**Test 2**

**Biology 160**

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| 1. | In humans, males are:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | homogametic. | | |  |  | | --- | --- | | C. | hermaphroditic | | | |  |  | | --- | --- | | B. | heterogametic. | | |  |  | | --- | --- | | D. | pseudohermaphroditic. | | |

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| 2. | The\_\_\_\_\_\_\_\_\_\_\_\_gene on the \_\_\_\_\_\_chromosome determines sex in humans     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | SRY, X | | |  |  | | --- | --- | | C. | XIST, sex | | | |  |  | | --- | --- | | B. | SRY, Y | | |  |  | | --- | --- | | D. | sex, Y | | |

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| 3. | What is the function of SRY?     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | sex determination | | |  |  | | --- | --- | | C. | gene for testosterone production | | | |  |  | | --- | --- | | B. | pseudoautosomal regions for meiosis | | |  |  | | --- | --- | | D. | cause of pseudohermaphrodism | | |

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| 4. | Evidence suggests that homosexuality is \_\_\_\_\_\_\_\_\_\_\_\_\_\_.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | not inherited | | |  |  | | --- | --- | | C. | completely inherited | | | |  |  | | --- | --- | | B. | partially inherited | | |  |  | | --- | --- | | D. | completely environmental | | |

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| 5. | A female whose father was colorblind marries a normal male whose father was also colorblind,  What is the probability that their son will be colorblind?   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | 0% | | |  |  | | --- | --- | | C. | 50% | | | |  |  | | --- | --- | | B. | 25% | | |  |  | | --- | --- | | D. | 100% | | |

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| 6. | Which of the following genetic conditions is not sex-linked?     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | ichthyosis | | |  |  | | --- | --- | | C. | sickle-cell anemia | | | |  |  | | --- | --- | | B. | colorblindness | | |  |  | | --- | --- | | D. | a and C | | |

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| 7. | A woman whose brother has hemophilia is concerned about passing this trait to her offspring.  What is the risk that she will have a son with hemophilia?     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | 1/8 | | |  |  | | --- | --- | | C. | 1/2 | | | |  |  | | --- | --- | | B. | 1/4 | | |  |  | | --- | --- | | D. | 1 | | |

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| 8. | Males are\_\_\_\_\_\_\_\_\_\_\_ for X-linked traits     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | homozygous | | |  |  | | --- | --- | | C. | hemizygous | | | |  |  | | --- | --- | | B. | heterozygous | | |  |  | | --- | --- | | D. | pseudozygous | | |

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| 9. | Calico cats have large patches of coat color.  What can we conclude about the timing of X-inactivation?     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | it occurred early | | |  |  | | --- | --- | | C. | it occurred both early and late | | | |  |  | | --- | --- | | B. | it occurred late | | |  |  | | --- | --- | | D. | no relationship exists | | |

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| 10. | Male pattern baldness is a \_\_\_\_\_ trait.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | sex-linked | | |  |  | | --- | --- | | C. | sex-influenced | | | |  |  | | --- | --- | | B. | sex-limited | | |  |  | | --- | --- | | D. | Y-linked | | |

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| 11. | Beard growth in humans is an example of a \_\_\_\_trait.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | sex-linked | | |  |  | | --- | --- | | C. | sex-limited | | | |  |  | | --- | --- | | B. | sex-influenced | | |  |  | | --- | --- | | D. | y-linked | | |

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| 12. | The video concerning sex determination showed the story of Jan Johnson who was an XY female.  What was the cause of this condition?   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | Congenital adrenal hyperplasia | | |  |  | | --- | --- | | C. | The SRY gene | | | |  |  | | --- | --- | | B. | Androgen insensitivity syndrome | | |  |  | | --- | --- | | D. | Sustentacular cells | | |

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| 13. | X-linked genes have different patterns of expression in females and males because:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | they are suppressed in males. | | |  |  | | --- | --- | | D. | they determine maleness or femaleness. | | | |  |  | | --- | --- | | B. | they are expressed in females only. | | |  |  | | --- | --- | | E. | there are two copies in males. | | | |  |  | | --- | --- | | C. | there is only one copy of these genes in males. | |  | |

