

TEST NAME: Genetics Test Study Guide
TEST ID: 2851129
GRADE: 07 - Seventh Grade
SUBJECT: Life and Physical Sciences
TEST CATEGORY: Shared Classroom Assessments

Student: _____

Class: _____

Date: _____

1. **Bacteria are organisms that reproduce asexually. What would the traits inherited by a newly produced bacterium be like?**

- A. different from the traits of the single parent
- B. the same traits as the single parent
- C. different from the traits of two parents
- D. similar traits as two parents

2. The diagram below shows a parental cross.

R=red, r=white

	R	R
R		
r		

- A. 100% red
- B. 100% white
- C. 50% red and 50% white
- D. 75% red and 25% white

3. **What can cause an offspring to have a physical trait neither of its parents has?**

- A. a mutation in a parent's body cell
- B. a mutation in a parent's DNA
- C. the natural selection of a trait
- D. the artificial selection of a trait

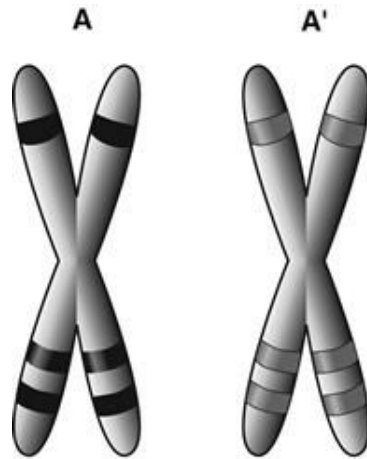
4. **Which BEST describes sexual reproduction in all animals?**

- A. Egg and sperm join together.
- B. Pollen and seed join together.
- C. Offspring have traits of only one parent.
- D. Offspring are identical to one parent.

5. **Which statement MOST accurately describes the influences on a person's length of life and quality of life?**
- A. Genes alone determine both the length and quality of life.
 - B. Behaviors alone determine both the length and quality of life.
 - C. Both behaviors and genes influence the length and quality of life.
 - D. Neither genes nor behaviors influence the length or quality of life.
6. **Why would a scientist use asexual reproduction to grow two offspring of a plant, instead of using sexual reproduction?**
- A. The plants would be an exact genetic match.
 - B. The plants would have fewer recessive traits.
 - C. The plants would have greater genetic diversity.
 - D. The plants would be more likely to mutate.
7. **All of the inherited traits that are passed to offspring during asexual reproduction come from a single**
- A. egg.
 - B. sperm.
 - C. virus.
 - D. parent.
8. **Meiosis is a type of cell division in which germ cells divide to produce haploid cells. Where does meiosis occur?**
- A. brain cells
 - B. bone cells
 - C. muscle cells
 - D. ovary cells
9. **Plants can reproduce sexually and asexually. If one offspring is produced sexually while the other is produced asexually, what will only the sexually produced offspring have?**
- A. both inherited and acquired traits
 - B. a new combination of traits
 - C. beneficial genetic traits
 - D. a complete set of traits

10. **Organisms that reproduce asexually generally have offspring that are**
- A. unicellular.
 - B. multicellular.
 - C. genetically varied.
 - D. genetically identical.
11. **Which of the following can occur because of the exchange of homologous chromosome parts during the process of meiosis?**
- A. random mutations
 - B. decreased gamete number
 - C. offspring with unique combinations of traits
 - D. decreased number of alleles on each chromosome
12. **Vertebrate animals produce offspring by sexual reproduction. Which is an advantage of this type of reproduction?**
- A. Time and energy is used to find a mate in the population.
 - B. There is increased genetic diversity within the population.
 - C. The offspring grows faster than one that is produced asexually.
 - D. The offspring receives its DNA from one parent and is identical to that parent.
13. **Which is a characteristic of asexual reproduction?**
- A. Half of the offspring have learned traits similar to the parents.
 - B. All of the learned traits pass from parents to offspring.
 - C. All of the inherited traits are the same as the parents.
 - D. Half of the inherited traits come from two parents.
14. **Some fungi can reproduce either asexually or sexually, resulting in offspring with different characteristics. Sexually produced offspring have**
- A. a complex level of cell organization.
 - B. a number of organelles in each cell.
 - C. a lesser risk of having mutations than asexually produced offspring.
 - D. a combination of genetic material from each parent cell.
15. **Why does sexual reproduction result in more genetic diversity than asexual reproduction?**
- A. Traits from two parents are combined.
 - B. More organisms reproduce this way.
 - C. Offspring grow in different environments.
 - D. Offspring come from identical parents.

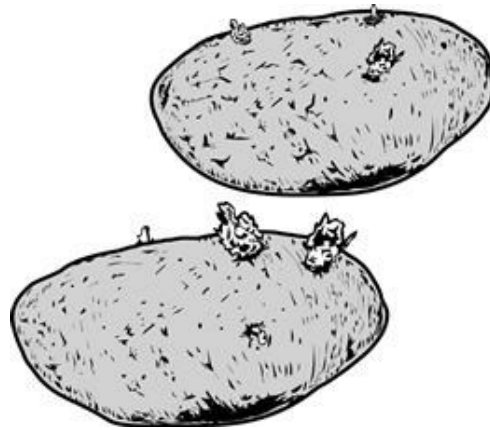
16. **What types of cells are found only in organisms that reproduce sexually?**
- A. blood cells
 - B. neurons
 - C. skin cells
 - D. gametes
17. **Daffodils can reproduce both asexually and sexually. How does a daffodil population benefit from reproducing sexually instead of asexually?**
- A. It can reproduce more rapidly.
 - B. It can pass favorable traits to all offspring.
 - C. It can increase the diversity of inherited traits.
 - D. It can eliminate unfavorable traits from the gene pool.
18. **A diagram of a homologous pair of rabbit chromosomes is shown. Homologous pairs of chromosomes code for the same traits and look alike.**



In which cell is there is an absence of homologous chromosomes?

- A. bone
- B. gamete
- C. liver
- D. skin

19. Potatoes reproduce by growing sprouts on their surfaces as shown.



When planted, these sprouts grow into new plants. This is an example of

- A. seed production.
 - B. fertilization.
 - C. pollination.
 - D. asexual reproduction.
20. Which of the following describes asexual reproduction?
- A. the process of meiosis in a fruit fly
 - B. fertilization of a chicken egg
 - C. binary fission in an amoeba
 - D. the process of embryo development in a mouse
21. In animals, which structure passes the mother's DNA to offspring?
- A. sperm
 - B. seeds
 - C. pollen
 - D. eggs
22. A farmer sprayed his crops with an insecticide to improve his crop production. Most of the insects died, but a few survived the spraying. Which can be inferred about the offspring of the surviving insects?
- A. Their offspring will have mutations.
 - B. They will most likely be killed by the insecticide.
 - C. They will most likely be able to survive exposure to the insecticide.
 - D. They will be genetically identical to the insects that were killed by the insecticide.

23. Below are some influences on a person's quality of life.

Influences on the Quality of Life	
1	inheriting genetic diseases
2	using tobacco products
3	eating healthy food
4	drinking clean water

Which is **LEAST** controlled by human behavior?

- A. 1
- B. 2
- C. 3
- D. 4