Genetic Diseases and Diagnosis: Word Scramble

Read each clue and then unscramble the words in parentheses.

A sex-linked disease, it is the most common type of color blindness.  EDR REGEN

In this disease, the blood does not clot properly.  MEHOIPLAI

A disease afflicting males in which normal sexual characteristics fail to develop.  FTKINELERELS YDMNSNROE

A disease that involves mental retardation and abnormal facial characteristics.  WODNS SDERNYOM

A disease afflicting females in which normal female characteristics do not develop.  SUNERTR MOESNRDY

A disease involving fat build-up in the brain cells.  AYT ACSHS

A disease in which the red blood cells are misshapen and unable to carry oxygen effectively.  ISKLEC LELC MENAAI

A disease in which the body is unable to metabolize a certain amino acid, resulting in mental retardation.  EYKIAPNLHTEOUNR

A genetic disease can be caused when this happens to a gene.  UATMTONI

A diagnostic technique which involves the insertion of a needle to obtain fetal cells.  MONTSANISECEI

A diagnostic technique in which sound waves are used to obtain an image of a fetus.  TRULDNSAUF

The technique that allows one to see a fetus by using a camera on an endoscope.  ETOCYFSOP

The term used for something in the environment capable of causing a gene mutation.  AGENMUT
Textbook Section 12-2

1. Most genetic diseases are caused by inheritance of two copies of a recessive allele. One such disease is cystic fibrosis.
   (a) Show a Punnett square demonstrating the cross between two parents who have normal phenotypes, but who both carry a copy of the cystic fibrosis allele:

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   (b) What are their chances of having a child with CF?

2. What are TWO genetic disorders caused by inheritance of a single DOMINANT allele?

3. Regarding the previous questions, show me a Punnett square demonstrating the cross between an affected parent and a non-affected parent. What are their chances of having an affected child?

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4. Because of where some gene mutations originated, and because of intermarriage based on ethnic or religious differences, some recessive genetic diseases tend to be more common in some gene pools.
   (a) List a genetic disease that is mentioned in the chapter as being most prevalent in people of African descent.

   (b) List a genetic disease that is more common in people of European Jewish descent.

5. List two genetic disorders caused by NONDISJUNCTION.

6. (a) What does “polygenic” mean?

   (b) List TWO traits that are POLYGENIC.