CHEM FORM 3

A fixed mass of a gas has a volume of 250cm3 at a temperature of 270C and 750mm Hg pressure. Calculate the volume the gas would occupy at 420C (2MKS)

a) Using dots(.) and crosses (x) to represent electrons draw diagram to represent the

bonding in:

 (i) NH3 (ii) NH4+ (1mk)

b) State why an ammonia molecule (NH3) can combine with H+ to form NH4+ (Atomic numbers: N=7 and H=1) (1mk

 The reaction of propane with chlorine gas gave a compound of formula C3H7Cl.

 a) What condition is necessary for the above reaction to take place? (1mk)

 b) Draw two structural formulae of the compound C3H7Cl (2mks)

 On strong heating, sodium nitrate produces a gas. , draw a

labeled diagram of a set-up that could be used for heating sodium nitrate and identify the gas liberated. (3mks)