**Total No. of Questions :5]**

**SEAT No. :** ____

**P691**

**[Total No. of Pages :2**

# [5217] - 201
# S.Y.B.Sc.
# BIOTECHNOLOGY
## Bb-221: Moleculer Biology
## (2013 Pattern) (Semester - II)

***Time : 3 Hours]*** ***[Max. Marks :80***

***Instructions to the candidates:***

1) ***All questions are compulsory.***
2) ***Draw neat labelled diagrams wherever necessary.***
3) ***Figures to the right indicate full marks.***

***Q1)*** Answer in 2-3 sentences. **[10×2=20]**

a) What is B. Form DNA?

b) Write the findings of Hershy - chase experiment.

c) Define: Gene Cluster.

d) What is Kinetochore?

e) What is enchromatin?

f) Role of Initiator Proteins.

g) What is origin of replication in Prokaryotes?

h) What are exons?

i) Role of DNA pol II.

j) Define: SOS - response.

***Q2)*** Write short notes on (any three): **[3×5=15]**

a) Processing of m - RNA in eukaryotes.

b) Lac operon.

***P.T.O.***

c) Non - histone proteins.

d) Glycosylation of proteins.

***Q3)*** Answer the following (any three). **[3×5=15]**

a) Explain the process of protein import to mitochondria..

b) Write a note on termination of DNA replication in prokaryotes.

c) What are single peptide? Give an account.

d) Discuss the bacterial genome organisation.

***Q4)*** Answer any one. **[1×15=15]**

a) Give a detail account of protein synthesis in prokaryotes

OR

b) Describe in detail transcription process in prokaryotes.

***Q5)*** a) Write a note various ways of regulation of transcription process in eukaryotes. **[8]**

b) What are histones? Give an account of histone modifications. **[7]**

OR

a) Describe the efforts made by Dr. HarGovind Khurana and his colleagues in order to decipher the universal genetic code. **[8]**

b) What is end replication? Describe mechanism of end replication facilitated by Telomerase. **[7]**

♦ ♦ ♦