Name: - ………………............ Science Quarter (3) Grade (8)

**Particles in motion worksheet**

**1] Fill in the following from the below in the box: - [4 marks]**

**a. Conduction b. Vaporization c. Thermal insulator d. Temperature**

**e. Thermal conductor f. Convection g. Heat h. Radiation**

1. …………………………… Is the transfer of thermal energy by the movement of the particles from one part of a material to another?

2. …………………………… is the change of state from a liquid to a gas.

3. …………………………… is a material in which thermal energy moves slowly.

4. …………………………… Is the movement of thermal energy from a region of higher temperature to a region of lower temperature?

5. …………………………… is the transfer of thermal energy by collisions between particles in matter.

6. …………………………… is a material in which thermal energy moves quickly.

7. …………………………… is the measure of the average kinetic energy of the particles in a material.

8. …………………………… is the transfer of thermal energy by electromagnetic waves.

**2] Summarize**  **[3marks]**

**A. The kinetic molecular theory**

1. …………………………………………………………………………………………………………………………………………….....

2. …………………………………………………………………………………………………………………………………………………

3. …………………………………………………………………………………………………………………………………………………

**B. How heat is related to thermal energy.**

…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**3] Choose the right answer in the following: - [3 marks]**

1. Which of the following is **NOT** a way in which thermal energy is transferred?

1. conduction
2. convection
3. radiation
4. sublimation

2. When the temperatures of the materials that are in contact are the same, the materials are in thermal

1. vaporization
2. equilibrium
3. transformation
4. expansion

3. Convection occurs in

1. solids
2. gas
3. liquids
4. b & c

4. When the thermal energy of the particles decrease, they

1. expand
2. contract
3. evaporate
4. melt

5. liquid-vaporization occur in two ways

1. evaporation and condensation
2. melting and evaporation
3. boiling and evaporation
4. melting and boiling

6. The following are thermal insulators **EXCEPT**

1. foam
2. plastic
3. stain steel
4. wood