

Module 2: Introduction to Genetics II Quiz Questions

A pedigree can be used by a registered nurse to:

- a) Determine biological relationships across multiple generations
- b) Identify family members who may be at risk of developing a genetic condition
- c) Identify inheritance patterns of traits in a family
- d) All of the above**

Phenotype refers to:

- a) The specific genetic makeup of an organism (its genes).
- b) The observable physical characteristics of an organism.**
- c) The specific location of a gene on a chromosome.
- d) The environmental factors influencing an organism's development.

Polymorphism refers to:

- a) A single gene having multiple alleles in a population**
- b) A genetic mutation that causes a severe disease
- c) The complete set of chromosomes in an organism
- d) The transfer of genetic material between different species

Variations are:

- a) permanent alternations in the DNA sequence**
- b) always small single base pair changes
- c) always harmful
- d) have limited impact at a population level

Which of the following are red flags for genetic risk in adults?

- a) The patient is the typical age for onset of the condition.
- b) The patient has a history of exposure to an environmental factor that is known to increase risk for the condition.
- c) Multiple family members are affected by the same condition.**
- d) The patient is of the typical sex impacted by the condition.

Anne brings her 6-month-old daughter Ava to the public health unit. Anne has concerns about Ava's development. The public health nurse completes a physical exam of Ava and constructs a 3-generation pedigree. Which of the following does the public health nurse consider as red flags for risk of a possible genetic condition?

- a) On examination, the nurse notes that Ava's head is smaller than a typical 6-month old's head.
- b) Anne is concerned that Ava has been slower to hit developmental milestones as compared to her older brother.

- c) The nurse notes that Ava's growth rate has been lower than the typical growth rate since birth
- d) All of the above**

Which of the following are true about genes? (select all that apply)

- a) Genes are the basic physical and functional unit of heredity.**
- b) Each individual has two copies of each gene.**
- c) Each gene only codes (or has instructions) for one protein.
- d) Genes are composed of small strands of DNA.**