

Biotech - Sem IV (CBGS)

MG
Molecular Genetics
(3 Hours)

QP Code : NP-19700

(25) [Total Marks : 80

- N. B. : (1) Question No. 1 is compulsory.
 (2) Attempt any 3 of remaining 5 questions.
 (3) Explain with suitable diagram wherever necessary.
 (4) Figures to the right indicate maximum marks.

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| 1. Write short notes on: | 20 |
| (i) Structure of tRNA | |
| (ii) Law of segregation | |
| (iii) Enzymes involved in translation | |
| (iv) Mechanism of Initiation in Translation | |
| 2. (a) Explain the complexity of DNA & Cot curves. | 10 |
| (b) Explain Eukaryotic replication. | 10 |
| 3. (a) Write a note on RNA Polymerases. | 8 |
| (b) Explain the splicing mechanism of RNA. | 12 |
| 4. (a) Explain the termination of translation and co-and post translational modifications. | 12 |
| (b) Explain the process of Initiation of Transcription in Prokaryotes. | 8 |
| 5. Explain Lac operon model in detail. Explain its regulation in presence of Glucose & Lactose in medium. | 20 |
| 6. Write a short note on: | 20 |
| (i) Alternate splicing | |
| (ii) Operon theory | |
| (iii) DNA repair mechanism | |
| (iv) Satellite DNA | |

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