INDIAN SCHOOL NIZWA

BIOLOGY-WORKSHEET -5

CH.3 PRINCIPLES OF INHERITANCE

DATE: _____ NAME:_____ CLASS: XII

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1. Why do sons of haemophylic father never suffer from this trait?
2. How is the child affected if it has grown from the zygote formed from an XX –egg fertilized by Y-carrying sperm? What do you call this abnormality?
3. The map distance in certain organism between genes A &B is 4 units, between B&C is 2 units and between C&D is 8 units . Which one of these gene paves will show more recombination frequency? Give reason.
4. A man with blood group AB marries a woman with O blood group.

   I) Work out all possible phenotypes and genotypes of the progeny.

   II) Discuss the kind of domination in parents and progeny in this case.
5. What is mutagen ? Give an example.
6. Give the chromosomal constitution and related sex in each of the following:-

   i) Turner's syndrome ii) Klinefilter's syndrome.
7. What are multiple alleles? Explain with an example.
8. A smooth seeded and red flowered pea plant [SsRr} is crossed with a smooth seeded and white flowered pea plant [Ssrr]. Determine the phenotypic and genotypic ration in the F1 progeny.
9. A dihybrid heterozygous tall and yellow plant was crossed with double recessive plant.

   i) What type of cross is it?

   ii) Work out the genotype and phenotype of progeny.

   iii) What principle of Mendal is illustrated through result of this cross?
10. Explain the inheritance pattern in Snapdragon.
11. Sex determination is based on particular chromosomes in both birds and humans. State two points of difference between their mechanisms of sex determination.
12. Differentiate between male heterogamy and female heterogamy .