PRACTICE: BIOSIGNALING

1. The Scatchard analysis provides data on:
    a. enzyme cascades
    b. enzyme mechanism
    c. gated ion-channels
    d. protein phosphorylation
    e. receptor-ligand interactions

2. When G protein-coupled receptors bind their ligand:
    a. their ion channels open
    b. adenylyl cyclase is immediately activated
    c. GDP is replaced with GTP in protein G
    d. perform an enzymatic reaction on the ligand
    e. they synthesize protein G

3. Protein kinase A is:
    a. activated by covalent binding of c-AMP
    b. affected by c-AMP at the phosphorylation site
    c. allosterically activated by c-AMP
    d. completely inhibited by c-AMP
    e. hydrolyzed by c-AMP

4. Hormone activated phospholipase C can convert physphatidylinositol 4,5 bisphosphate to:
    a. diacylglycerol + inositol + 2 phosphates
    b. glycerol + inositol + phosphate
    c. glycerol + phosphoserine
    d. diaglycerol + inosititol-trisphosphate
    e. phosphatidyl glycerol + inositol + 2 phosphates

5. Autophosphorylation of receptor tyrosine kinases depends on:
    a. dimerization of the receptor
    b. ATP
    c. ligand binding
    d. conformational changes in the receptor through the membrane
    e. all of the above

6. After insulin binds to its receptor?
    a. Glycogen synthase become activated
    b. The glucose transporter GLUT4 moves from internal membrane vesicles to the plasma membrane
    c. The glucose transporter GLUT4 moves from the plasma membrane to internal membrane vesicles
    d. Cyclic GMP is produced
    e. Both a and b

7. Steroid hormones are carried on specific carrier proteins in blood because the hormones:
    a. are too unstable to survive in blood on their own
    b. cannot target cells without them
    c. cannot dissolve in blood
    d. need them to pass through the cell membrane
    e. required them to bind the receptor in the nucleus