Assignment 5

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

1. For stability, the heat capacity (C) and molar heat capacity (C_p) must be
   
   Accepted Answer:

2. In order for the stability condition to be met, which of the following could be varied in the boundary conditions of the system?
   
   Accepted Answer:

3. Stability analysis
   
   Accepted Answer:

4. Stability of a system in equilibrium is represented as:
   
   Accepted Answer:

5. The change in entropy equals zero (dS = 0). The stability of a system in equilibrium is represented by:
   
   Accepted Answer:

6. For a binary mixture component N_1 and N_2, the stability conditions are defined as dG > 0 and dF = 0 (dG/dV)_{T, N_1, N_2} > 0. The corresponding chemical potential will be
   
   Accepted Answer:

7. Choose one of the statements for the classic framework of phase equilibrium
   
   Accepted Answer:

8. How does the global stability condition graphically represent when the thermodynamic functions represented their intensive variables?
   
   Accepted Answer:

9. Which of the following equations predicts the dependence of equilibrium pressure on temperature when two phases of a given substance exist?
   
   Accepted Answer:

10. The necessary and sufficient condition for thermodynamic equilibrium between two phases is
    
    Accepted Answer:

11. The chemical potential of each component should be the same in the two components
    
    Accepted Answer:

12. In the figure given below, the red dot represents:
    
    Accepted Answer:

Potential Energy (kJ/mol)

Reaction Coordinate (\epsilon)

Solvate
Unsolvate
Metastable

Accepted Answer:

13. Entropy of a certain gas is given as S = nR \ln(T) - nR, where T is in Kelvin. Which of the following values of the specific heat of the gas at constant pressure becomes independent of pressure as well as temperature?
   
   Accepted Answer: