

CHEM106 Quiz 2

Please show all equations, all substitutions, all units, and all work to receive any credit

1. Draw the complete Lewis structures (to include all atoms, bonds, formal charges and lone electron pairs) for all reactants and products and show the mechanism of action for the condensation reaction between ethanol (C_2H_5OH) and stearic acid, an 18 carbon straight chain saturated fatty acid [$CH_3(CH_2)_{16}COOH$].

2. Draw the complete Lewis structures (to include all atoms, bonds, formal charges and lone electron pairs) for all reactants and products and show the mechanism of action for the condensation reaction between a glycerol molecule and a dihydrogen phosphate ion [H_2PO_4]⁻¹.

3. Draw the Lewis structures (to include all atoms, bonds, formal charges and lone electron pairs) for all reactants and products and show the mechanism of action for the condensation reaction to form a dipeptide from the amino acids glycine (R group for glycine is -H) and serine (R group for serine is -CH₂OH). Hint: remember that amino acids have the form $H_2N-CHR-COOH$