Name of Student

Name of Professor

Name of Class

Day Month Year

HCR 240

10. Down syndrome is the most common type of genetic disorder which occurs due to the abnormality in chromosome numbers. The main cause of Down syndrome is trisomy, which is the presence of three copies of some or all of Chromosome 21. The type of mutation that is involved here is called nondisjunction, where homologous chromosomes are unable to separate from each other. Prenatal test is used to diagnose patients with Down Syndrome.

11. Klinefelter Syndrome occurs as a result of an abnormal distribution of chromosome X in males. The males receive an extra number of chromosome X, so this syndrome is called XXY syndrome. While Turner syndrome is disorder most likely to occur in females. Both of these disorders are related to sex chromosomes. Both disorders occur as a result of nondisjunction, where chromosomes either get an extra pair or part of the chromosome is missing. Females with Turner syndrome have short height, swelling in hand and feet and receding jaw. While individuals with Klinefelter syndrome have less facial and body hair, reduced muscle tone and breast growth.

12. Since cystic fibrosis is an example of autosomal recessive inheritance. That means that in each parent one recessive carrier gene and other normal dominant gene must be present. Since the dominant gene is normal therefore the parents are less likely to get the disaese, but the child of such parents have 25% chances to inherit the disease. With each pregnancy the chances of getting the disease in offspring increases.

13. Hemophilia is an X-linked disease; mutation occurs at the X-chromosome which results in the occurrence of this disease. The disease primarily affects males, in females, the disease is less severe as compared to the males and can be traced through the maternal lineage.

14. As Huntington disease is an example of autosomal dominant gene mutation. So even only one parent has this autosomal gene mutation then there are 50% chances that the offspring will manifest the disease.