

### Biology Quiz for Lab (Ex. 12 - Genetics )

Question1: Which of the following is an alternate form of a gene ?

- (a) allele
- (b) genotype
- (c) linkage
- (d) phenotype

An individual who is heterozygous for two genes is represented :

- (a) Aabb
- (b) AaBb
- (c) AAbb
- (d) AABb

Question 3: How many genetically different kinds gametes will an individual with genotype AA $\text{bb}$  produce ?

- (a) 1
- (b) 2
- (c) 3
- (d) 4

Question 4: Round seed is dominant over wrinkled seed in pea. If homozygous, round seeded peas are crossed with wrinkled seeded peas, the offspring will be:

- (a) all round
- (b) all wrinkled
- (c) 50 % round + 50% wrinkled
- (d) 75 % round + 25% wrinkled

Question 5: If heterozygous round seeded pea plants are self-pollinated the offspring will be:

- (a) 75% round
- (b) 50% heterozygous
- (c) 25 % aa
- (d) All of the above

Question 6: Assume that red-green colorblindness is sex-linked. A colorblind woman and a man with normal vision have a son. The son's genotype is:

- (a) Aa
- (b) ay
- (c) Ay
- (d) AxAx

Question 7: A man and a woman, both with normal thumbs, have a son with hitchhiker's thumb. It is likely that \_\_\_\_\_ is (are) heterozygous.

- (a) the son
- (b) the man
- (c) the woman
- (d) both parents

Question 8: A man has blood type A. His wife has blood type B. Their children can have blood type:

- (a) AB
- (b) A or B
- (c) A or B or AB
- (d) A or B or AB or O

Question 9: Inheritance of the A,B,O blood groups is an example of:

- (a) incomplete dominance
- (b) linkage
- (c) multiple alleles
- (d) sex linkage

Question 10: In pigeons, checkered pattern is dominant over plain pattern and red color is dominant over brown. A checkered brown female mated with a plain red male produced 2 checkered red, 2 plain red, and 1 checkered brown offspring. What are the probable genotypes of the parents ?

- (a) CCRR and crrr
- (b) CcRr and CRrr
- (c) CcRr and ccRR
- (d) Ccrr and ccRr