Quiz 1. SELECT THE BEST ANSWER FROM THE FIVE ALTERNATIVES PROVIDED: please read all the choices before selecting the correct answer.

1. Xenografts are grafts exchanged between
   a. Close friends
   b. Identical twins
   c. Xena the warrior princess and her enemies
   d. Different individuals within a species
   e. **Different species**

2. Which of the following is characteristic of primary lymphoid tissue?
   a. Responsive to foreign antigen when presented at a mucosal surface
   b. **Surgical removal leads to absence of cell lineage**
   c. Derived from mesodermal cells
   d. A and C
   e. All of the above

3. Which of the following terms refers to the combined morphological changes and role changes that occurs during hematopoiesis?
   a. **Differentiation**
   b. Determination
   c. Division
   d. Detonation
   e. Delineation

4. Which of the following cell types differentiate from a common lymphoid progenitor cell?
   a. Neutrophils
   b. **B cells**
   c. Red blood cells
   d. Basophils
   e. Megakaryocytes

5. Which of the following phenomena are associated with the intensity of the immune response that follows a second exposure to an antigen?
   a. Shorter lag response
   b. High intensity in immune response
   c. More sustained immune response
   d. B and C
   e. **All of the above**

6. Which isotypes can be found as monomers or as multimers (e.g. multiples) of the standard 2 heavy chain and 2 light chain configuration?
   a. IgG and IgM.
   b. IgA and IgD.
   c. IgX and IgZ.
   d. **IgA and IgM.**
   e. None of the above.
7. Which of the following statement(s) about (an) immunogen(s) is/are TRUE?
   a. **All immunogens are antigens**
   b. All antigens are immunogens
   c. Immunogens must be smaller than 10kD
   d. Haptens are immunogenic without need for conjugation to a carrier protein
   e. All the above are true.

8. What is the name of the antigenic structure of an antibody’s antigen binding site?
   a. idiotype
   b. isotype
   c. allotype
   d. hapten
   e. congenic

9. Why do scientists use inbred mice for research?
   a. They carry segregating genes
   b. **Mice of a particular inbred strain are essentially genetically homogeneous, with some important caveats (exceptions)**
   c. Males and females are genetically identical
   d. Inbred mice are immune to spontaneous mutations that would otherwise compromise the research results
   e. They are cute

10. What might result from a signal molecule engaging a membrane bound receptor on a cell of the immune response?
    a. Apoptosis
    b. Anergy
    c. Proliferation
    d. Differentiation
    e. **All of the above (A-D)**