

## Ch-8 Heredity

1. Green and red colored seeds are recessive and dominant trait respectively. Out of  $F_1$  and  $F_2$ , in which generation will the green seed appear, if both parents are not hybrid.
2. Species A shared ten characteristics with species B, while species C share fifteen characteristics with D. Which of the two pairs share closer relation.
3. Dead remains of two species A and B were buried. Later only A's body was found to be a fossil but not B's, give reason.
4. With the help of an example explain how genes control characteristics or trait.
5. Male has 23 pairs of chromosomes and female has 23 pairs of chromosomes. Then, why don't an offspring have 46 pairs of chromosomes which is obtained by the fusion of these two eggs.
6. What is a genetic drift?
7. What are the uses of fossils?
8. What term did Mendel use for genes? Where are the genes located?
9. What is the effect of DNA copying which is not perfectly accurate on the reproduction process?
10. "We cannot pass on to our progeny the experiences and qualifications earned during our life time". Justify the statement giving reason and examples.
11. "The sex of a newborn child is a matter of chance and none of the parents may be considered responsible for it". Draw a flow chart showing determination of sex of a newborn to justify this statement.
12. Tabulate two distinguishing features between acquired traits and inherited traits with one example of each.
13. A cross was made between pure breeding pea plants one with round and green seeds and the other with wrinkled and yellow seeds.
  - a. Write the phenotype of  $F_1$  progeny. Give reason for your answer.
  - b. Write the different types of  $F_2$  progeny obtained along with their ratio when  $F_1$  progeny was selfed.
14. Define the term 'evolution'. "Evolution cannot be equated with progress". Justify this statement.
15. Distinguish between homologous organs and analogous organs. In which category would you place wings of a bird and wings of a bat? Justify your answer giving a suitable reason.
16. Explain the terms –
  - a. Speciation, and
  - b. Natural selection.
17. Explain Mendel's law of independent inheritance. Give one example.
18. Answer the following –
  - a. Give the evidence that the birds have evolved from reptiles.
  - b. Insects, octopus, planarian and vertebrates possess eyes. Can we group these animals together on the basis of eyes that they possess? Justify your answer giving reason.
19. Name two human traits that show variation.
20. What is microevolution?
21. Who is known as the 'Father of genetics'?
22. What is the speciation? How does it occur?
23. What are the various evidences in factors of evolution?