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| 14. | In males, genes on the X chromosome are:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | expressed. | | |  |  | | --- | --- | | D. | mutant. | | | |  |  | | --- | --- | | B. | recessive. | | |  |  | | --- | --- | | E. | autosomal. | | | |  |  | | --- | --- | | C. | disease-causing. | |  | |

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| 15. | A daughter can inherit a sex-linked recessive disorder if:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | her mother is a carrier and her father has the disorder. | | |  |  | | --- | --- | | D. | her father is hemizygous for the disorder. | | | |  |  | | --- | --- | | B. | both parents are carriers of the disorder. | | |  |  | | --- | --- | | E. | her father is a carrier of the disorder. | | | |  |  | | --- | --- | | C. | her mother is affected with the disorder. | |  | |

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| 16. | If a woman has a brother who is color blind:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | she will also be color blind. | | |  |  | | --- | --- | | D. | her daughters have a 50% chance of being carriers. | | | |  |  | | --- | --- | | B. | she has a 50% chance of being a carrier. | | |  |  | | --- | --- | | E. | 25% of her pregnancies will end in spontaneous abortion. | | | |  |  | | --- | --- | | C. | her sons will all be color blind. | |  | |

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| 17. | X-linked dominant mutant alleles are usually expressed:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | only in males. | | |  |  | | --- | --- | | D. | equally in the sexes. | | | |  |  | | --- | --- | | B. | more severely in females. | | |  |  | | --- | --- | | E. | when X-inactivated. | | | |  |  | | --- | --- | | C. | more severely in males. | |  | |

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| 18. | Males and females are genetically equivalent because:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | an X chromosome is inactivated in female cells. | | |  |  | | --- | --- | | D. | females lack the Y chromosome. | | | |  |  | | --- | --- | | B. | males only inherit one X chromosome. | | |  |  | | --- | --- | | E. | males are hemizygous. | | | |  |  | | --- | --- | | C. | the X chromosome is inactive in male cells. | |  | |

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| 19. | Unspecialized structures in embryos that develop into female sex organs are the:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | Mullerian ducts. | | |  |  | | --- | --- | | D. | sustentacular cells. | | | |  |  | | --- | --- | | B. | Cowper's glands. | | |  |  | | --- | --- | | E. | Barr bodies. | | | |  |  | | --- | --- | | C. | Wolffian ducts. | |  | |

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| 20. | In humans, if the SRY gene is not expressed, the unspecialized gonads develop into:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | testes. | | |  |  | | --- | --- | | D. | Barr bodies. | | | |  |  | | --- | --- | | B. | ovaries. | | |  |  | | --- | --- | | E. | testes and ovaries. | | | |  |  | | --- | --- | | C. | a placenta. | |  | |

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| 21. | A man has the X-linked dominant condition CGH that produces dense hair on the face and upper body. What is the chance that he will pass it on to his daughters?   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | 0% | | |  |  | | --- | --- | | D. | 100% | | | |  |  | | --- | --- | | B. | 25% | | |  |  | | --- | --- | | E. | 75% | | | |  |  | | --- | --- | | C. | 50% | |  | |

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| 22. | Traits that have both inherited and environmental causes are termed     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | heritable. | | |  |  | | --- | --- | | D. | familial. | | | |  |  | | --- | --- | | B. | polygenic. | | |  |  | | --- | --- | | E. | Mendelian. | | | |  |  | | --- | --- | | C. | multifactorial. | |  | |

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| 23. | An example of a trait that is continuously varying is:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | leaf color in pea plants. | | |  |  | | --- | --- | | D. | coat color in guinea pigs. | | | |  |  | | --- | --- | | B. | height in humans. | | |  |  | | --- | --- | | E. | seed color in pea plants. | | | |  |  | | --- | --- | | C. | eye color in *Drosophila.* | |  | |

