

E.2 Thermal Energy & Heat Transfer

Practice Worksheet – name: _____ date: _____

FORMULAS FOR THIS TOPIC

HEAT ENERGY $Q = mc\Delta T$

SECTION A — MULTIPLE CHOICE

A1. Through which process does heat travel from the Sun to the Earth?

- (A) Conduction
- (B) Convection
- (C) Radiation
- (D) Insulation

A2. Which material is generally the best thermal conductor?

- (A) Wood
- (B) Copper
- (C) Air
- (D) Glass

SECTION B — SHORT ANSWER

B1. Distinguish between heat and temperature.

B2. Explain convection currents in fluids (liquids or gases).

ANSWER KEY

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Section A

A1: Radiation

A2: Copper

Section B

B1: Temperature is a measure of the average kinetic energy of the particles in a substance, while heat is the total thermal energy transferred from a hotter body to a colder body.

B2: When a fluid is heated, it expands, becomes less dense, and rises. The cooler, denser fluid sinks to take its place. This continuous cycle creates a convection current.