**Practice Quiz 1. SELECT THE BEST ANSWER FROM THE FIVE ALTERNATIVES PROVIDED**

1. What would be the consequence of surgical removal of a mouse’s thymus at birth?
   1. The mouse will show no change in immune capacity
   2. The mouse will lack the ability to produce B cells
   3. The absence of an appropriate microenvironment will eliminate normal T cell development
   4. Macrophages will randomly activate and produce a chronic inflammatory disease
   5. None of the above are true
2. Which of the following statement(s) about (an) immunogen(s) is/are TRUE?
   1. All immunogens are antigens
   2. All antigens are immunogens
   3. Immunogens must be smaller than 10kD
   4. Haptens are immunogenic without need for conjugation to a carrier protein
   5. All the above are true.
3. Which parts of an antibody form the antigen binding pocket?
   1. Heavy chains
   2. Light chains
   3. The Fc region
   4. Variable regions of heavy chains (VH) and light chains (VL)
   5. Constant region of heavy chains (CH) and light chains (CL)
4. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_strain of mice differs from an inbred strain by only a small segment of a single chromosome.
   1. Congenic
   2. Co-isogenic
   3. Isogenic
   4. Allotypic
   5. Clonal
5. Xenografts are grafts exchanged between
   1. Close friends
   2. Identical twins
   3. Xena the warrior princess and her enemies
   4. Different individuals within a species
   5. Different species
6. Which of the following is an example of primary lymphoid tissue?
   1. Lymph nodes
   2. Thymus
   3. Bursal equivalent
   4. Tonsils
   5. B and C
7. Which of the following does **NOT** contribute to residual heterogeneity after 20 generations of mouse inbreeding?
   1. Slow reproduction/breeding
   2. There are some remaining genes that are still able to segregate by chance
   3. Genetic differences between males and females
   4. Spontaneous mutation
   5. Balanced lethals
8. Landsteiner’s performed an experiment in which he injected *levo- dextro- and meso-*tartaric acid conjugated to carrier protein into a rabbit and collected antiserum. He then mixed the antiserum with *levo- dextro- and meso-*tartaric acid conjugated to a different carrier protein and recorded whether he saw formation of precipitate. What did the formation of precipitate indicate?
   1. Graft rejection
   2. Immune complex formation
   3. Binding of antibodies in the antiserum to tartaric acid conjugate
   4. Denatured antibody
   5. b and c
9. What is the difference between an aggressive cellular immune response and a non-aggressive cellular immune response?"
   1. A non-aggressive response is simply a failure to engage with non-self
   2. An aggressive response requires cytokine involvement
   3. A non-aggressive response allows peaceful co-existance of self and non-self in the same organism
   4. An aggressive response can result in damage to both self and non-self, and to other nearby organisms
   5. None of the above are true.
10. Which of the following cell types differentiate from a common myeloid progenitor cell?
    1. Neutrophils
    2. T cells
    3. B cells
    4. Hepatocytes
    5. None of the above