**Chapter 14 Test Study Guide**

1. Why do we study chromosomes during mitosis?
2. Number of chromosomes in the human genome
   1. How many pairs?
3. Autosomes vs. Sex chromosomes
   1. How many of each do we have?
4. What symbols are used to represent sex chromosomes?
   1. Females
   2. Males
5. Sperm cells vs. Egg cells (who has X, Y, both…)
6. What can cause mistakes in chromosome number?
7. Function of karyotypes
   1. 3 things shown in a karyotype
   2. What can they show you?
8. Klinefelter’s vs. Turner’s Syndrome
9. Results of people with abnormal sex chromosome numbers
10. What do all living organisms must be born with?
11. Pedigrees
    1. Definition
    2. Function
    3. Males vs. females
       1. Normal
       2. Carriers
       3. Have trait
    4. Marriage
    5. Birth of children
12. Genetic disorders
    1. Most caused by what kind of alleles?
    2. Description, causes, who is affected, and treatment of the following disorders:
       1. Cystic fibrosis
       2. PKU
       3. Tay Sachs
       4. Albinism
13. Dominant genetic disorder and what happens
14. Sickle Cell Anemia
    1. Who it affects
    2. What happens
    3. Treatments
    4. Causes
    5. Benefit of being heterozygous
15. Chromosomes 21-22
    1. What did their sequencing show?
16. Sex-linked inheritance
    1. Description
    2. Examples
    3. Who do these traits affect the most and why?
17. X-chromosome inactivation
    1. Who does this affect and why
    2. Definition of barr body and how it forms
18. Multiple alleles-Blood Typing
    1. Description of multiple alleles
    2. 4 types of blood
       1. Genotype and phenotype
       2. Who can receive what blood
       3. Universal donor
       4. Universal acceptor
    3. 3 alleles used
    4. Which alleles are codominant? Recessive?
19. Accomplishments of Charles Drew
20. Examples of internal and external environmental influences on genes
21. Are alleles linked or separate?
22. STUDY YOUR HOMEWORK WORKSHEETS!!!