

M.Sc Sem-3 Examination

502

Botany

November-2024

Time : 2-30 Hours]

[Max. Marks : 70

Q-1. Describe Linkage and Recombination in detail. [14]

OR

Q-1(A) Write a note on the mitochondrial genome. [07]

Q-1(B) Explain genetic mapping. [07]

Q-2 Describe the process of DNA replication. [14]

OR

Q-2(A) Explain the structure of Nucleic Acids. [07]

Q-2(B) Write a note on transcription in eukaryotes [07]

Q-3 Describe the types of DNA and RNA. [14]

OR

Q-3(A) Explain RNA interference. [07]

Q-3(B) Describe the PCR and its application. [07]

Q-4 Describe the GMO and their uses. [14]

OR

Q-4 (A) Explain the NIH guidelines and biosafety regulation. [07]

Q-4 (B) Write a note on IPR and patent. [07]

Q-5 Attempt any seven out of twelve. [14]

- 1) Explain the law of segregation of Mendelian genetics.
 - 2) Explain in brief: Transposons
 - 3) Give the importance of CRISPER.
 - 4) Give the names of any 2 research journals of Genetic Engineering.
 - 5) Explain any two salient features of the genetic code.
 - 6) What is central dogma? Who Proposed it?
 - 7) What is the significance of DNA barcoding?
 - 8) What is cDNA library? How it is used?
 - 9) What is microRNAs? Explain in brief.
 - 10) Give the full form of GATT and WTO.
 - 11) What is the role of GEAC?
 - 12) Give the importance of nanomedicines.
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