

Note:

1. Question No. 1 is compulsory.
2. Attempt any three questions out of remaining five questions.
3. Assume suitable data wherever necessary.
4. Figures to right indicate full marks.

- Q.1 Write short notes on: (Any four) 26
- a. Aneuploidy
 - b. Characteristics of genetic code
 - c. Denaturation of DNA
 - d. DNA repair mechanisms
 - e. Alternate splicing
- Q.2 Explain lac operon model in detail. What is the effect of presence of glucose and lactose in the medium on its regulation? 20
- Q.3
- a. Explain Mendel's laws with the help of appropriate examples. 12
 - b. Write a note on types of RNA. 8
- Q.4
- a. Explain Watson & Crick DNA model with the help of a neat, labeled diagram. 10
 - b. Explain the process of transcription in prokaryotes. 10
- Q.5
- a. Explain the DNA replication process in prokaryotes. 10
 - b. Write a note on initiation of translation in prokaryotes. 10
- Q.6
- a. Write a note on post-translational modifications in proteins. 10
 - b. Write a note on 5' & 3' modifications occurring in eukaryotic mRNA. 5
 - c. Write a note on induced mutations. 5
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