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Total No. of Pages : 02

Total No. of Questions : 09

B.Sc.(BT) (2013 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

Q1 Answer briefly :

1. What are introns and exons?
2. What is replisome?
3. What is a primer and primase?
4. Role of primosome.
5. What is mis-sense mutation?
6. What is photoreactivation?
7. What are amber, ochre and opal codons?
8. What is a regulon?
9. What is aminoacyl-tRNA?
10. What is a regulator gene?

SECTION-B

- Q2. Discuss what are Histone and Non-Histone proteins and their functions.
- Q3. Discuss the enzymes and proteins involved in prokaryotic replication.
- Q4. What are spontaneous and induced mutations?
- Q5. Discuss the structure and functions of RNA polymerase.
- Q6. How initiation of translation starts and what is the role of fMet -tRNA?

SECTION-C

- Q7. What do you understand by DNA repair? Discuss the Photoreactivation and Dark excision repair mechanisms.
- Q8. Discuss the various factors and steps involved in elongation of a polypeptide chain.
- Q9. Discuss the gene regulation with the help of lactose operon and its positive and negative control.

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.