. Interactions among the human ABO blood group alleles involve _____ and ____

A. codominance; complete dominance

B. codominance; incomplete dominance

C. complete dominance; incomplete dominance

D. epistasis; complementation

E. continuous variation; environmental variation

Ans: A

. Achondroplasia is a common cause of dwarfism in humans. All individuals with

achondroplasia are thought to be heterozygous at the locus that controls this trait.

When two individuals with achondroplasia mate, the offspring occur in a ratio of 2

achondroplasia : 1 normal. What is the MOST likely explanation for these

observations?

A. Achondroplasia is incompletely dominant to the normal condition.

B. Achondroplasia is codominant to the normal condition.

C. The allele that causes achondroplasia is a dominant lethal allele in hetrozygotes.

D. The allele that causes achondroplasia is a recessive lethal allele in heterozygotes.

E. The allele that causes achondroplasia is a late-onset lethal allele.

Ans: A

In humans, blood types A and B are codominant to each other and each is

dominant to O. What blood types are possible among the offspring of a couple of

blood types AB and Ai?

A. A, B, AB, and O

B. A, B, and AB only

C. A and B only

D. A, B, and O only

E. A and AB only

Ans: B

. A mother with blood type A has a child with blood type AB. Give all possible

blood types for the father of this child.

A. O

B. B, AB

C. A, AB

D. A, B, O

E. A, B, AB, O

Ans: B

. Two parents are phenotypically normal, but one of their four biological children

has a typical autosomal recessive trait. The other three children are phenotypically

normal. It is very likely that:

A. the affected child is a girl.

B. the affected child is a boy.

C. the trait was expressed by one of the grandparents of the children.

D. the parents are both heterozygous for the trait.

E. if the affected child eventually marries a phenotypically normal spouse, all of

their children will have the trait

Ans: D

. Which description of a Y-linked trait in humans is CORRECT?

A. All the sons of an affected father will be affected with the trait.

B. Half the sons of a mother whose father was affected with the trait will be

affected.

C. Half the sons of an affected father will not be affected with the trait and the

other half will be infertile.

D. All the daughters of an affected father will be phenotypically normal but half of

their own sons will be affected with the trait.

E. The parents of an affected man likely were both phenotypically normal.

Ans: A

. Which statement is INCORRECT concerning an X-linked recessive trait in humans

A. An affected man often has phenotypically normal parents.

B. All the sons of an affected woman will be expected to be affected.

C. An affected woman almost always has an affected mother.

D. An affected man usually has a mother who carries the recessive allele.

E. A phenotypically normal woman whose father was affected is likely to be

heterozygous for the condition.

Ans: C

. This form of prenatal testing is most commonly performed between the 15th

week and 18th week of pregnancy.

A. chorionic villus sampling

B. preimplantation genetic analysis

C. amniocentesis

D. heterozygote screening

E. presymptomatic screening

Ans: C

. How is colchicine, the chemical used in preparing karyotypes, useful for studying

chromosomal mutations?

A. Colchicine prevents cells from entering anaphase, stalling them in metaphase

with condensed chromosomes.

B. Colchicine induces chromosome condensation during interphase, which allows

the visualization of interphase chromosomes.

C. Colchicine causes chromosomal breakage, leading to inversions and

translocations that can be observed with a microscope.

. In order to perform karyotype analysis, chromosomes are obtained from actively

dividing cells and treated with chemicals to keep them at the _____ stage of mitosis.

A. Prophase

B. Interphase

C. Anaphase

D. Telophase

E. metaphase

Ans: E

. Which of the following is a form of aneuploidy in which two members of the

same homologous pair are absent? Extra!

A. Nullisomy

B. Monosomy

C. Disomy

D. Trisomy

E. Tetrasomy

Ans: A

. Which of the following is NOT an example of epigenetics?

A. Alleles mutations

B. genomic imprinting

C. miRNAs

D. Cytosine methylation.

E. X inactivation

Done Layan Daoud