

R09

Code No: 54049

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech II Year II Semester Examinations, December - 2018

MOLECULAR BIOLOGY AND GENETICS

(Biotechnology)

Time: 3 hours

Max. Marks: 75

**Answer any five questions
All questions carry equal marks**

- 1.a) Discuss Watson and Crick model of DNA.
b) List out the enzymes involved in DNA replication. [10+5]
2. Explain about Prokaryotic transcription and compare it with eukaryotic transcription. [15]
- 3.a) Explain about genetic code.
b) Give a schematic diagram of Translation. [5+10]
4. Discuss about:
a) Heterochromatin
b) Nucleosome
c) Mendel's Laws of inheritance. [5+5+5]
- 5.a) Explain about linkage and crossing over.
b) Write about gene mapping. [10+5]
- 6.a) Write about lytic and lysogenic cascades.
b) Define transformation and explain molecular mechanism involved in the process. [7+8]
- 7.a) Write about different types of mutagens and their mode of action.
b) What is site directed mutagenesis. Mention its application. [8+7]
- 8.a) Write about Extra chromosomal inheritance.
b) Explain petite phenotypes in yeast. [8+7]

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