***Test bank chapter 6***

**1- The statement “The total energy of the universe is constant” is related to**

(A) Internal energy (B) The first law of thermodynamics

(C ) Enthalpy (D) The heat capacity

**2- The statement “A state function that equals to the sum of kinetic and potential energies of all particles in the system” is related to**

|  |  |
| --- | --- |
| (A) Internal energy  (C ) bomb calorimeter | (B) The first law of thermodynamics (D) Coffee-cup calorimeter |

**3- ……………….. is used to measure the heat evolved from combustion reactions at constant volume.**

|  |  |
| --- | --- |
| (A) Coffee-cup calorimeter  (C ) bomb calorimeter | (B) The first law of thermodynamics (D) Hess’s law |

**4- ………………….. is used to measure the heat changes in different reactions at constant pressure.**

|  |  |
| --- | --- |
| (A) Hess’s law  (C ) bomb calorimeter | (B) The first law of thermodynamics (D) Coffee-cup calorimeter |

**5- The endothermic reaction is the one whose…………**

|  |  |
| --- | --- |
| (A) ∆H< 0  (C ) ∆H > 0 | (B) ∆H = 0 (D) None of them |

|  |
| --- |
| **6- The relation between the energy and enthalpy is ……………** |
| (A) E = H + PV (B) H = E – PV  (C ) H = E + PV (D) none of them |  |

**7- The enthalpy (H) is defined as the sum of its internal energy and its…….**

|  |  |  |  |
| --- | --- | --- | --- |
| (a) Volume | (b) Pressure | (c) concentration | (d) product of volume and pressure |

**8- The value of enthalpy change (∆H) is positive for….**

|  |  |
| --- | --- |
| (a) Exothermic reaction  (c) reversible reaction | (b) endothermic reaction  (d) Irreversible reaction |

**9- Constant pressure calorimeter measures**

|  |  |
| --- | --- |
| 1. enthalpy change capacity   (c) heat of combustion | (b) internal energy  (d) heat |

**10- Thermodynamics is the general study of…………...**

|  |  |
| --- | --- |
| (a) energy interconversions  (c) reaction kinetics | (b) chemical changes  (d) physical changes |

11- The total energy of the universe is……(a) Increasing (b) decreasing (c) constant (d) changeable

**12- The sum of the kinetic and potential energies of all particles that compose a system is known as……….**

1. enthalpy (b) work

(c) internal energy (d) stat function

**13- The burning of natural gas on a stove is an …..**

|  |  |
| --- | --- |
| (a) exothermic process  (c) endothermic process | (b) physical process  (d) chemical process |

**14- Water condensation from a steam is ………**

|  |  |
| --- | --- |
| (a) exothermic process  (c) endothermic process | (b) chemical process  (d) physical process |

15- Internal energy (E) of system is…………………………..

a) kinetic energy b) potential energy c) kinetic and potential energy d) heat

16- We measure change in internal energy by………………………….a) Coffee – cup Colorimeter b) Ammeter

c) Bomb Colorimeter d) Colorimeter

17- An endothermic reaction……………………………a) Absorbed heat from the surrounding b) Gives off heat to the surrounding  
c) A chemical reaction with negative ΔH d) A chemical reaction with zero ΔH