

**DELHI PUBLIC SCHOOL
BOKARO STEEL CITY**

ASSIGNMENT FOR THE SESSION 2014-2015

Class: XII

Subject : Biology

Assignment No. 2

1. What is a test cross? Depict the same to show its significance.
2. Differentiate between codominance and incomplete dominance. Give an account of multiple allelism with example.
3. Why is DNA considered to be a better genetic material than RNA inspite of the fact that RNA had evolved earlier to DNA?
4. Enlist the differences between Turner's syndrome and Klinefelter's syndrome.
5. Who performed 'Blender' experiment? What was the objective of this experiment? Explain the process in detail.
6. Why is DNA replication called as semiconservative and semidiscontinuous? Explain.
7. Illustrate schematically the process of transcription of a gene in a bacterium.
8. Describe post transcriptional modifications occurring in a hnRNA. Explain the process of translation in a eukaryote.
9. Illustrate the life cycle of a retrovirus.
10. What is operon? Expand your idea about operon concept with respect to inducible operon and repressible operon.
11. What is DNA fingerprinting? List the uses of DNA fingerprinting technique.
12. Give an account of human genome project.
13. What is adaptive radiation? Give two examples to explain it. Give examples from plants showing homology.
14. "A population has been exhibiting genetic equilibrium." Answer the following with regard to the above statement
 - a. Explain the above statement
 - b. Name the underlying principle.
 - c. List any two factors which would upset the genetic equilibrium of the population.
 - d. Take up any one such factor and explain how the gene pool will change due to that factor.
15. Explain the role of microbes as biocontrol agent and their product as bioactive molecules, with example.

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