1. Compared to their wild ancestors, domestic animals usually show

a) More uniform coat color
b) No allelic variability of coat-color-associated genes
c) Substantial allelic variability of coat-color-associated genes

2. Basic pigments stored in coat of mammals are

a) Lutein and erythrin
b) Eumelanin and phaeomelanin
c) Chlorophyl and carotene

3. Main genes involved in coat color determination in mammals are

a) ASIP a MC1R
b) KRT17 a ADAMTS2
c) RYR1 a LAMC2

4. The most important enzyme in the melanogenesis process is

a) Phosphatase
b) Helicase
c) Tyrosinase

5. Albinism means

a) Failure of pigment production
b) Pork meat defect
c) Absence of fur

6. What is a pleiotropy?

a) State when more different genes determine one phenotypic trait
b) State when one gene influences two or more unrelated phenotypic traits (e.g. coat color and genetic disease occurrence)
c) A large number of alleles within a single locus

7. In grey horses has been proven

a) Increased susceptibility to skin melanoma occurrence
b) Increases occurrence of undesirable behavior
c) Impaired fertility

8. The so-called „lethal white foal syndrome“ is associated with

a) TOBIANO spotting
b) OVERO spotting
c) Extremely fast greying

9. The interaction between EXTENSION and AGOUTI loci in horses is called

a) Recessive epistasis
b) Dominant epistasis
c) Codominance

10. What is the probability of non-greying foal being born to two grey parents, both heterozygous at G locus (Gg x Gg)?

a) 75 %
b) 50 %
c) 25 %