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NEET MOLECULAR BASIS OF INHERITANCE — DNA FINGERPRINTING — PYQS

Max. Marks: 40 **Questions:** 10

Section A (MCQ) — 10 questions

Q.1 Arrange the following steps of DNA fingerprinting in a correct sequence.

A. Isolation of DNA and its digestion by restriction endonucleases.
B. Hybridisation using a labelled VNTR probe.
C. Transferring of separated DNA fragments to synthetic membranes.
D. Detection of hybridised DNA fragments by autoradiography.
E. Separation of DNA fragments by electrophoresis.

Choose the correct answer from the options given below : [NEET (UG) 2026]

(1) A, E, B, C, D (2) A, D, B, E, C
(3) A, B, D, C, E (4) A, E, C, B, D

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Q.2 DNA polymorphism forms the basis of: [NEET (UG) 2022]

(1) Genetic mapping
(2) DNA fingerprinting
(3) Both genetic mapping and DNA fingerprinting
(4) Translation

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Q.3 DNA fingerprinting involves identifying differences in some specific regions in DNA sequence, called as [NEET (UG) 2021]

(1) Polymorphic DNA (2) Satellite DNA
(3) Repetitive DNA (4) Single nucleotides

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Q.4 Which of the following is not required for any of the techniques of DNA fingerprinting available at present? [NEET 2016 (Phase 1)]

(1) DNA – DNA hybridization
(2) Polymerase chain reaction
(3) Zinc finger analysis
(4) Restriction enzymes

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Q.5 Satellite DNA is important because it : [AIPMT 2015]

(1) Shows high degree of polymorphism in population and also the same degree of polymorphism in an individual, which is heritable from parents to children.
(2) does not code for proteins and is same in all members of the population.
(3) codes for enzymes needed for DNA replication.
(4) codes for proteins needed in cell cycle.

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Q.6 An analysis of chromosomal DNA using the Southern hybridization technique does not use: [AIPMT 2014]

(1) Blotting (2) PCR
(3) Electrophoresis (4) Autoradiography

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Q.7 One of the most frequently used techniques in DNA fingerprinting is :- [NEET 2013 (Karnataka)]

(1) SSCP (2) SCAR (3) VNTR (4) AFLP

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Q.8 What is it that forms the basis of DNA Fingerprinting ? [AIPMT 2012 (Mains)]

(1) The relative proportions of purines and pyrimidines in DNA
(2) The relative amount of DNA in the ridges and grooves of the fingerprints
(3) The relative difference in the DNA occurrence in blood, skin and saliva
(4) Satellite DNA occurring as highly repeated short DNA segments

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Q.9 PCR and Restriction Fragment Length Polymorphism are the methods for [AIPMT 2012 (Prelims)]

(1) Genetic transformation
(2) Genetic fingerprinting
(3) Study of enzymes
(4) DNA sequencing

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Q.10 DNA fingerprinting refers to :- [AIPMT 2004]

(1) Techniques used for molecular analysis of different specimens of DNA
(2) Analysis of DNA samples using imprinting devices
(3) Molecular analysis of profiles of DNA samples
(4) Techniques used for identification of fingerprints of individuals

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ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	
Ans.	**4**	**3**	**3**	**3**	**1**	**2**	**3**	**4**	**2**	**3**	