BHARATIYA VIDYA BHAVAN'S V M PUBLIC SCHOOL, VADODARA

QUESTION BANK

Chapter- **Heredity and Evolution**

1 Mark Questions

1. Who proposed the theory of natural selection?
2. What is speciation?
3. Give any one example of presence of vestigial organs in human beings.
4. Name the fossil which is considered as a link between reptiles and birds.
5. What is genetic drift?
6. What is carbon dating in fossils?

2 mark questions

1. What are fossils? How do they tell us about process of evolution?
2. "The sex of the children is determined by what they inherit from their father and not the mother". Justify.
3. How do sexual and asexual reproduction lead to speciation? Give one point for each.
4. State the importance of chromosomal difference between sperms and eggs of humans.
5. Give one example of each of the characters that are inherited and the ones that are acquired in humans. Mention the difference between the inherited and the acquired trait.
6. "Red beetles live in bush with green bushes. Eventually, the number of green beetles increases as compared to red beetles".
   (a) Give reason for this increased number of green beetles. (b) State two advantages of variation.
7. (a) What is meant by evolution of species?
   (b) List and describe any two evidences for evolution.
8. (a) Define heredity.

   (b)Which of the following traits cannot be passed to the progeny? Justify.

   (c)Name the vegetables that have been obtained from wild cabbage by artificial selection when farmers opted for (i) Arrested flower development of wild cabbage (ii) Swollen parts of wild cabbage.

9. Explain how Mendel's experiment shows that traits are inherited independently.
10. How are fossils formed layer by layer? Explain.

3 Mark Questions

1. Name two homologous structures in vertebrates. How do such organs help in understanding an evolutionary relationship?
2. (a) In a monohybrid cross of tall Pea plants denoted by TT and short pea plants by tt, Preeti obtained only tall plants (denoted by Tt) in F1 generation. However, in F2 generation she

obtained both tall and short plants. Using the above information, explain the law of dominance.
(b) What is genetic drift?

3. Explain how sex of the child is determined genetically at the time of conception in human beings.
4. (a)Explain giving examples how artificial selection has helped in the formation of newer varieties of Cauliflower/vegetables.

   (b)How different races of human beings belong to the same species.
5. Mention three important features of fossils which help in the study of evolution.
6. A woman has only daughters. Analyse the situation genetically and provide a suitable explanation.

5 Mark Questions

1. (a) Define evolution.
   (b)Mention any four ways by which individuals with a articular trait may increase in a population.
2. How morphological and anatomical evidences provide evidences in favour of organic evolution? Explain.
3. Differentiate between inherited and acquired traits. Give one example of each type.