

Chapter 5. Heat

Q. 1. Rewrite the statements by filling the blanks.

1. The amount of water in the air is called as
2. If same amount of heat is given to different objects having same mass then the rise in their temperature is not the same because of their property of
3. When a substance in liquid form gets converted to solid its latent heat is

Q. 2 Find the odd word and explain the reason for choosing it

1. temperature, conduction, convection, radiation
2. Joule, Erg, calorie, Newton
3. cal/g, cal/g / $^{\circ}$ C, kcal/kg. $^{\circ}$ C, erg/g. $^{\circ}$ C

Q. 3 Match the pairs between column A and column B

Column 'A'	Column 'B'
1) latent heat	a) $Q = mc \Delta T$
2) specific heat capacity	b) $Q = mL$
3) The heat absorbed or given out by any object during change of temperature	c) kcal d) cal/g. $^{\circ}$ C

Q. 4 Write true or false

1. The specific latent heat of melting is expressed in g/cal
2. If the temperature of water is increased from 0° C to 10° C its volume increases.
3. At dew point, the relative humidity is 100%
4. 1 Kilocalorie = 4.18 Joule

5. There is no unit for the Relative humidity
6. Absolute humidity is measured in kg/m^3

Q. 5 Select the correct option from those given here and rewrite the statements

1. To study the anomalous behaviour of water is used .
 - a) Calorimeter
 - b) Joule's apparatus
 - c) Hope's apparatus
 - d) thermos flask

2. When water gets converted to steam because of boiling
 - a) Heat is absorbed and temperature remains constant
 - b) Heat is absorbed and temperature increases
 - c) Heat is given out and temperature increases
 - d) heat is given out and temperature remains constant

3. If water vapor/ steam is converted to water then
 - a) Heat is given out and temperature remains constant
 - b) Heat is given out and temperature decreases
 - c) Heat is absorbed and temperature remains constant
 - d) Heat is not absorbed but temperature decreases

4. When ice melts its volume
 - a) Increases
 - b) Decreases
 - c) remains the same
 - d) will increase or decrease

5. ice/ water is such a substance which
- a) contracts while melting and there is no change in its volume while freezing
 - b) expands while melting and contracts while freezing
 - c) contracts while melting and expands while freezing
 - d) volume does not change while melting or freezing
6. for melting of 1 g of ice having temperature 0°C to form 1 g of water having temperature 0°C calorie heat is required
- a) 80
 - b) 800
 - c) 540
 - d) 54
7. The specific latent heat of vaporisation of water is
- a) 540 cal/g
 - b) 800 cal/g
 - c) 80 cal/g
 - d) 54 cal/g
8. The specific latent heat of melting of ice is
- a) 540 cal/g
 - b) 800 cal/g
 - c) 80 cal/g
 - d) 4 cal/g
9. If the temperature of water is decreased from 4°C to 0°C then its
- a) volume decreases and density increases
 - b) volume increases and density decreases
 - c) volume decreases and density decreases.
 - d) volume increases and density increases

10. The density of water isat 4°C temperature
- a) 10 g/cm^3
 - b) 4 g/cm^3
 - c) $4 \times 10^3\text{ kg/m}^3$
 - d) $4 \times 10^3\text{ kg/m}^3$
11. At temperature the density of water is maximum
- a) 0°C
 - b) -4°C
 - c) 100°C
 - d) 4°C
12. To increase the temperature of 1 kg water from 14.5°C to 15.5°C heat is required
- a) 4180 Joule
 - b) 1 Kilojoule
 - c) 1 Calorie
 - d) 4180 calorie
13. If 1 g water at 100°C temperature and at atmospheric pressure at sea level is transformed in to 1 g steam thenheat is required
- a) 80 calorie
 - b) 540 calorie
 - c) 80 Joule
 - d) 540 Joule

Q. 6 Write the definition of

1. Specific latent heat of melting
2. Boiling point of a substance
3. Regelation
4. Specific latent heat of vaporization
5. Dew point temperature