

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.9</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.**

- In solids, the primary mode of heat transfer is:  
A) Conduction    B) Convection    C) Radiation    D) Absorption
- The unit for measuring thermal conductivity is:  
A)  $\text{Wm}^{-1}\text{K}^{-1}$     B) J/K    C)  $\text{W/m}^2$     D) K/W
- Which color is most effective at absorbing heat?  
A) White    B) Black    C) Bright    D) Colorful
- The reason a glider remains in the air is due to:  
A) Power    B) Conduction    C) Convection    D) Radiation
- To facilitate quick heat transfer, saucepans are usually made from:  
A) Wood    B) Plastic    C) Metal    D) Fiberglass
- Which birds are recognized as skilled thermal climbers?  
A) Eagles    B) Hawks    C) Vultures    D) All of these
- Which of the following is regarded as a poor conductor of heat?  
A) Wool    B) Iron    C) Gold    D) Graphite
- The thermal conductivity value of water is:  
A)  $0.59 \text{ Wm}^{-1}\text{K}^{-1}$     B)  $0.8 \text{ Wm}^{-1}\text{K}^{-1}$     C)  $1.7 \text{ Wm}^{-1}\text{K}^{-1}$     D)  $0.6 \text{ Wm}^{-1}\text{K}^{-1}$
- In gases, heat is mainly transferred by:  
A) Conduction    B) Molecular collisions    C) Convection    D) Radiation
- Thermal conductivity tends to increase with:  
A) Length of the conductor    B) Surface area    C) Temperature    D) Time

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

- What occurs during the process of heat conduction?
- Why are metals good conductors of heat?
- Define thermal conductivity and provide its formula.
- How does the length of a solid influence its thermal conductivity?
- Give examples of applications for conductors and insulators.
- Describe the greenhouse effect.
- Compare land breezes with sea breezes.
- What are convection currents?
- Identify and describe three methods of heat transfer.
- Explain why a hot cup of tea eventually loses its heat.
- Define convection and provide an example of it.
- What methods can be used to conserve energy in a home?

**Write an answer to the following questions:**

- Discuss the functions and uses of a Leslie cube.
- What is radiation? Explain how heat is transferred from the sun to Earth.