



ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

- **Subject : Physics Worksheet- 9 Class IX**
- **Date 9.06.2020**

- **Chapter : Heat**

- **Answer the following questions (MCQ) : (1×15)**

• Question 1

Q. How many Joules of energy are required to change 10 gram of ice at -2°C to water at 20°C ?

answer choices

440 J

880 J

3,840 J

66,000 J

• Question 2

Q. How many Joules of energy are required to change 10 gram of water from 20°C to 90°C ?

answer choices

1400 J

2800 J

210,000 J

1,400,000 J

• Question 3

Q. How many Joules of energy are required to make 100 grams of ice at 0°C completely melt?

answer choices

200 J

400 J

30,000 J

2,000,000 J

• Question 4

Q. The symbol for specific heat is

answer choices

c

Q

m

t

• Question 5

Q. If 200 grams of water is to be heated from 24.0 °C to 100.0 °C to make a cup of tea, what is the mass and what is the change in temperature?

answer choices

m=200g
 $\Delta\theta=66$

m=200g
 $\Delta\theta=124$

m=200
 $\Delta\theta=100$

m=200g
 $\Delta\theta=76$

• Question 6

Q. What is the formula to calculate heat energy required to raise the temperature of any substance?

answer choices

$Q=mc\Delta\theta$

$Q=mc$

$Q= \frac{1}{2}mv$

$m=QC$

• Question 7

Q. 20 g of water. specific heat of water is $4.18 \text{ J g}^{-1} \text{ }^\circ\text{C}^{-1}$. temperature changes from 25 °C to 20 °C, how much heat energy (Q) moves from the water to the surroundings?

answer choices

418 Joules

209 J

83 J

4.18 J

• Question 8

Q. Specific heat of water is $4.18 \text{ J g}^{-1} \text{ }^\circ\text{C}^{-1}$. Specific heat of wood is $1.760 \text{ J g}^{-1} \text{ }^\circ\text{C}^{-1}$ What material needs more heat energy to raise the temperature?

answer choices

Water

Wood

Both are same

• Question 9

Q. Water molecules have the greatest kinetic energy in

answer choices

Ice at $0 \text{ }^\circ\text{C}$.

Water at 373 K .

Water at $98 \text{ }^\circ\text{C}$

Steam at $150 \text{ }^\circ\text{C}$.

• Question 10

Q. The unit Joules is for _____

answer choices

heat energy

temperature

specific heat

• Question 11

Q. Does everything have Specific Heat?

answer choices

I give up!

no

yes

• Question 12

Q. A high specific heat means...

answer choices

It heats up quickly with energy added

It requires more energy to change temperature

• Question 13

Q. What is Specific Heat?

answer choices

The amount of thermal energy required to increase the temperature of 1kg of a material by 1°C.

The amount of radiant energy required to increase the temperature of 1kg of a material by 1°C

The amount of energy required to increase the temperature of 1kg of a material by 1°C.

The amount of friction required to increase the temperature of 1kg of a material by 1°C.

• Question 14

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

answer choices

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

Low, so that it will change temperature quickly

• Question 15

Q. Compared to metal, water seems to have a _____ specific heat.

answer choices

High, it takes a lot of energy to heat up and change temperature

Low, because it does not require a lot of energy to change temperature

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