Quiz 2 SELECT THE BEST ANSWER

1. Which of the following phosphatases is/are important in T cell signaling?
   a. CD45
   b. Calcineurin
   c. ZAP70
   d. a and b are true
   e. a,b and c are true

2. The experiments by Zinkernagel and Doherty involving cytotoxic T lymphocytes (CTLs) demonstrated that the T cell Receptor (TCR) must recognize both the peptide and MHC I molecule in order to facilitate CTL activation and target cell lysis. However, we also know that CTLs can kill transplanted tissue from donors with a different MHC. If this is true, why didn’t CTLs in Zinkernagel and Doherty’s experiments lyse target cells with a different MHC?
   a. CTLs that recognize non-self MHC are at too low a frequency in animals exposed to the virus to lyse a detectable amount of allogeneic cells.
   b. CTLs can only kill virus-infected targets
   c. The target cells expressing the non-self MHC I were not able to process CMV peptides
   d. a and b are true
   e. a,b, and c are true

3. Which of the following amino acids is an important target for phosphorylation by kinases (e.g. Lck) that regulates subsequent biochemical events in a T cell signal transduction cascade?
   a. Serine
   b. Threonine
   c. Alanine
   d. Tryptophan
   e. Tyrosine

4. Listeria monocytogenes is an intracellular pathogen. If a human is infected with Listeria, their infected cells would present the bacterial pathogens on:
   a. MHC class II
   b. cytotoxic T cells
   c. MHC class I
   d. Antigen presenting cells
   e. CD4 T cells.

5. Both the BCR and TCR:
   a. Are members of the immunoglobulin supergene family
   b. have membrane bound forms
   c. have two heavy chains and two light chains
   d. All of the above are true
   e. both a and b are true