**UNIVERSITY OF NAIROBI**

**DEPARTMENT OF CHEMISTRY**

**DEGREE: BACHELOR OF PHARMARCY**

**COURSE: SCH 203: LIQUIDS, THERMODYNAMICS AND THERMOCHEMISTRY**

**CAT**

**5/5/2014**

**LIQUIDS**

Q.1. a) i) Describe the gas liquefaction processes (6mks)

ii) Differentiate between critical temperature and critical pressure (2mks)

 b) i) Write an expression for Van der Waals equation and define the terms used in the equation (5mks)

 ii) Two moles of ammonia gas are enclosed in a five litre container at 270C. Calculate the pressure exerted b the gas assuming that : a) the gas behaves like an ideal gas b) the gas behaves like a real gas (6mks)

Q. 2. a) i) Explain why the entropy of water and ethanol show a positive deviance from Trouton’s rule (4mks)

 ii) Boiling point of CH3 is 61.70 C . Entropy of vaporization is 31.4 kJ/mol. Calculate entropy of vaporization. (3mks)

 b) Describe the origin of saturated vapour pressure of a liquid in a closed container (4mks)