Name Period Date

Genetics Open Book Quiz

1. What does TT mean?

A. two dominant alleles

B. heterozygous alleles

C. at least one dominant allele

D. one dominant and one recessive allele

2. Another way to say tt is

A. heterozygous

B. homozygous recessive

C. hybrid

D. phenotype

3. An organism’s physical appearance is its

A. phenotype

B. genotype

C. purebred

D. hybrid

4. The different forms of a gene are called

A. alleles

B. factors

C. masks

D. traits

5. An organism’s genotype is its

A. genetic makeup or allele combinations

B. feather color

C. physical appearance

D. stem height

6. A heterozygous organism has

A. three different alleles for a trait

B. two identical alleles for a trait

C. only one allele for a trait

D. two different alleles for a trait

7. Scientists call an organism that has two

different alleles for a trait a

A. hybrid

B. trait

C. purebred

D. factor

8. What is the probability of producing a

tall pea plant from a genetic cross

between two hybrid tall pea plants?

A. one out of four

B. two out of four

C. three out of four

D. four out of four

9. What does a Punnett Square show?

A. all the possible outcomes of a genetic

cross

B. only the dominant alleles in a genetic

cross

C. only the recessive alleles in a genetic

cross

D. all of Mendel’s discoveries about genetic

Crosses

10. If a homozygous black guinea pig (BB)

is crossed with a homozygous white

guinea pig (bb), what is the probability

that an offspring will have black fur?

A. 25 percent

B. 50 percent

C. 75 percent

D. 100 percent

11. A monkey that is heterozygous for a long tail is crossed with a monkey that is homozygous recessive for a short tail. Using a Punnett Square, determine all of the possible genotypes and phenotypes the offspring could have. Then calculate the percent chance that the offspring will be homozygous recessive for a short tail.

Punnett Square:

Possible Genotypes: Possible Phenotypes:

Percent chance that the offspring will be homozygous recessive for a short tail: