

End Semester Examinations - 2015-16 Even Semester - May 2016

Time : 3 hrs
Total Marks: 100

1. a. Describe the Hershey and Chase experiment to prove that DNA is the genetic material (10 mark)
b. Detail the process of conjugation. Comment on F-prime factor and Hfr? (10 mark)
OR
2. a. What is transformation principle? Illustrate the Frederick Griffith's experiment. (10 mark)
b. Explain the specialized transduction with an example. (10 mark)
3. a. Brief on the enzymes involved in the process of replication. (6 mark)
b. Write the process of replication in *E.coli* with neat diagrams(14 mark)
OR
4. Comment on the DNA polymerases of eukaryotes and describe the process of replication in eukaryotes with neat illustrations. (20 mark)
5. a. Give details on: a. Mismatch repair; b. Photo-reactivation; c. SOS repair (15 mark)
b. Write a note on the promoter in prokaryotes. (5 mark)
OR
6. a. Comment on Enhancers and Transcription factors. (8 mark)
b. Describe the process of prokaryotic transcription with post transcriptional processing. (12 mark)
7. a. Write the salient features of genetic code. Mention any 5 codons with their amino acids. (15 mark)
b. Write the amino acid activation or tRNA charging step of translation. (5 mark)
OR
8. a. Discuss about the post translation processing and targeting in eukaryotes. (10 mark)
b. Detail the gene regulation in *lac* operon. (10 mark)
9. a. Define attenuation. Explain the regulation of *trp* operon by attenuation. (12 mark)
b. Give a detailed account on histone modification occurs in gene regulation. (8 mark)

Wishing you All the Best