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| 24. | Polygenic traits are:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | determined by more than one gene. | | |  |  | | --- | --- | | D. | determined by genes on the same chromosome. | | | |  |  | | --- | --- | | B. | phenotypically different in different organisms. | | |  |  | | --- | --- | | E. | always recessive. | | | |  |  | | --- | --- | | C. | characteristic of X-linked genes. | |  | |

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| 25. | In humans, clubfoot has a heritability of 0.8. Expression of clubfoot is:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | strongly influenced by environmental factors. | | |  |  | | --- | --- | | D. | inherited from an affected parent 80% of the time. | | | |  |  | | --- | --- | | B. | solely dependent on inheritance of the clubfoot gene(s). | | |  |  | | --- | --- | | E. | X-linked. | | | |  |  | | --- | --- | | C. | strongly dependent on inheritance of the clubfoot gene(s) but also influenced by environmental factors. | |  | |

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| 26. | Which risk factor for coronary artery disease is uncontrollable?     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | high serum cholesterol | | |  |  | | --- | --- | | D. | hypertension | | | |  |  | | --- | --- | | B. | family history | | |  |  | | --- | --- | | E. | all of these | | | |  |  | | --- | --- | | C. | diabetes | |  | |

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| 27. | A brother and sister share \_\_\_\_\_\_\_ percent of their genes.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | 10 | | |  |  | | --- | --- | | D. | 100 | | | |  |  | | --- | --- | | B. | 25 | | |  |  | | --- | --- | | E. | 0 | | | |  |  | | --- | --- | | C. | 50 | |  | |

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| 28. | Two brothers share \_\_\_\_\_\_\_ percent of their genes.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | 10 | | |  |  | | --- | --- | | D. | 100 | | | |  |  | | --- | --- | | B. | 25 | | |  |  | | --- | --- | | E. | 0 | | | |  |  | | --- | --- | | C. | 50 | |  | |

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| 29. | The proportion of shared genes (correlation coefficient) between a grandparent and grandchild is \_\_\_\_\_\_\_.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | 12.5% (1/8) | | |  |  | | --- | --- | | D. | 100% | | | |  |  | | --- | --- | | B. | 25% (1/4) | | |  |  | | --- | --- | | E. | 0% | | | |  |  | | --- | --- | | C. | 50% (1/2) | |  | |

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| 30. | Dizygotic (DZ) twins:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | are always the same sex. | | |  |  | | --- | --- | | D. | are also called consanguineous twins. | | | |  |  | | --- | --- | | B. | are as closely related as non-twin siblings. | | |  |  | | --- | --- | | E. | are unrelated genetically. | | | |  |  | | --- | --- | | C. | share 100% of their genetic material. | |  | |

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| 31. | Eye color is thought to be a purely polygenic trait with little or no environmental component.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | True | | |  |  | | --- | --- | | B. | False | | |

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| 32. | Human height is thought to be a purely polygenic trait with little or no environmental component.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | True | | |  |  | | --- | --- | | B. | False | | |

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| 33. | The fingerprints of identical twins are identical.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | True | | |  |  | | --- | --- | | B. | False | | |

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| 34. | What percentage of genes do you share with your Father?     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | 50% | | |  |  | | --- | --- | | D. | 12.5% | | | |  |  | | --- | --- | | B. | 6.25% | | |  |  | | --- | --- | | E. | 25% | | | |  |  | | --- | --- | | C. | 3.125% | |  | |

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| 35. | Which of the following would support the thrifty gene hypothesis?     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | 2/3 of the inhabitants of Naura had become obese one generation after their diet changed. | | |  |  | | --- | --- | | C. | The prevalence of obesity has increased in the United States in the past 20 years. | | | |  |  | | --- | --- | | B. | Pima Indians in Arizona have a high prevalence of obesity while Pima Indians in Mexico do not. | | |  |  | | --- | --- | | D. | All of these. | | |

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| 36. | Genetic determinism states that the expression of an inherited trait cannot be modified by the environment.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | True | | |  |  | | --- | --- | | C. |  | | | |  |  | | --- | --- | | B. | False | | |  |  | | --- | --- | | D. |  | | |

