

Module Quiz 4

⚠ This is a preview of the published version of the quiz

Started: Feb 8 at 4:02pm

Quiz Instructions

Module 4 Genetics, Evolution, and Behavior



This quiz is open media. Use anything you like to help you, except for another person or their answers. Good luck!

Question 1

1 pts

Based on chapter 18 in your book: In what way has neuroscience contributed to the legal system or the legal decisions we make?

- By taking advantage of epigenetics, we can now “cure” someone of hostile behaviors, rather than putting them in jail for the rest of their lives

- We have made significant advances in EEG such that we can now tell with certainty who is lying
- Understanding that addiction should be seen as a disease rather than a behavior under someone's complete control may lead to therapeutic rehabilitation rather than punishment
- All of the above

Question 2**1 pts**

Based on chapter 18 in your book: Research in the field of neuroeconomics has discovered ____

- Genetic markers that predict when someone will make a high-risk purchase
- A single structure in the brain that inhibits purchasing behavior
- A neurotransmitter that appears to mediate stock market performance
- Hormones play a role in financial decision making

Question 3**1 pts**

A gene is best described as a ____

- 6ft length of DNA
- base pair, either AT or CG
- set of three base pairs
- specific segment of DNA

Question 4**1 pts**

For the tongue rolling trait, how many alleles must you have?



- 0
- 1
- 2
- 3
- 4

Question 5

1 pts

What is Crispr?

- A method for turning genes on and off
- A method for breaking apart a segment of DNA and repairing it with the code we want
- A method for disabling ribosomes
- A drawer in your refrigerator

Question 6**1 pts**

Which of the following is TRUE about genetic tags?

- Most of the genetic tags we accumulate on our genes are erased in the fetus to create a blank slate
- Most of the genetic tags we accumulate on our genes are passed on to the fetus
- None of the genetics tags we accumulate on our genes are passed on to the fetus
- Genetic tags are like a game of Russian roulette – most of them are blank and one is not

Question 7**1 pts**

Which of the following supports the statement that a form of “eugenics” is practiced today? Select all that apply.

- Banning immigrants from certain countries
- Arranged marriages
- Couples with genetic disorders deciding not to reproduce and have children
- The movie "Idiocracy"

Question 8**1 pts**

What does the nature vs nurture question refer to?

- whether we should spank/not spank children
- whether biology or the environment controls our behavior
- the relative contributions of neurotransmitters and hormones on behavior

- whether we should intervene with the natural ecosystem and introduce foreign species into a country

Question 9**1 pts**

Other than sperm and egg, each cell in the human body has ____ pairs of

- 23 : chromosomes
- 23 : genes
- 46 : chromosomes
- 2 : legs

Question 10**1 pts**

Genes ultimately direct _____ which in turn affect the development of everything that makes us who we are.

- peptides
- hormones
- glial cells
- proteins

Question 11**1 pts**

Which of the following statements about genes is false?

- a person's phenotype remains stable throughout the lifespan
- genes can be active or inactivate
- gene activity can change over the lifespan
- gene function can be controlled by experience

Question 12**1 pts**

Characteristics that are determined by several genes rather than by a single pair of genes are referred to as _____

- multigenic
- polygenic
- heterogenic
- confused

Question 13**1 pts**

To estimate heritability _____

- We need only study one person
- We compare groups of individuals
- We have to limit ourselves to animal research
- Would require some very unethical experiments!

Question 14**1 pts**

What is/are some of the challenge(s) faced by twin studies?

- MZ twins typically share an environment, not just a genetic code
- MZ twins tend to be treated more similarly compared to regular siblings
- It is hard to find MZ twins reared apart from birth
- All of the above are challenges faced by twin studies

My girlfriend told me she was leaving me because I keep pretending to be a Transformer. I said, "No, wait! I can change."



Question 15

1 pts

Two identical (MZ) twins have their epigenomes compared minutes after birth. Though very similar, there are some differences. What likely explains this?

- The lab tech made a mistake
- The twins had different experiences in the womb
- There was a genetic mutation in one of the twins

- The premise of the question is wrong. This could never happen.

Question 16**1 pts**

As MZ twins, which of the following would we expect to see?

- Their epigenomes become more dissimilar
- Their epigenomes become more similar
- The epigenomes of MZ twins remain identical and do not change with age
- MZ twins are a freak of nature

Question 17**1 pts**

Epigenetics is the study of how _____

- the internal and external environment of an organism affects the arrangement of the bases that make up DNA
- the internal and external environment of an organism results in genetic mutations
- the internal and external environment of an organism affects how the genetic code is read by turning genes on and off
- the game called "tag" is played

Question 18**1 pts**

What important implication does the field of epigenetics have?

- Huh? Did we cover that?

- It suggests that nature is more important than nurture
- It suggests that nurture is more important than nature
- It suggests that our well-being is a product of both nature and nurture

Question 19**1 pts**

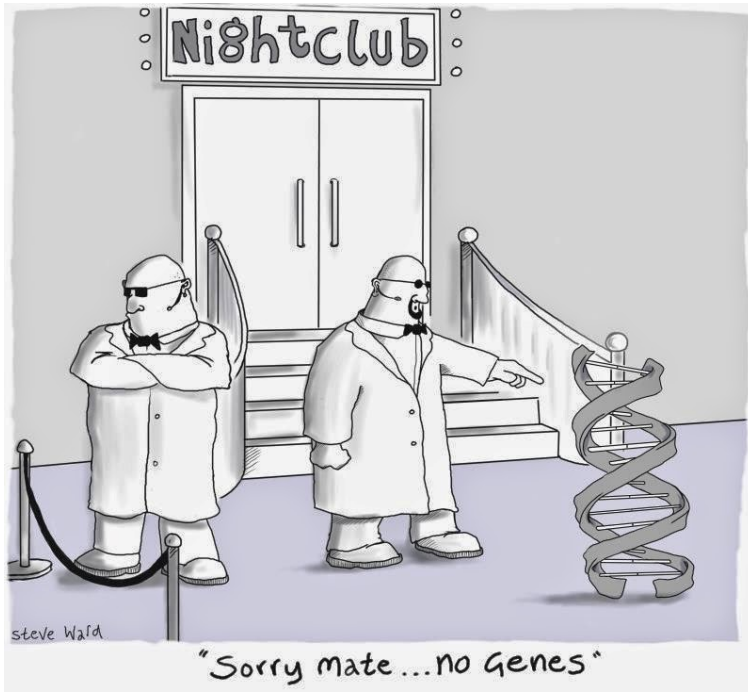
As components of organic molecules, _____ groups attach to DNA turning specific genes “off”, whereas _____ groups attach to DNA and turn specific genes “on”.

- Methyl : Acetyl
- Acetyl : Methyl
- antagonist : agonist
- inhibitor : stimulator

Question 20**1 pts**

If a given trait is "sex-linked", this means _____

- you need to have sex to express it
- males are more likely to have the trait
- females are more likely to have the trait
- it is a trait carried only by sperm



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