

(3 Hours)

[Total Marks : 80

- N.B. : (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.

1. Write short notes on: (Any four)

- (a) 20 Chemical mutagens
- (b) tRNA
- (c) SNP
- (d) Aneuploidy & associated disorders
- (e) Chaperones

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| 2. | (a) Write a note on post transcriptional modifications in eukaryotic mRNA. | 10 |
| | (b) Explain the process of DNA replication in prokaryotes. | 10 |
| 3. | (a) Explain the process of translation in prokaryotes. | 20 |
| 4. | (a) Explain Watson & Crick model of DNA with the help of a diagram. | 8 |
| | (b) Explain Mendel's laws with appropriate examples. | 12 |
| 5. | (a) Explain Jacob and Monad's lac operon model. | 10 |
| | (b) What are the mechanisms available for repair of damaged DNA? | 10 |
| 6. | (a) Explain the attenuation model for trp operon in starved and non-starved condition. | 10 |
| | (b) Explain mechanisms involved in termination of transcription in prokaryotes. | 5 |
| | (c) Explain the significance of C_0t curves. | 5 |

