchromatin**

49. Ethidium bromide used as _____ to dye. **stain**

50. C-N bond is shorter in _____ **Protein**

51. How many types of Amino acids are present in human body? **20**

52. In protein each amino acid are joined by another amino acid by covalent bond is called _____ **peptide linkage**

53. The six atoms of the peptide group are coplanar i.e., lie in a single plane, with the oxygen atom of the **carbonyl group** and the hydrogen atom of the amide nitrogen trans to each other.

54. _____ is a more extended conformation of polypeptide chains. **B-sheet**

55. Western blotting is used for detection of _____ **protein**

56. Bacteria has high coding density than _____ **Eukaryotes**

57. In human _____ numbers of genes are present. **23000**

58. The overall three dimensional arrangement of all atoms in a protein is referred to as the protein's **tertiary structure**.

59. The percentage of nucleic acid in relation to protein is about **1%** for the influenza virus and about **50%** for some bacteriophage.

60. bacterial DNA to form a highly condensed nucleoprotein complex called the **Nucleiod**.

61. Northern blotting used for the _____ **RNA**

62. Mitochondrial gene are in human cell _____ **37 genes**

63. Highly condensed chromatin is known as **heterochromatin.**

64. Cell lyses by **SDS** and **proteinase K**

65. **Agarose** is convenient for separating DNA fragments ranging in size from a few hundred base pairs to about 20 kb.

66. **Polyacrlamide** is preferred for smaller DNA fragments.

67. **Probe** is a fragment of **DNA or RNA** which is used to detect the sequences of target DNA.

68. In **electroporation**, electric field is applied to cells in order to increase **permeability** of the cell membrane to take DNA.

69. At least **four** R-M systems are known.

70. **Type III** enzymes have symmetrical recognition sequences but otherwise resemble type I systems and are of little value.

71. Type II endonucleases recognize and cleave DNA within particular sequences of **four to eight** nucleotides which have a twofold axis of rotational symmetry i.e. referred as **palindromes**

72. **Nucleases or DNases** are the enzymes that degrade DNA.

73. An enzyme that catalyzes template-dependent synthesis of DNA. **DNA polymerase**

74. An enzyme that creates a phosphodiester bond between the 3' end of one DNA segment and the 5' of another. **DNA Ligase**

75. Chemically synthesized adaptor molecules which have a preformed cohesive end can be used to insert blunt ended foreign DNA into vector. **Adaptor**

76. Eukaryotic mRNA can be cloned in vector after converting it to cDNA by using an enzyme **reverse transcriptase**

77. Plasmids can be categorized into conjugative or non conjugative depending whether or not they carry a set of transfer genes, called **tra genes**

78. The loss of plasmids due to defective partioning is called **segregative instability**

79. White Biotechnology Development of processes and microorganisms for **Industrial processes**

80. Sumerians and Babylonians are used anaerobic respiration _____ **6000 BC**