



ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

TERM- 3

Subject- Physical Science Worksheet- 2 Class – 9

Date- 9.11.2020

Topic- Heat

CHOOSE THE CORRECT OPTION- (MCQ)

MARKS : 1× 15

- Question 1

Q. For the formula:

$$Q = m c \Delta T$$

The units for specific heat are:

answer choices

A.g /J C

B.°C/g J

C.kC

D.J/g°C

- Question 2

Q. What would be the effect on the particles if more heat is supplied to the system?

answer choices

- A.They would slow down
- B.They would stop moving
- C.They would speed up
- D.There would be no effect

- Question 3

Q.

If two objects have different temperatures when they come in contact, heat will flow from the warmer object to the cooler one UNTIL _____

answer choices

- A.one reaches a temperature of zero
- B.they both have an equal temperature
- C.one runs out of energy

- Question 4

Q. The total energy of all the particles in a substance is called:

answer choices

- A.temperature
- B.thermal energy
- C.degrees
- D.mass

- Question 5

Q.

If the specific heat of water is $4.18 \text{ J/g}\cdot^{\circ}\text{C}$, how much heat is required to increase the temperature of 1.2 kg of water from 23°C to 39°C ? (show your work)

answer choices

- A. -80,256 J
- B. 80.256 J
- C. 80,256 J
- D. -80.256 J

- Question 6

Q. What is the specific heat of an unknown substance if 100.0 g of it at 200.0°C reaches an equilibrium temperature of 27.1°C when it comes in contact with a calorimeter of water. The water weighs $75. \text{ g}$ and had an initial temperature of 20.00°C ? (Specific heat of water is $4.18 \text{ J/g}\cdot^{\circ}\text{C}$) (show your work)

answer choices

- A. $0.111 \text{ J/g}\cdot^{\circ}\text{C}$
- B. $1.29 \text{ J/g}\cdot^{\circ}\text{C}$
- C. $0.129 \text{ J/g}\cdot^{\circ}\text{C}$
- D. 22225.85 J

- Question 7

Q.
For a skillet, used for cooking, do you want a high or low specific heat

answer choices

- A. High, so that it will need more energy to heat up

B.Low, so that it will change temperature quickly

- Question 8

Q. The SI unit of heat and energy is the _____.

answer choices

A.calorie

B.heat

C.joule

D.watt

- Question 9

Q. A sample of iron receives 50.J of heat energy that raises the temperature of the iron by 25.0°C. If iron has a specific heat of 0.10 J/g°C, what is the mass of the iron sample? (show your work)

answer choices

A.25g

B.30g

C 20g

D.50g

- Question 10

Q. A reaction is performed in a beaker with a temperature probe recording the temperature changes of the reaction. If the temperature began at 15.0 degrees Celsius and ended at 27.5 degrees Celsius. Is the reaction endothermic or exothermic?

answer choices

- A.Exothermic
- B.Endothermic

- Question 11

Q. Calorimetry Question:

A piece of metal with a mass of 32.8 g is heated to 100.5°C and dropped into 138.2 g of water at 20.0°C. The final temperature of the system is 30.2°C. What is the specific heat capacity of the metal? (show your work)

answer choices

- A 2.56 J/g°C
- B.0.391 J/g°C
- C.5.29 J/g°C
- D.3.50 J/g°C

- Question 12

Q. In an exothermic process, the surroundings are gaining energy.

answer choices

- A.True
- B.False

- Question 13

Q.
What does "q" mean?

answer choices

- A.A measure of heat energy

- B.A change in heat energy
- C.A measure of kinetic energy
- D.A change in temperature

- Question 14

Q. What is a tool that measures the heat of chemical reactions?

answer choices

- A.calorimeter
- B.calorie
- C.Styrofoam™ cup
- D.none of these

- Question 15

Q. Calorimeters use insulating materials to:

answer choices

- A encourage affordable materials in science experiments in schools.
- B.preserve the heat of the environment outside the Styrofoam cup.
- C.prevent heat from escaping to the environment.
- D.keep the liquid inside the Styrofoam cup from overheating.

Name of the Teacher- Piyali Halder