1.) (4 Points) The liver produces lipoprotein particles called very low density lipoproteins (VLDL) and high density lipoproteins (HDL). Briefly describe the role these lipoproteins play in cholesterol metabolism.
   Answer: VLDL delivers triacylglycerols and cholesterol to tissues, forming low density lipoprotein (LDL) or “bad cholesterol.” HDL returns unwanted cholesterol to the liver as bile acids and is referred to as “good cholesterol.”

2.) (4 Points) Show the first half of the mechanism of a transaminase enzyme reacting with an amino acid that results in the formation of pyradoxamine phosphate (hint: PLP is the cofactor).

3.) (2 Points) What is the purpose of the urea cycle in land animals?
   Answer: To form urea from excess nitrogen so that it can be excreted from the body.