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| 37. | Dopamine is the focus of research in which of the following diseases?     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | ADHD | | |  |  | | --- | --- | | C. | Asperger syndrome | | | |  |  | | --- | --- | | B. | autism | | |  |  | | --- | --- | | D. | All of the above | | |

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| 38. | Which of the following statements is true regarding anorexia nervosa?     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | Only females suffer  from anorexia. | | |  |  | | --- | --- | | C. | Genes whose products control appetite are not implicated in eating disorders. | | | |  |  | | --- | --- | | B. | Anorexia has the highest risk of death of any psychiatric disorder. | | |  |  | | --- | --- | | D. | All of the above are true regarding anorexia nervosa | | |

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| 39. | An individual with  Familial advanced sleep phase syndrome (FASPS) is likely to \_\_\_\_\_\_\_\_\_\_\_\_     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | prompltly fall asleep at the same time each night | | |  |  | | --- | --- | | C. | also suffer from cataplexy | | | |  |  | | --- | --- | | B. | fall asleep several times during the day | | |  |  | | --- | --- | | D. | have above average intelligence | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 40. | The genes for narcolepsy were first identified in \_\_\_\_\_\_\_\_\_\_\_\_\_\_     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | cats | | |  |  | | --- | --- | | C. | dogs | | | |  |  | | --- | --- | | B. | humans | | |  |  | | --- | --- | | D. | fruit flies | | |

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| 41. | Twin and adoptive studies suggest that the heritability of IQ:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | stays the same through all age groups | | |  |  | | --- | --- | | C. | increases with age | | | |  |  | | --- | --- | | B. | decreases with age | | |  |  | | --- | --- | | D. | does not follow any particular trend | | |

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| 42. | Heritability is a measurement that estimates the proportion of     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | genetic variation in a group that can be attributed to phenotype | | |  |  | | --- | --- | | C. | phenotypic variation in a group that can be attributed to genes | | | |  |  | | --- | --- | | B. | phenotypic variation in an individual that can be attributed to genes | | |  |  | | --- | --- | | D. | none of the above | | |

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| 43. | Individuals that are perfectionists and/or have a low tolerance for new situations are thought to be at risk for:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | mood disorders. | | |  |  | | --- | --- | | D. | panic disorder. | | | |  |  | | --- | --- | | B. | eating disorders. | | |  |  | | --- | --- | | E. | autism. | | | |  |  | | --- | --- | | C. | schizophrenia. | |  | |

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| 44. | The average score on an IQ test, such as the Stanford-Binet, is \_\_\_\_\_\_\_.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | 50 | | |  |  | | --- | --- | | D. | 150 | | | |  |  | | --- | --- | | B. | 75 | | |  |  | | --- | --- | | E. | 200 | | | |  |  | | --- | --- | | C. | 100 | |  | |

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| 45. | SSRIs such as Prozac, Paxil, and Zoloft, are widely prescribed to treat:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | drug addiction. | | |  |  | | --- | --- | | D. | Alzheimer's disease. | | | |  |  | | --- | --- | | B. | depression. | | |  |  | | --- | --- | | E. | Huntington's disease. | | | |  |  | | --- | --- | | C. | schizophrenia. | |  | |

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| 46. | Schizophrenia is thought to have a genetic component because:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | the symptoms are behavioral. | | |  |  | | --- | --- | | D. | Dogs develop narcolepsy with cataplexy. | | | |  |  | | --- | --- | | B. | identical twins show high concordance. | | |  |  | | --- | --- | | E. | FASPS was found to be autosomal dominant in one family. | | | |  |  | | --- | --- | | C. | children who have an adoptive parent with schizophrenia are more likely to develop it than children with an adoptive parent who does not have schizophrenia. | |  | |

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| 47. | Familial advanced sleep phase syndrome (FASPS), in a Utah family, has provided evidence for a "biological clock" in humans. In this family FASPS is inherited as a(n):     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | autosomal recessive. | | |  |  | | --- | --- | | D. | X-linked dominant. | | | |  |  | | --- | --- | | B. | autosomal dominant. | | |  |  | | --- | --- | | E. | Y-linked trait. | | | |  |  | | --- | --- | | C. | X-linked recessive. | |  | |

