

A105 quiz 7

There is another quiz on the back

1. Which is FALSE about human sperm?

- B. They can combine with ova to form zygotes
- D. They carry an X or a y chromosome, but not both
- A. They are gametes
- C. They have 23 pairs of chromosomes
- E. The sperm determine the sex of the child

2. The meaning of "Creation Science" (or "Scientific Creationism") in the video we saw is:

- A. The belief that God is responsible for the Big Bang 10 billion years ago.
- B. The knowledge gained from reading the Bible.
- C. The attempt to gather scientific evidence to support that the earth is only about 10,000 years old.
- D. Any belief in a creation by a superior being.
- E. The modern theory of evolution based on Darwin and genetics.

3. Sickle cell anemia has persisted for thousands of years because:

- A. natural selection favored heterozygous carriers in high malaria environments
- B. People with normal hemoglobin were not as fit in high malaria environments
- C. humans changed environments by farming; mosquitos and malaria increased, and humans adapted.
- D. The malaria plasmodium does not thrive well in slightly anemic people, such as carriers.
- E. all of the above are part of the chain of causality.

4. Which is true about mutations?

- A. when the environment changes, beneficial mutations always occur to prevent extinction.
- B. When the environment does not change, no mutations will occur.
- C. Mutations are the source of new variations
- D. mutations that happen to adults during mitosis will be passed on to their children
- E. All of these are true

5. Which is TRUE?

- A. natural selection only occurs when the environment is changing
- B. dominant alleles are always more common in a gene pool
- C. recessive alleles are never expressed in an individual, even if he is homozygous
- D. genetically it is the mother that determines the sex of a child.
- E. Your adult height is a result of both genes and environment.

6. In the video we saw, the "human footprints" they found with dinosaur prints turned out to be:

- A. Real (humans did walk with dinosaurs)
- B. River clams
- C. miracles
- D. 3-toed dinosaur prints with a deep heel impression
- E. prints of alien visitors from another planet

7. In the 1920's, Tennessee schoolteacher Scopes was tried for teaching evolution; what happened?

- A. He was convicted, and teaching evolution continued to be illegal in many states for decades.
- B. He was found innocent, and teaching evolution was then legal.
- C. The jury was deadlocked; the US Supreme Court found Scopes innocent & overturned the law in 1925.
- D. He was found innocent, but all courts ruled that creationism must be taught alongside evolution

8. If the allele for brown feathers is dominant to the allele for blue feathers in parrots, and a pair of brown parrots have a blue chick, then:

- A. Mom is in trouble, this cannot be the child of two brown birds.
- B. Both parents are heterozygous.
- C. The chick is heterozygous
- D. Both parents are homozygous recessive
- E. Both parents are homozygous dominant

9. If you get a different allele of a certain gene from each parent, you are said to be:

- A. Mutant
- B. homozygous
- C. heterozygous
- D. Mendelian
- E. polygenic

10. Which is true about natural selection?

- A. it is one of the four causes or factors in the modern theory of evolution.
- B. Both Darwin and Wallace thought of it
- C. by itself it tends to reduce variation
- D. It cannot work if there is no variation
- E. Natural selection plus mutations can eventually form a new species
- F. ALL of these are true

Your First Name _____ Last Name _____

BONUS Q: From an evolutionary perspective, why do we run a fever when we are sick?