ST. LAWRENCEHIGH SCHOOL

- A JESUIT CHRISTIAN MINORITY INSTITUTION
- **Subject :Physics Worksheet-11   Class: IX**
- **Date 11.06.2020**

- **Chapter:Heat**

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

Question 1

Q.
When a body absorbs heat, its temperature will

answer choices

increase.

decrease.

remains constant.

Question 2

Q.
Which statement defines the thermal capacity (heat capacity) of a solid body?

answer choices

the energy needed to melt the body without a change in temperature

the energy needed to raise the temperature of the body by one degree Celsius

the increase in the volume of the body when its temperature is raised by one degree Celsius

the total amount of internal energy in the body

Question 3

Q.
The heat capacity of a substance depends on the followings, EXCEPT:

answer choices

mass of substance.

type of substance.

Quantity of heat supplied.

ice point and steam point.

Question 4

Q.
A substance can exist in three different states: solid, liquid or gas.
Each of the two statements below describes a change of state.
Change 1: Molecules move closer together but continue to travel throughout the substance.
Change 2: Molecules stop travelling throughout the substance and just vibrate about fixed positions.
Which changes of state do these statements describe?

answer choices

Change 1: Condensation; Change 2: Melting

Change 1: Condensation; Change 2: Solidification

Change 1: Solidification; Change 2: Condensation

Change 1: Solidification; Change 2: Melting

Question 5

Q.
A metal has a specific heat capacity of 360 J / (kg ^{0}C). An object made of this metal has a mass of 2.0 kg.
What is the thermal capacity (heat capacity) of the object?

answer choices

180 J / ^{0}C

180 J / kg

720 J / ^{0}C

720 J / kg

Question 6

Q.
Temperature difference of 1 degree Celsius equivalent to a difference of

answer choices

1 K.

100 K.

272 K.

274 K.

Question 7

Q.
The specific heat capacity of a substance is the quantity of heat required to

answer choices

melt 1 kg of the substance.

raise the temperature of the substance by 1^0C.

raise the temperature of 1 kg of the substance by 1^0C.

Question 8

Q.
This equation is often used to solve problems related to heat and temperature change of a substance.

answer choices

change in energy = $mc\Delta T$

energy = ml

Question 9

Q.
A liquid X of mass 1 kg requires 3800 J of heat to raise its temperature by 1^0C. Calculate the total heat required to raise the temperature of 1 kg of liquid X by 3^0C.

answer choices

3800 J

7600 J

11 400 J

Question 10

Q.
The time taken by an electric heater to raise the temperature of 4 kg of water from 25^0C to 30^0C is 1 minute. If the specific heat capacity of water is 4200 J kg^{-1} $^0C^{-1}$, calculate the power of the heater.

answer choices

70 W

140 W

700 W

1400 W

Question 11

Q.
When a liquid is heated, it _____ and when cooled, it _____.

answer choices

contracts, expands

Expands, contracts

only expands

only contracts

- Question 12

Q.
Water has minimum volume and maximum density at

answer choices

4 degree Celsius

zero degree Celsius

100 degree Celsius

none of these

- Question 13

Q.
Aquatic animals can survive in cold countries even when temperature falls below zero because

answer choices

Water does not freeze

They have special adaptation to survive in ice

Top layer freezes, ice floats on liquid water underneath

None of these

- Question 14

Q.
In the following image, weathering of rocks is caused due to

answer choices

Expansion of water due to heat

The rock becomes weak after being soaked in water

Anomalous expansion of water below 4 degree Celsius

none of these

- Question 15

Q. The transfer of energy through touching molecules is ...

answer choices

Heat

Conduction

Convection

Radiation
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