CBCS Scheme

USN | | | | | | | | | | |

15NT63

Sixth Semester B.E. Degree Examination, June/July 2018
Molecular Biology and Genetic Engineering

Time: 3 hrs. Max. Marks: 80

Note: ***Answer any FIVE full questions, choosing one full question from each module.***

Module-1

1 a. Explain briefly about Genes, Chromosomes , Genetic engineering and Molecular genetics. **(06 Marks)**

b. Explain briefly about experiments of Mc Leod and McCarty and Hershey and chase. **(10 Marks)**

OR

2 a. Explain in detail about the difference between the Eukaryotic and Prokaryotic cells. **(10 Marks)**

b. Discuss about Prokaryotic and Eukaryotic genome organization. **(06 Marks)**

Module-2

3 a. Explain about DNA replication , similarities and differences of DNA replication in prokaryotes and eukaryotes. **(08 Marks)**

b. With a neat schematic representation discuss about D – loop replication. Mention its importance. **(08 Marks)**

OR

4 a. Explain about transcription. Discuss in detail about various stages of transcription. **(10 Marks)**

b. Explain the process of replication of linear viral DNA. **(06 Marks)**

Module-3

5 a. Write a short note on Genetic code, Codon and reading frame. **(08 Marks)**

b. Discuss about post translational modification of proteins. **(08 Marks)**

OR

6 a. Discuss in detail about Lac Operon. **(08 Marks)**

b. Discuss in detail about Trp Operon. **(08 Marks)**

Module-4

7 a. Discuss in detail about DNA cloning and its uses. **(10 Marks)**

b. Write a short note on Restriction enzymes. **(06 Marks)**

OR

8 a. Explain about Northern Blotting technique. **(10 Marks)**

b. Write a short note on Screening techniques used in genetic engineering. **(06 Marks)**

Module-5

9 a. Explain about recombinant vaccine. **(10 Marks)**

b. Write a note on recombinant cytokines and recombinant antibodies. **(06 Marks)**

OR

10 a. Explain in detail about stem cell therapy and its applications. **(10 Marks)**

b. Give a comparative description on in vitro fertilization and embryo transfer. **(06 Marks)**

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