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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

Paper ID : [F0236]

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 :**

- a) Which activity of DNA polymerase is used for proof reading?
- b) What is the difference between a spontaneous and induced mutation?
- c) What is the significance of histone proteins in genome organization?
- d) What is the significance of polyA tail in mRNA of eukaryotes?
- e) What is splicing?
- f) What is Chargaff's rule?
- g) Give the name of any two antibiotics that inhibit protein synthesis.
- h) Why the replication of DNA is from 5' to 3' direction ?
- i) What is TATA box?
- j) What are Okazaki fragments?

SECTION-B

- Q2 What are the different proteins involved in replication of DNA?
- Q3 Discuss about different chemical mutagen causing induced mutations.
- Q4 Explain the steps involve in initiation of transcription in prokaryotes.
- Q5 Explain lac operon.
- Q6 Discuss different levels of genomic organization in eukaryotes.

SECTION-C

- Q7 Explain DNA repair mechanism.
- Q8 Explain the steps occurring in protein synthesis.
- Q9 Write short notes on **any two** :
- a) Genetic Codes.
 - b) RNA polymerase.
 - c) Central Dogma.
 - d) Ribosomes.