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| 48. | Early symptoms of schizophrenia tend to affect:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | thinking. | | |  |  | | --- | --- | | C. | hearing. | | | |  |  | | --- | --- | | B. | speech. | | |  |  | | --- | --- | | D. | vision. | | |

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| 49. | Which of the following would be considered a behavioral trait?     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | abilities | | |  |  | | --- | --- | | D. | how a person copes with stress | | | |  |  | | --- | --- | | B. | feelings and moods | | |  |  | | --- | --- | | E. | all of these | | | |  |  | | --- | --- | | C. | intelligence | |  | |

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| 50. | Researchers believe that genes contribute to most behavioral traits in humans.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | True | | |  |  | | --- | --- | | B. | False | | |

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| 51. | Drug addiction produces long-lasting changes in the brain.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | True | | |  |  | | --- | --- | | B. | False | | |

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| 52. | A patient who experiences severe withdrawal symptoms when he/she stops taking a drug is exhibiting \_\_\_\_\_\_\_.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | tolerance | | |  |  | | --- | --- | | D. | suicidal ideation | | | |  |  | | --- | --- | | B. | dependence | | |  |  | | --- | --- | | E. | insomnia | | | |  |  | | --- | --- | | C. | paranoia | |  | |

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| 53. | A person who constantly needs to take more of a drug to get the same effect is exhibiting which of the following?     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | tolerance | | |  |  | | --- | --- | | D. | suicidal ideation | | | |  |  | | --- | --- | | B. | dependence | | |  |  | | --- | --- | | E. | insomnia | | | |  |  | | --- | --- | | C. | paranoia | |  | |

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| 54. | The most likely diagnosis for a patient who experiences long periods of depression alternating with periods of mania would be:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | major depressive disorder. | | |  |  | | --- | --- | | D. | bipolar disorder. | | | |  |  | | --- | --- | | B. | clinical depression. | | |  |  | | --- | --- | | E. | insomnia with suicidal ideation. | | | |  |  | | --- | --- | | C. | schizophrenia. | |  | |

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| 55. | A young woman depicted in one of the video's desired to become a male.  What was the chemical she was taking to effect this change.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | estrogen | | |  |  | | --- | --- | | C. | testosterone | | | |  |  | | --- | --- | | B. | dopamine | | |  |  | | --- | --- | | D. | leptin | | |

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| 56. | Which of the following disorders is multifactorial?     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | Klinefelter syndrome | | |  |  | | --- | --- | | C. | hypertension | | | |  |  | | --- | --- | | B. | myotonic dystrophy | | |  |  | | --- | --- | | D. | cri du chat | | |

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| 57. | To date, the most informative studies on how and to what degree heredity and the environment influence human traits have relied on data from:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | adopted children and their biological parents. | | |  |  | | --- | --- | | C. | dizygotic twins reared apart. | | | |  |  | | --- | --- | | B. | monozygotic twins reared in the same environment. | | |  |  | | --- | --- | | D. | monozygotic twins separated at birth. | | |

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| 58. | The empiric risk to a family member of an affected individual developing a disorder caused by a multifactorial trait:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | decreases with severity of the disorder. | | |  |  | | --- | --- | | C. | decreases in larger families. | | | |  |  | | --- | --- | | B. | increases with fewer affected family members. | | |  |  | | --- | --- | | D. | increases with increasing relatedness to affected individuals. | | |

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| 59. | Geneticists calculate the \_\_\_\_\_\_of a trait, or the degree to which it is inherited, as the percentage of pairs in which both twins express the trait.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | heritability | | |  |  | | --- | --- | | C. | concordance | | | |  |  | | --- | --- | | B. | coefficient of relationship | | |  |  | | --- | --- | | D. | empiric risk | | |

