



**Subject:** Grade 8 Natural Sciences

**Topic:** Particle model of matter

**Total:** 35 Marks

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1. weaker | quicker

4 marks

**Explanation:**

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2. D: the particles move more slowly.

4 marks

**Explanation:**

When something is cooled it means that energy is removed from the substance. This causes the particles to have less kinetic energy and therefore they move around more slowly.

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3. gas

3 marks

**Explanation:**

The reason for this is because the particles of a gas move around more freely than those of a solid or liquid. Diffusion relies on the spontaneous movement of particles.

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4. diffusion

3 marks

**Explanation:**

Diffusion occurs more quickly in a gas than a liquid. Do you know why?

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5. A: the energy of movement.

4 marks

**Explanation:**

While heat energy can be converted into kinetic energy it is not the same as kinetic energy.

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6. B: only C

4 marks

**Explanation:**

When a substance is heated the particles of the substance move quicker since they have more energy. The particles of all substances are moving, even in solids where the particles vibrate. When a substance is heated its particles absorb the heat and move around more quickly. This causes them to move further apart and the spaces between them increase.

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7. a fan could be used | heated

4 marks

**Explanation:**

Diffusion increases when the particles move around more quickly.

A fan blows the particles around. If the room is heated the particles will have more kinetic energy and then move around more quickly.

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8. kinetic | kinetic energy

3 marks

**Explanation:**

The heat energy causes the particles to vibrate more rapidly. This movement is known as **kinetic energy**.

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9. gas | liquid

4 marks

**Explanation:**

In a gas the particles move around freely, and in a liquid they slide past one another.

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10. true

2 marks

**Explanation:**

Gas particles move around quite freely and therefore will move into all parts of a container into which the gas is placed.

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**Total:** 35 Marks