Roll No. | | | | | | | | | | | | |

Total No. of Pages : 02

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B.Sc.(BT) (2014 to 2017) (Sem.–4)

# MOLECULAR BIOLOGY

Subject Code : BSBT-204

M.Code : 47048

Time : 3 Hrs. Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

## SECTION-A

**1. Answer briefly :**

a. Give the nucleosome structure.

b. Discuss Okazaki fragments.

c. What is induced mutation?

d. What is photoreactivation?

e. What is central dogma reverse?

f. What is TATA box and its significance?

g. Explain Types of DNA polymerases in prokaryotes?

h. What is replicative transposition?

i. Define Operon.

j. What are cis-acting and trans-acting regulators?

## SECTION-B

2. What do you understand by semiconservative replication of DNA? Describe the experiment which proved that DNA replication is semiconservative.

3. Give the nature and properties of genetic code.

4. Discuss the proteins and enzymes involved in replication process of Prokaryotes.

5. Discuss the role of ribosome in translation.

6. Discuss the various regulatory genes involved in gene expression.

## SECTION-C

7. Describe the physical and chemical mutagens that can damage DNA.

8. Explain prokaryotic gene expression in relation to Lac operon.

9. Describe in detail the sequence of events of translation in prokaryote.



**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**