**I. Genetic Disorders (pg. 117-118)**

A. **Genetic disorder**-

B. Identify two causes of genetic disorders in humans:



C. These are some common genetic disorders in humans today.

**1. Cystic Fibrosis**

Cause-

How do people get the disorder? -

Symptoms -

Diagnosis-

Treatment -

Incidence (How often does it happen? (Be Specific))-

**2. Sickle-Cell Disease**

Cause-

How do people get the disorder? -

Symptoms -

Diagnosis-

Treatment -

Incidence (How often does it happen? (Be specific)) -

**3. Hemophilia**

Cause-

How do people get the disorder? -

Symptoms -

Diagnosis-

Treatment -

Incidence (How often does it happen? (Be specific) -

**4. Down Syndrome**

Cause-

How do people get the disorder? -

Symptoms -

Diagnosis-

Treatment -

Incidence (How often does it happen? (Be specific) -

**5. Huntington’s Disease**

Cause-

How do people get the disorder? -

Symptoms -

Diagnosis-

Treatment -

Incidence (How often does it happen? (Be specific) -

**6. Phenylketonuria (PKU)**

Cause-

How do people get the disorder? -

Symptoms -

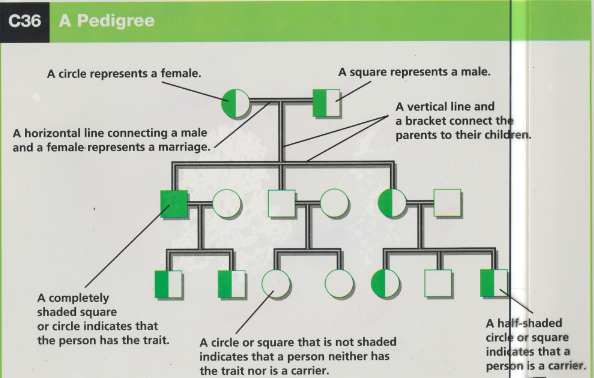
Diagnosis-

Treatment -

Incidence (How often does it happen? (Be specific) -

**II. Pedigrees (pg.119)**

1. What is a Pedigree?
2. Why are pedigrees important or How are they used?
3. Symbols and Descriptions
   * Circle represents -
   * Square represents-
   * Horizontal line represents-
   * Vertical line and bracket represents-
   * Shaded all the way represents-
   * Not shaded represents-
   * Shaded half-way represents-



1. **Now try to create a pedigree using the following story.**

A man and a woman marry. They have 5 children, 2 girls and 3 boys. The mother is a carrier of hemophilia, a sex-linked disorder. She passes the gene on to two of the boys who died in childhood and one daughter is also a carrier. Both daughters marry men without hemophilia and have 3 children each (2 boys and a girl). The carrier daughter has one son with hemophilia. One of the non-carrier daughter’s sons marries a woman who is a carrier and they have twin daughters. What is the percent chance that each of the twin daughters will be a carrier?

**III. Genetic Advances (pg. 120-131)**

1. Karyotypes-
2. Genetic Counseling-
3. Selective Breeding-
4. Cloning-
5. Genetic Engineering-
6. Gene Therapy-
7. Human Genome Project-
8. DNA Fingerprinting-