



Your answers should be specific to the questions asked.  
Draw neat labeled diagrams wherever necessary. Answer all questions

**LONG ESSAY (Answer any TWO)**

**2 X 20 = 40 Marks**

1. Describe in detail various stages of cell cycle
2. Describe the methods and applications of DNA sequencing
3. Describe different biotechnological techniques associated with the peptide chemistry and peptidomimetics

**SHORT ESSAY (Answer any FIVE)**

**5 X 10 = 50 Marks**

4. Write a note on Human genome project
5. Describe the technique of RFLP
6. What is gene therapy? Mention the types with examples
7. Describe the immunogenicity of protein therapeutics
8. Write a note on the genetic code elucidation
9. Describe various steps involved in animal cell culture

**SHORT NOTES**

**2 X 5 = 10 Marks**

10. Cloning vectors
11. Vaccines – rDNA products

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