Read the instructions carefully

CHEMISTRY ASSIGNMENT – 1

THERMODYNAMICS

Answer all the questions

1. Derive Clapeyron Clausius equation for solid-liquid equilibria.

2. Derive Gibbs Duhem equation and state its significance.

3. Derive an expression for the variation of free energy with pressure at constant temperature.

4. Derive different forms of Gibbs Helmholtz equation and prove that $\left[\dfrac{\partial (G/T)}{\partial (1/T)} \right]_P = H$

5. Derive the total free energy of mixing of two ideal gases.

6. Solve the examples: 24, 25, 26, 32, 36, 39, 43, 47, 48 and 60 from your chemistry textbook (Sashi Chawla).

N.B.

1. **The last date for submission of this assignment is on or before June 1, 2023 by 6 pm.** **There will be mark deduction because of late submission.**
2. **The assignment should be handwritten, and hard copies should be submitted.**
3. **All the answers should be in written in details.**
4. **The whole assignment needs to be done in A4 paper with a proper cover stating the assignment name and number, your roll number, name of the student, section, semester and year, and date of submission. (==A sample copy is attached below==)**

Chemistry Assignment -1

THERMODYNAMICS

Roll Number

_____

Name of the Student

_____

Section

_____

Semester and Year

_____

Date of Submission

_____