

Chapter – 5 | Molecular Basis of Inheritance**QUIZ
PART-09**

1. The Human Genome Project was launched in:

- A. 1980
- B. 1990
- C. 2000
- D. 2003 (B)

Explanation : The Human Genome Project was launched in 1990 to determine the complete DNA sequence of the human genome.

2. The Human Genome Project was completed in:

- A. 1990
- B. 1995
- C. 2003
- D. 2010 (C)

Explanation : The 13-year Human Genome Project was completed in 2003.

3. The human genome contains approximately:

- A. 3×10^6 base pairs
- B. 3×10^7 base pairs
- C. 3×10^9 base pairs
- D. 3×10^{12} base pairs (C)

Explanation : The human genome contains approximately 3 billion base pairs.

4. The rapid development of which field was associated with the Human Genome Project?

- A. Ecology
- B. Bioinformatics
- C. Taxonomy
- D. Immunology (B)

Explanation : HGP contributed to the rapid development of bioinformatics for storing and analyzing genome data.

5. One of the major goals of the Human Genome Project was:

- A. Production of proteins
- B. Identification of all human genes
- C. Formation of RNA molecules
- D. Study of only bacterial DNA (B)

Explanation : HGP aimed to identify approximately 20,000–25,000 genes present in human DNA.

6. EST stands for:

- A. Expressed Sequence Tags
- B. Enzyme Sequence Technique
- C. Expressed Structural Type
- D. Essential Sequence Transfer (A)

Explanation : Expressed Sequence Tags (ESTs) are one of the approaches used in genome analysis.

7. Sequence annotation refers to:

- A. Destroying DNA sequences
- B. Identifying coding and non-coding sequences and determining their functions
- C. Copying DNA without analysis
- D. Producing proteins directly (B)

Explanation : Sequence annotation identifies coding and non-coding regions of genes and helps determine their functions.

8. The largest known human gene is:

- A. Insulin
- B. Dystrophin
- C. Beta-globin
- D. Lactase (B)

Explanation : Dystrophin is the largest known human gene, consisting of about 2.4 million bases.

9. Less than what percentage of the human genome codes for proteins?

- A. 2%
- B. 20%
- C. 50%
- D. 90% (A)

Explanation : Less than 2% of the human genome codes for proteins.

10. SNPs are:

- A. Protein molecules
- B. Single nucleotide polymorphisms
- C. RNA processing units
- D. Repetitive proteins (B)

Explanation : SNPs are single base DNA differences found at specific locations in the human genome.