

CHAPTER – 9

HEREDITY AND EVOLUTION

GLOSSARY:

- Ⓢ **Accumulation** : An increase by natural growth or addition.
- Ⓢ **Acquired traits** : A physical characteristic that is not inherited but may be an effect of the environment or of a somatic mutation.
- Ⓢ **Adaptation** : Change in behavior of a person or group in response to new or modified surroundings.
- Ⓢ **Amphibians** : Members of the animal class Amphibia, includes frogs, toads and salamanders, all capable of living on land or in water.
- Ⓢ **Analogous organs** : The organs that are structurally different but perform the same functions.
- Ⓢ **Artificial selection** : Human intervention in animal or plant reproduction to ensure that certain desirable traits are represented in successive generations.

- Ⓢ **Breeding** : The process of producing plants or animals by sexual reproduction.
- Ⓢ **Centromere** : The very points through which chromatids are attached with each other.
- Ⓢ **Chromatids** : The units possessed by each chromosome.
- Ⓢ **Chromosomes** : The physical basis of heredity.
- Ⓢ **Classification** : The systematic arrangement of similar entities on the basis of certain differing characteristics.
- Ⓢ **Diploid** : Double or two-fold.
- Ⓢ **Dominant trait** : An outstanding mental or physical characteristic.
- Ⓢ **Evolution** : The gradual progressive development of a complex form from its simpler form.
- Ⓢ **Fertilisation** : Union of male and female gametes to form the diploid zygote, leading to development of a new individual.

- ④ **Fossils** : A remnant or trace of an organism of a past geologic age, such as a skeleton or leaf imprint, embedded and preserved in the earth's crust.
- ④ **Genetic drift** : Random fluctuations in the frequency of the appearance of a gene in a small isolated population, presumably owing to chance rather than natural selection.
- ④ **Genetic material** : The material responsible for the possession of distinct characters.
- ④ **Genetics** : The science of heredity and variation.
- ④ **Heredity** : The transmission of characters from parents to the offspring.
- ④ **Hierarchy** : System of persons or things ranked one above the other.
- ④ **Homologous chromosomes** : A pair of chromosomes that are exactly similar.
- ④ **Homologous organs** : Body parts of different species that are structural equivalents, such as the arms of humans and the forelegs of dogs and cats.

- Ⓢ **Inheritance** : Attributes acquired via biological heredity from the parents.
- Ⓢ **Inherited traits** : A distinguishing quality or characteristic that is transmitted genetically from one generation to the next.
- Ⓢ **Karyotype** : The chromosomal constitution of a cell or an individual.
- Ⓢ **Mammals** : An individual of the class Mammalia, a division of vertebrates, including all that possess hair and suckle their young.
- Ⓢ **Mutation** : The sudden heritable changes underwent by genes.
- Ⓢ **Natural selection** : The survival in nature of those individuals and their progeny best equipped to adapt to environmental conditions.
- Ⓢ **Phylogeny** : The sequence of events involved in the evolutionary development of a species or taxonomic group of organisms.
- Ⓢ **Pollination** : To transfer pollen from an anther to the stigma of a flower.
- Ⓢ **Population** : All the organisms that constitute a specific group or occur in a specified habitat.

- ④ **Progeny (Offspring)** : The product of reproduction, a new organism produced by one or more parents.
- ④ **Recessive trait** : An inherited character determined by a recessive gene.
- ④ **Reproduction** : The process of generating offspring.
- ④ **Reptiles** : Terrestrial or aquatic vertebrates, which breathe air through lungs and have a skin covering of horny scales.
- ④ **Retrovirus** : A virus with RNA as heredity material.
- ④ **Sex chromosomes** : The chromosomes associated with sex-determination.
- ④ **Sex determination** : The mechanism to determine the sex of an organism.
- ④ **Speciation** : The evolutionary formation of new species.
- ④ **Starvation** : The result of a severe or total lack of nutrients needed for the maintenance of life.

- ④ **Traits** : An identifying characteristic, habit or trend.

- ④ **Variation** : The occurrence of difference among the individuals of the same species.