

## Physics (New Book) - 9th Class Physics English Medium Chapter 7 Preparation

Q1. Why solids have a fixed volume and shape according to particle theory. of matter.

**Ans 1:** Solids have fixed volume and shape because their particles are closely packed and have a fixed position in space, with strong forces holding them together.

Q2. Define Internal Energy

**Ans 1:** The sum of kinetic and potential energies of the molecules of an object is called its internal energy

Q3. What do liquids have a definite volume.

**Ans 1:** Liquids have a definite volume because the intermolecular forces are strong enough to keep the molecules close together.

Q4. What happens to the shape of a liquid in a container.

**Ans 1:** A liquid acquires the shape of its containing vessel due to the free motion of its molecules.

Q5. Difference between Temperature and Heat

**Ans 1:** Temperature:-  
Temperature of a body is defined as the degree of its hotness or coldness  
It is denoted by T  
its SI unit is Kelvin

**Ans 2:** Heat:  
Heat is the form of energy which is transferred from one object to another due to the difference of temperature between the two bodies  
Its quantity is denoted by Q  
Its unit is Joule

Q6. When you touch a cold surface, does cold travel from the surface to your hand or does energy travel from your hand to the cold surface.

**Ans 1:** The heat flows from your hand to the cold surface because of the fundamental nature of heat flow and laws of thermodynamics.

Q7. What is the effect of raising the temperature of a liquid.

**Ans 1:** Raising the temperature of a liquid increases the kinetic energy of its particles, causing them to move faster and spread out, eventually turning into vapour form.

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Q8. What is plasma composed of.

**Ans 1:** Plasma is composed of ionized atoms, containing positive ions and free electrons.

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Q9. Can you feel your fever by touching your own forehead? Explain.

**Ans 1:** No, you can't feel fever by touching your own forehead. This is because your hand is at the same temperature as your forehead, so you won't be able to detect the heat.

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Q10. Comment on the statement, A thermometer measures its own temperature.

**Ans 1:** A thermometer measures the temperature of substance not its own temperature. It measures the temperature of an external object or environment.

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