2003001105020004
EXAMINATION FEBRUARY -MARCH 2024
BACHELOR OF SCIENCE (FIFTH SEMESTER)
(BIOTECHNOLOGY)
INTRODUCATION TO MOLECULAR BIOLOGY – II LEVEL 2

[**Time: As Per Schedule]** **[Max. Marks: 50]**

Instructions:
1. Fill up strictly the following details on your answer book
   a. Name of the Examination : **BACHELOR OF SCIENCE (FIFTH SEMESTER)**
   b. Name of the Subject : **(BIOTECHNOLOGY) INTRODUCATION TO MOLECULAR BIOLOGY - II LEVEL 2**
   c. Subject Code No : **2003001105020004**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

Student's Signature

Q.1 Define/Answer in short Any Four: **8**

(a) Catabolite Repression & Wobble position
(b) Antisense RNA & Consensus sequences
(c) Poly and monocistronic mRNAs
(d) Inducer & Operator
(e) Negative Transcriptional Control & Operon

Q.2 Attempt Any Two: **14**

(a) Discuss the events of transcription in bacteria.
(b) How amino acids are activated for protein synthesis and why specificity of aminoacyl tRNA synthetase reaction is important.
(c) Explain the mechanism of attenuation in detail.

Q.3 Explain in detail Any Two: **14**

(a) Protein secretion system of Gram-negative bacteria.
(b) Lac-operon regulation.
(c) Role of small RNAs.

Q.4 Attempt Any Two of the following: **14**

(a) Lytic and lysogeny in Bacteriophage λ.
(b) Molecular chaperons and their role in polypeptide folding.
(c) Regulation by Riboswitches.

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