2019

B.Sc. (Hons.)

4th Semester Examination

BOTANY

Paper - C8T

Molecular Biology

Full Marks : 40 Time : 2 Hours

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

1. Answer any *five* questions of the following : 5×2=10

(a) What is primosome?

(b) Differentiate between sense and antisence RNA.

(c) What is replication slippage?

(d) Define micro RNA.

(e) What is Cot curve?

[Turn Over]

(f) What is negative control of gene regulation?

(g) Give an example of self splicing intron.

(h) What is nuclesome?

2. Answer any *four* of the following : 4×5=20

(a) What is Adaptor Hypothern? Explain the role of various enzymes involved in DNA replication. 2+3

(b) Mention in brief the functions of different types of RNAs. 5

(c) Explain with illustration the negative control of Lac operon. 2+3

(d) Compare the process of ribosome biogenesis in eukaryotes and prokaryotes. 2.5+2.5

(e) Define transcription : State the functions of TFIID, TFIIF, TFIIE and TFIIH in enkaryotic transcription. 1+4

(f) Write the function of aminoacyl tRNA synthetase? Explain the regulation of tryptophan synthesis in etalize. 1+4

3. Answer any *one* questions of the following : 1×10=10

(a) Justify that the genetic code is non-overlapping. Explain degeneracy and Wobbles' hypothesis. 4+6

(b) Write a note on replisome and its importance in prokaryotes. How is the end part of eukaryotic chromosome replicated? 5+5
