Define these terms:

- **Allele**: This is an alternative form of a gene.
- **Carrier**: This is a person or animal that shows no symptoms of a disease but carries the disease-causing agent and is capable of passing it on to others.
- **Diploid**: This is an organism or cell with two sets of chromosomes.
- **Genetic Engineering**: The process of manipulating the DNA code of living organisms.
- **Haploid**: This is a cell or organism having half of the diploid chromosome number, symbolized by "n".

Match the term on the left with its definition on the right:

- **P. Artificial Selection**
  - A. This mapped all the genes in the human genome.
- **V. Chromosome**
  - B. This is one result of gamete formation through meiosis and fertilization during sexual reproduction that promotes biodiversity within a species.
- **U. Clones**
  - C. This is an autosomal recessive heredity disease that affects the respiratory and digestive systems.
- **K. Codominance**
  - D. This is the insertion of genes into an individual's cells and tissues to treat a disease, hereditary diseases in particular.
- **R. Color Blindness**
  - E. This is the inheritance of alleles of two genes from two different parents.
- **H. Crossing Over**
  - F. This is an organism that has two different alleles for the same genetic trait.
- **C. Cystic Fibrosis**
  - G. This is an observable trait of an organism that can mask the recessive trait.
- **Q. Deletion**
  - H. This is the process in which two chromosomes exchange DNA during prophase of meiosis.
- **E. Dihybrid Cross**
  - I. These are inherited diseases that cause negative, abnormal physical effects in organisms.
- **T. DNA Fingerprinting**
  - J. This is a genetic disorder that impairs a blood's ability to clot.
- **G. Dominant**
  - K. This is a type of heredity where two dominant alleles are both fully expressed in a phenotype.
- **X. Electrophoresis**
  - L. This is the offspring of a genetic cross between parents with different traits.
- **M. Frameshift**
  - M. This is a genetic mutation caused by the insertion or deletion of one or more nucleotides that changes the amino acid sequence from the site of the mutation forward.
- **O. Gene**
  - N. The genetic makeup of an organism.
- **D. Gene Therapy**
  - O. This is a segment of DNA on the chromosome that is coded for a particular trait.
- **I. Genetic Disorders**
  - P. This is the process of intentionally interfering with the breeding process to encourage certain traits over others.
- **B. Genetic Variation**
  - Q. A genetic mutation caused by the loss of a chromosomal segment.
- **N. Genotype**
  - R. This is the inability to perceive differences between some or all hues that other people can distinguish, most of the time it is due to a genetic
disorder but can have other causes.

**J** Hemophilia  **S.** This is an organism that has two identical alleles for the same genetic trait.

**W** Heredity  **T.** This is a technique used to distinguish between individuals of the same species using only samples of their DNA.

**F** Heterozygous  **U.** These are organisms that come from the same cell and are genetically identical to one another.

**S** Homozygous  **V.** This is the structure in the cell nucleus that houses a cell's genetic information.

**A** Human Genome Project  **W.** This is the transfer of characteristics from parent to offspring.

**L** Hybrid  **X.** This is the process of separating DNA fragments by size using an electric field and a fluorescent dye.