

No. of Printed Pages : 03

Roll No.

461

B. Tech. EXAMINATION, May 2017

(Fourth Semester)

(Old Scheme) (Re-appear Only)

(BT)

BT-202

MOLECULAR BIOLOGY

Time : 3 Hours]

[Maximum Marks : 100

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. Draw suitable diagram wherever is necessary.

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P.T.O.

Unit I

1. Describe the technique involved in DNA amplification in *in-vitro* condition. Also explain their working and applications in biotechnology.

20

2. As we move from lower organism to higher organism in hierarchy of evolutionary tree there is no increase in regular sharp increase in DNA content. Explain this anomaly in terms of c-value paradox.

20

3. Discuss in detail about the regulation of translation in prokaryotes and eukaryotes.

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Unit II

4. Give the detailed mechanism of transcription in prokaryotes and role the regulatory elements in control of the event.

20

5. Write notes on the following :

(a) Attenuation and ante-termination

(b) Repressor inducer complex.

10,10

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2

6. Discuss the following :

8+6+6=20

(a) Homeodomain regulatory mechanism

(b) Structure of eukaryotic RNA polymerase

(c) Transcription of gene of mitochondria.

Unit III

7. Discuss the mechanism of nuclear splicing and their importance in molecular biology.

20

8. Write notes on the following :

10×2=20

(a) Second messengers

(b) Apoptotic genes.

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20