Short test questions 3, 2019

1. The Clapeyron equation
2. What assumptions are made when the Clapeyron-Clausius equation is derived from the Clapeyron equation?
3. The Clapeyron-Clausius equation
4. What is the standard Gibbs free energy of formation?
5. The molar Gibbs free energy (chemical potential) of an ideal gas
6. Definition of chemical potential (formula)
7. Definition of chemical potential (words)
8. The exact differential of the Gibbs free energy in an open system
9. The exact differential of the Helmholtz free energy in an open system
10. The exact differential of the internal energy in an open system
11. The exact differential of the enthalpy in an open system
12. The chemical potential of a pure substance
13. Conditions for phase equilibria (in terms of chemical potentials)
14. What determines the direction of material transport if there is no phase equilibrium?
15. The Gibbs' phase rule
16. Definition of compression factor
17. Reduced pressure and reduced temperature
18. The law of corresponding states
19. Definition of Joule-Thomson coefficient
20. Definition of partial molar volume
21. What is the relationship between the extensive quantities and partial molar quantities in solutions?
22. What is partial molar Gibbs free energy in other words?

23. What is the relationship between the Gibbs free energy of a solution and the chemical potentials of the components?

24. The Gibbs-Duhem equation