每題5分，共20題
答案請精簡，儘量以公式表達。公式中之每一符號須清楚定義。

(1) What is Raoult's law ?

(2) What is ideal solution ?

(3) What is regular solution ?

(4) What is compression factor ?

(5) What is Boyle temperature ?

(6) What is the condition for $df = g(x,y)dx + h(x,y)dy$ being exact ?

(7) What is $(C_p - C_v)$ for a perfect gas ?

(8) What is Kirchhoff's law ?

(9) Please define internal pressure.

(10) Please define Jouel-Thomson coefficient.

(11) Express the efficiency of a Carnot engine using T_c and T_h.

(12) What is Clausius inequality ?

(13) What is ΔS for the expansion of ideal gas from V_i to V_f ?

(14) What is Nernst heat theorem ?

(15) What is Helmholtz energy ?

(16) What is the relationship between ΔG and ΔG^0 ?

(17) Write the equation for the value of equilibrium constant at different temperatures.

(18) Express dG in terms of change in P and V for a closed system.

(19) What is Gibbs-Helmholtz equation ?

(20) What is Clapeyron equation ?