

Code No. 3211

**FACULTY OF SCIENCE**  
B.Sc. V-Semester (CBCS) Examination, November / December 2018

Subject : Biochemistry (Molecular Biology)

Paper – VI – A (DSE E - 1)

Time : 3 Hours

Max. Marks: 60

**PART – A (5 x 3 = 15 Marks)**  
(Short Answer Type)

Note : Answer any FIVE of the following questions.

- 1 DNA ligase
- 2 Nucleosomes
- 3 Sigma factor and promoters
- 4 Inhibitors of transcription
- 5 tRNA
- 6 Signal hypothesis
- 7 Catabolite repression
- 8 Rho-independent transcriptional termination

**PART – B (3 x 15 = 45 Marks)**  
(Essay Answer Type)

Note: Answer ALL questions.

- 9 (a) How the leading and lagging strands of DNA are synthesized in *E. Coli*? Explain.  
OR  
(b) Give the experimental evidence to prove semi-conservative mode of replication.  
Write a note on bi-directional model of replication.
- 10 (a) Explain in detail about post-transcriptional processing of eukaryotic mRNA.  
OR  
(b) Explain the events of initiation and elongation stages of transcription process in prokaryotes.
- 11 (a) Discuss on important features of genetic code and add a note on wobble hypothesis.  
OR  
(b) Discuss on regulation of tryptophan operon.

\*\*\*\*\*