Assignment-II

CH(CHE)-302-Chemistry

1. i)   Write down the Ditereci equation for real gas.
   ii)   What is Kinetic theory of gas? How Van der Waal's corrected it?
   iii) Write down the assumptions Maxwell made and derive the Maxwell distribution equation. 1+(2+5)+(2+5)

2. i)   Derive thermodynamically the expression for osmotic pressure of a solution and the relative lowering of vapour pressure of the solvent. Write down the relation between them.
   ii)   Find out the radius of a nitrogen atom. (P_c=72 atm, T_c =211 K) 5+5+1+4

3. i)   What do you mean by surface film?
   ii)   What is Freundlich isotherm?
   iii) What are the assumptions ofLangmuir isotherm?
   iv)   Deduce Langmuir adsorption isotherm.
   v)   Write down the BET adsorption isotherm and explain the terms in it.
   vi)   Discuss the application of adsorption.
   vii) Adsorption is an exothermic process. Explain.   1+1+2+5+2+2+2

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