

SUBJECT: MOLECULAR BIOLOGY – II

Day: Tuesday
Date: 30/10/2018

W-2018-1194

Time: 10.00 AM TO 01.00 PM
Max Marks. 80

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Both sections should be written in **SEPARATE** answer books.
 - 3) Figures to the right indicate **FULL** marks.
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SECTION - I

- Q.1** A) Answer any **ONE** of the following (06)
- a) Discuss semi-conservative replication of DNA.
 - b) What is the effect of UV radiations on DNA?
- B) Answer any **TWO** of the following (10)
- a) Explain termination of DNA replication in *E – coli*.
 - b) Explain the process of synthesis lagging strand.
 - c) Discuss in brief base excision repair mechanism.
- Q.2** Write short notes on any **FOUR** (16)
- a) Replication fork
 - b) Mismatch repair
 - c) Photo-reactivation
 - d) Mut S, mut L and mut H
 - e) Okazaki fragments

SECTION - II

- Q.3** A) Answer any **ONE** of the following (06)
- a) Explain the general mechanism of intron splicing.
 - b) Discuss tryptophan operon.
- B) Answer any **TWO** of the following (10)
- a) Differentiate between prokaryotic and eukaryotic ribosome.
 - b) Explain the synthesis of mRNA in eukaryotes.
 - c) Discuss post transcriptional modification of tRNA in brief.
- Q.4** Answer any **FOUR** of the following (16)
- a) What are cis - acting elements?
 - b) What is the role of Rho factor in termination?
 - c) Give an outline on steps involved in elongation during protein synthesis.
 - d) Why t-RNA is called adaptor molecule?
 - e) Differentiate between prokaryotic and eukaryotic translation.
- Q.5** Write short notes on any **FOUR** (16)
- a) TBP
 - b) Prokaryotic promoter
 - c) Nick translation
 - d) Spliceosome
 - e) Transcription bubble