※ 考生請注意：本試題不可使用計算機。　請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

(1) What is Boyle Temperature? (6%)

(2) What is Hess's law? Please describe its usefulness (6%)

(3) What is Kirchhoff's law? Please describe its usefulness (6%)

(4) What is the Joule-Thomson coefficient? Please describe its usefulness (6%)

(5) What is Nernst heat theorem? Please describe its usefulness (6%)

(6) What is Trouton's rule? Please describe its usefulness (6%)

(7) What is Gibbs-Helmholtz equation? Please describe its usefulness (6%)

(8) What is Clausius-Clapeyron equation? Please derive it (7%)

(9) What is contact angle? Please describe its usefulness (6%)

(10) What is Gibbs-Duhem equation? Please derive it (7%)

(11) What is ideal-dilute solution? Please describe its usefulness (6%)

(12) What is regular solution? Please describe its usefulness (6%)

(13) What is activity and activity coefficient? Please describe its usefulness (6%)

(14) What is Le Chatelier's principle? Please describe its usefulness (6%)

(15) What is van't Hoff equation? Please derive it (7%)

(16) What is Nernst equation? Please describe its usefulness (7%)