PPSC Chemistry Part I Physical Chemistry Online Test

Sr	Questions	Answers Choice
1	Which of the following properties of a system does not change in a state of equilibrium.	A. Density B. Pressure C. Colour D. All above properties
2	The statement that heat cannot flow spontaneously from a colder to a hotter body is the result of.	A. The first law of thermodynamics B. The second law of thermodynamics C. The third law of thermodynamics D. Henry's law
3	Which of the following makes the motion of perpetual motion machine a physical impossibility.	A. First law of thermodynamics B. Second law of thermodynamics C. Third law of thermodynamics D. The Boltzmann law
4	In an adiabatic system, if work in done, the temperature must.	A. Increase B. Decrease C. Remain the same D. Increase than decrease
5	Which of the following has the bighest value.	A. Transnational partition function B. Rotational partition function C. Vibrational partition function D. Electronic partition function
6	In statistical mechanics, there exists a function which contains all the information about a macroscopic system. This function is known as.	A. Eigen function B. Wave function C. Partition function D. Distribution function
7	The link between classical thermodynamics and quantum mechanics is prevented by	A. Statiatical mechanics B. Boltzmann law C. Wave mechanics D. Matrix mechanics
8	The change of chemical potential of any component with temperature an constant P and composition, is euqal to.	A. Partial molar enthalpy of that component B. Partial molar volume C. Partial molar free energy D. Negative of the partial molar entropy
9	Which of the following is the statement of third law of thermodynamics.	A. Entroy of perfectly crystalline substance is zero at T = 0 B. Entropy of a perfectly crystaline substance is zero at standard state conditions C. Entropy and enthalpy of a substance become equal at T = 0 D. Free energy of a crystalline substance is zero at T = 0
10	The entropy change accompanying any physical or chemical transformation approaches zero as T approaches zero. This statement refers to.	A. Helmholtz law B. Third law of thermodynamics C. Second law of thermodynamics D. Nernat heat theorem
11	Which law of thermodynamics helps in calculating the absolute entropies of varies substances.	A. Zeroth law B. 1st law C. Second law D. Third Law
12	All naturally occurring processes spontaneously in a direction leads to.	A. Decrease of entropy B. Increase of entropy C. Decrease in free energy D. Increase in free energy
13	At constant temperature and pressure, the decrease in Gibbs free energy (F) in equal to	A. Increase in entropy B. Decrease in entropy C. Reversible work done by the system D. All types of work except the work of expansion

14	At constant temperature , the decrease in Halmholts free energy is equal to.	A. Decrease in entropy B. Increase in entropy C. Reversible work done by the system D. All types of work done
15	Which of the following statements is not related with entropy.	A. It is a measure of disorder B. It is a measure of unavailable energy C. It is a function of thermodynamics probability D. It is a path function
16	The entropy of the universe	A. Tends towards a maximum B. Tend towards a maximum C. Tends to be zero D. Remains constatn
17	All cycle engines working reversibly between same temperature of source and sink have the same efficiency This is the statement for the.	A. Carnot cycle B. Carnot theorem C. Narnst theorem D. Second law of thermodynamics
18	The efficiency of a reversible heat engine depends only on the	A. Temperature of the heat sink B. Temperature of the heat source C. Temperature of the heat source and sink D. Pressure of the fluid
19	Which of the following process is not related with cannot cycle.	A. Iso thermal expansion B. Adiabatic expansion C. Isothermal compression D. Isobaric compression
20	The overall energy change during the Cannot cycle to.	A. Equal to zero B. Equal to Q C. Equal to W D. Maximum