

Roll No.

Total Pages : 2

CMDE/M-24

4711

DNA PROFILING

Paper–M–FSC 204

Time allowed : 3 Hours]

[Maximum Marks : 80

Note : Attempt **five** questions in all, selecting **one** question from each unit. Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. Give short answers to the following questions: 8×2=16
- (i) Allele
 - (ii) Karyotype
 - (iii) Mini STR
 - (iv) Exons
 - (v) Gene frequency
 - (vi) DNA primers
 - (vii) DNA data base – CODIS
 - (viii) DNA probe.

UNIT-I

2. Give a detailed account on different types of human chromosomes. Also discuss about different types of DNA. 16
3. Write notes on the following:
- (a) Human nuclear genome 8
 - (b) DNA modifying enzymes. 8

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UNIT-II

4. Discuss in detail about history and development of DNA finger printing with their advantage and limitations. 16
5. Write a detail note on different steps of PCR and its advantages & factors affecting PCR. 16

UNIT-III

6. Explain in detail about conventional and recent methods of DNA extraction. 16
7. Write note on the following: 2×8=16
- (a) DNA sequencing
 - (b) NGS (New Generation Sequencing Rapid DMNA).

UNIT-IV

8. Discuss in detail about Forensic applications of DNA Profiling and presentation of report in DNA profiling cases. 16
9. Write a note on the following: 2×8=16
- (a) Methods of labeling of DNA probes.
 - (b) Legal standards for admissibility of DNA profiling.

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2