

(3 Hours)

[Total Marks : 80]

N.B. : (1) Question No. 1 is compulsory.
(2) Answer any three of remaining five questions.

- | | | |
|--------|---|----|
| 1. (a) | Explain replication mechanism in procaryotes with a neat diagram. | 10 |
| (b) | Narrate the experiment to prove DNA as a genetic material. | 10 |
| 2. (a) | Explain the transcription mechanism in eucaryotes. | 10 |
| (b) | Describe processing of r-DNA. | 10 |
| 3. (a) | Write a short note on denaturation of DNA. | 6 |
| (b) | Explain the structure of t-RNA. | 7 |
| (c) | Write a short note on genetic code and its properties. | 7 |
| 4. (a) | Explain the law of segregation and the law of Independent assortment. | 10 |
| (b) | What is linkage? Explain the types of linkage by drawing suitable crosses. | 10 |
| 5. (a) | Explain the mechanism of meiotic crossing over with a neat diagram. | 10 |
| (b) | Explain disorders occurring at chromosomal level. | 10 |
| 6. (a) | Write a short note on enzymes and accessory proteins involved in DNA replication. | 10 |
| (b) | Write a note on alternate splicing. | 10 |

—v—