FOR GOD AND COUNTR



SUBTOPIC-PART-1

SUBJECT – CHEMISTRY DURATION – 30 mins F.M. - 15 DATE - 07.11.20

1. The variations in enthalpy that cannot be detected per calorimeter can be detected with the aid of

- a. Newton's law
- b. Hess's law
- c. Krebs law
- d. Ohm's law

Answer: (b)

2. The energy required to sever a given covalent bond is named

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- a. bond energy
- b. bond enthalpy
- c. bond dissociation energy
- d. all of above

Answer: (d)

3. Changes in enthalpy in an exothermic reaction is

- a. positive
- b. negative
- c. constant
- d. neutral

Answer: (b)

4. The first law of thermodynamics states that energy can not be

- a. created only
- b. destroyed only
- c. converted
- d. created and destroyed

Answer: (d)

5. Hess's law states that a chemical reaction is independent of the route by which chemical reactions takes place while keeping the same

- a. initial conditions only
- b. final conditions only
- c. mid-conditions
- d. initial and final conditions

Answer: (d)

6. The standard enthalpy change of neutralization involves the reaction of an acid with an alkali to form 1 mol of

- a. water
- b. oxygen
- c. nitrogen
- d. anhydrous salt

Answer: (a)

7. The change in the energy between a chemical reaction and the surroundings at constant temperature is called

- a. enthalpy change
- b. enthalpy
- c. enthalpy profile
- d. dynamic enthalpy

Answer: (a)

8. To initiate a reaction the minimum energy which is required to break bonds is called

- a. bond energy
- b. activation energy
- c. breaking energy
- d. ionization energy

Answer: (a)

9. The standard condition for enthalpy changes are

- a. the pressure of 100 kPa
- b. temperature 298K
- c. normal physical state
- d. all of above

Answer: (d)

10. The application of law of thermodynamics to the enthalpy change was done by

- a. Newton
- b. Hess's
- c. Lewis
- d. Sophocles

Answer: (b)

11.Carnot cycle consists of-

a.Two constant volume and two reversible adibatic processes

- b.Two isothermal and two reversible adibatic processes
- c.Two constant pressure and two reversible adibatic processes
- d.One constant volume, one constant pressure and two reversible adibatic processes

Answer: (b)

12. The amount of heat absorbed to evaporate 1 kg of water from its saturation temperature, without change of temperature, is called-

a.Sensible heat of water

- b.Latent heat of vaporisation
- c.Enthalpy of steam

d.Entropy of steam

Answer: (b)

13. Which of the following processes is used to do maximum work done on the ideal gas that is compressed to half of its initial volume?

- a. isothermal
- b. isochoric
- c. isobaric
- d. adiabatic

Answer: (d)

14. What is the ratio of Cp/Cv for gas if the pressure of the gas is proportional to the cube of its temperature and the process is an adiabatic process?

- a. 2
- b. 3/2
- c. 4/3
- d. 5/3

Answer: (b)

15. The coefficient performance of a refrigerator is 5. Calculate the heat rejected to the surrounding if the temperature inside the freezer is -20° C

- a. 11°C
- b. 41°C
- c. 21°C
- d. 31°C

Answer: (d)

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