Chapter- 4

Worksheet-2

- 1. The process by which new species develop from existing ones is called______.
- DNA segment in a chromosome performing specific function is the _____.
- 3. In the following pairs identify the homologous organs.
 - (a) Tendrils of Pisum spines of Opuntia
 - (b) Wings of insects and wings of birds
 - (c) Spines of cactus and thorns of euphorbia
 - (d) All the above
- 4. Broccoli, Cauliflower, Cabbage etc. are produced by:
 - (a) Reproductive isolation
 - (b) Artificial selection
 - (c) Survival of the fittest
 - (d) Natural selection
- 5. According to the evolutionary theory, formation of a new species is generally due to
 - (a) sudden creation by nature
 - (b) accumulation of variations over several generations
 - (c) clones formed during asexual reproduction
 - (d) movement of individuals from one habitat to another
- 6. Analogous organs show similarity in:
 - (a) size
 - (b) origin

- (c) appearance
- (d) function
- 7. Miller synthesized simple amino-acid from:
 - (a) methane, ammonia, oxygen, nitrogen
 - (b) hydrogen, methane, ammonia, water
 - (c) ammonia, methane, water, carbon-di-oxide
 - (d) hydrogen, oxygen, water, nitrogen
- 8. The two versions of a trait (character) which are brought in by the male and female gametes are situated on
 - (a) copies of the same chromosome
 - (b) two different chromosomes
 - (c) sex chromosomes
 - (d) any chromosome
- 9. The pair having opposite characteristics is called:
 - (a) allelomorph
 - (b) dominant
 - (c) homozygous
 - (d) similar
- 10. All dissimilarities of characteristics between members of the same species are called:
 - (a) mutation
 - (b) variations
 - (c) heredity
 - (d) crossing over
- 11. How do variations affect the evolution of those organisms that reproduce sexually?

- 12. "Variation is beneficial to the species, but not necessarily for the individual". Give reason. Evolutionary relationship can be traced by study of homologous organ. Explain.
- 13. How is the sex of the child determined in human beings?
- 14. What is speciation? List four factors that could lead to speciation, which of these cannot be a major factor in the speciation of a self pollinating plant species explain?
- 15. Explain the terms analogous and homologous organs with examples?
- 16. How gene is responsible for controlling a trait? Explain by giving an example.
- 17. "Natural selection and speciation leads to evolution." Justify this statement.
- 18. Fossils are related to evolution", justify this statement. Give the two ways by which age of the fossils can be estimated?
- 19. What is meant by characteristics?Give an example of the characteristics being used to determine how close two species are in evolutionary terms.
- 20. How do Mendel's experiments show that traits are inherited independently?