

Name: _____					
<b>Subject:</b> Physics		<b>Class:</b> 9 <sup>th</sup>	<b>Time:</b> 80 minutes	<b>Total Marks:</b>	<b>40</b>
<b>Chapter No.8</b>		<b>MJDexpert.com</b>			Obtained marks

**Note:** Please attempt any 10 short questions from Question 2. Also, attempt both parts (a and b) of Question 3. Cutting and removal of any content is strictly prohibited.

**Q.1: Tick (✓) the correct answer.**

- Water freezes at:  
A) 0°F    B) -273K    C) 0K    D) 32°F
- Which of the following factors influences evaporation?  
A) Temperature    B) Surface area of the liquid    C) Air movement    D) All of these
- The term for the degree of hotness or coldness of an object is:  
A) Heat capacity    B) Heat    C) Thermal conductivity    D) Temperature
- The latent heat of fusion of ice is:  
A) 334 kJ/kg    B) 230 kJ/kg    C) 420 kJ/kg    D) 280 kJ/kg
- The operational range of a clinical thermometer is:  
A) 20 - 42°C    B) 25 - 42°C    C) 30 - 42°C    D) 35 - 42°C
- The coefficient of volume expansion for aluminum is:  
A)  $1.8 \times 10^{-5} \text{ K}^{-1}$     B)  $2.4 \times 10^{-5} \text{ K}^{-1}$     C)  $7.2 \times 10^{-5} \text{ K}^{-1}$     D)  $6.5 \times 10^{-5} \text{ K}^{-1}$
- Which substance has a high specific heat capacity?  
A) Copper    B) Ice    C) Water    D) Mercury
- The coefficient of volume expansion for brass is:  
A)  $1.5 \times 10^{-4} \text{ K}^{-1}$     B)  $2.4 \times 10^{-5} \text{ K}^{-1}$     C)  $7.2 \times 10^{-5} \text{ K}^{-1}$     D)  $4.2 \times 10^{-5} \text{ K}^{-1}$
- Complete the equation:  
A)  $273 + C$     B)  $273 - C$     C)  $273 + F$     D)  $273 - F$
- The crocus flower opens at:  
A) 21°C    B) 22°C    C) 23°C    D) 24°C

**Write short answers to any ten (10) of the following questions:**

- What factors affect internal energy?
- Define specific heat and provide its formula.
- Convert 300 K to degrees Celsius.
- Differentiate between heat and temperature.
- Explain how heat capacity relates to the amount of substance.
- What does the latent heat of fusion refer to?
- Define the coefficient of linear thermal expansion in solids.
- Explain the significance of the upper and lower fixed points on a thermometer.
- Define latent heat of vaporization.
- Mention two applications of thermal expansion.
- Name two factors that influence evaporation.
- Why are gaps included in railway tracks?

**Write answers the following questions:**

- Discuss the concepts of latent heat of fusion and latent heat of vaporization.
- Describe and compare the three different temperature scales.