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| 60. | A correlation coefficient of 1.0 indicates     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | fraternal twins | | |  |  | | --- | --- | | C. | a cousin to cousin relationship. | | | |  |  | | --- | --- | | B. | a parent to child relationship. | | |  |  | | --- | --- | | D. | monozygotic twins. | | |

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| 61. | Which of the following proteins affect body weight?     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | apolipoprotein | | |  |  | | --- | --- | | C. | leptin | | | |  |  | | --- | --- | | B. | dopamine | | |  |  | | --- | --- | | D. | angiotensinogen | | |

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| 62. | Leptin is secreted by\_\_\_\_\_\_\_\_\_cells to influence the action of the \_\_\_\_\_\_\_\_\_\_\_\_.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | liver : stomach | | |  |  | | --- | --- | | C. | hypothalamus : intestine | | | |  |  | | --- | --- | | B. | adipose(fat cells) : hypothalamus | | |  |  | | --- | --- | | D. | pancreas : liver | | |

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| 63. | Research has shown that people vary in their metabolism and response to medications.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | True | | |  |  | | --- | --- | | B. | False | | |

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| 64. | Males and females are genetically equivalent because:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | an X chromosome is inactivated in female cells. | | |  |  | | --- | --- | | C. | the X chromosome is inactive in male cells. | | | |  |  | | --- | --- | | B. | males only inherit one X chromosome. | | |  |  | | --- | --- | | D. | females lack the Y chromosome. | | |

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| 65. | A man with the X-linked recessive condition, icthyosis, would be considered \_\_\_\_\_\_\_ for the trait.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | hemizygous | | |  |  | | --- | --- | | C. | heterozygous | | | |  |  | | --- | --- | | B. | autosomal dominant | | |  |  | | --- | --- | | D. | homozygous | | |

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| 66. | X-linked dominant mutant alleles are usually expressed:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | only in males. | | |  |  | | --- | --- | | C. | more severely in males. | | | |  |  | | --- | --- | | B. | more severely in females. | | |  |  | | --- | --- | | D. | equally in the sexes. | | |

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| 67. | The length of the ring finger compared to the index finger in humans is thought to be:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | Determined by testosterone level | | |  |  | | --- | --- | | C. | Controlled by the adrenal glands | | | |  |  | | --- | --- | | B. | Determined by estrogen level | | |  |  | | --- | --- | | D. | Controlled by the Y Chromosome | | |

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| 68. | How many Barr bodies would be observed in the nucleus of an XXY individual?     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | 0 | | |  |  | | --- | --- | | C. | 2 | | | |  |  | | --- | --- | | B. | 1 | | |  |  | | --- | --- | | D. | 3 | | |

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| 69. | A male with a missing SRY gene would be phenotypically:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | female. | | |  |  | | --- | --- | | C. | both male and female. | | | |  |  | | --- | --- | | B. | male. | | |  |  | | --- | --- | | D. | hermaphroditic. | | |

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| 70. | In genomic imprinting, the expression of a genetic disorder depends on:     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | A. | the age of the mother when she became pregnant. | | |  |  | | --- | --- | | D. | which parent transmits the disease-causing allele. | | | |  |  | | --- | --- | | B. | the sex of the child. | | |  |  | | --- | --- | | E. | the number of pseudoautosomal genes transmitted. | | | |  |  | | --- | --- | | C. | whether the trait is X-linked or autosomal. | |  | |

**Test 2- 07 Key**

1.B

2.B

3.A

4.B

5.C

6.C

7.B

8.C

9.A

10.C

11.C

12.B

13.C

14.A

15.A

16.B

17.C

18.A

19.A

20.B

21.D

22.C

23.B

24.A

25.C

26.B

27.C

28.C

29.B

30.B

31.A

32.B

33.B

34.A

35.D

36.A

37.A

38.B

39.A

40.C

41.C

42.C

43.B

44.C

45.B

46.B

47.B

48.A

49.E

50.A

51.A

52.B

53.A

54.D

55.C

56.C

57.D

58.D

59.C

60.D

61.C

62.B

63.A

64.A

65.A

66.C

67.A

68.B

69.A

70.D