



HOLIDAY HOMEWORK CLASS XII

ECONOMICS

- 1.** To collect primary or secondary data on the pre- discussed topics of the CBSE Economics Project.
- 2.** Assignment questions to be completed in the assignment registers.
- 3.** Topics to be studied thoroughly during vacations:
 - # National Income and its aggregates
 - # Money and Banking
 - # Theory of Income and Employment.

HOLIDAY ASSIGNMENT

CLASS-XII, BIOLOGY

PRINCIPLE OF INHERITANCE AND VARIATION

1. Differentiate between male and female heterogamety.
2. Explain the mechanism of sex determination in birds.
3. Why did Morgan select *Drosophila* to study sex-linked genes for his lab experiments?
4. The F₂ progeny of a monohybrid cross showed phenotypic and genotypic ratios as 1:2:1, unlike that of Mendel's monohybrid ratio. With the help of a suitable example, work out a cross and explain how it is possible.
5. Name the kind of diseases or disorders that are likely to occur in humans, if
 - i) Mutation in the gene that codes for an enzyme, phenylalanine hydrolase occurs.
 - ii) There is an extra copy of chromosome 21.
 - iii) The karyotype is XXY.
 - iv) Mention any one symptom of the disease named above.
6. Explain the genetic basis of blood grouping in human population.
7. Why are thalassemia and haemophilia categorized as Mendelian disorders?



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8. How would the phenotypes of monohybrid F1 and F2 progeny showing incomplete dominance in snapdragon and codominance in human blood group be different from Mendelian monohybrid F1 and F2 progeny? Explain.
9. What are “true breeding lines” that are used to study inheritance pattern traits in plants?
10. Why do normal red blood cells become sickle shaped in a person suffering from sickle cell anaemia?
11. Linkage and crossing over of genes are alternatives of each other. Justify with the help of an example.
12. A colourblind child is born to a normal couple. Work out a cross to show how it is possible.

NOTE: PERFORM CASE STUDIES FOR THE INVESTIGATIVE PROJECT

