

# Thermal Properties & Temperature

## Question Paper

Course	CIE IGCSE Physics
Section	2. Thermal Physics
Topic	Thermal Properties & Temperature
Difficulty	Medium

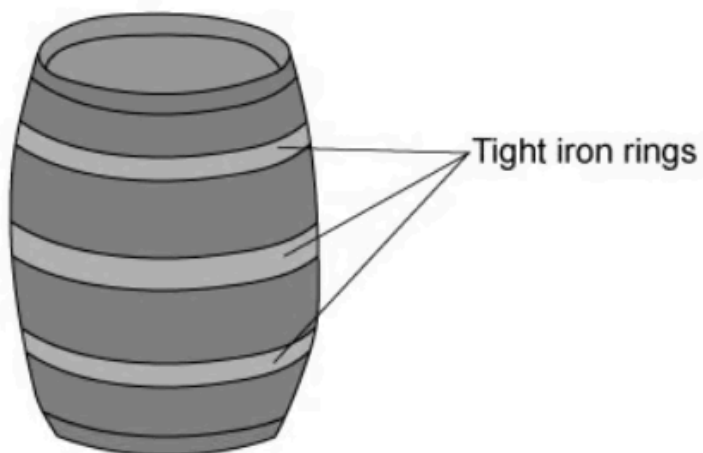
Time Allowed      10

Score                /7

Percentage        /100

**Question 1**

Wooden barrels are often reinforced by putting tight iron rings around them.



What procedure would make it easier to get the iron ring onto the barrel?

- A. Heating the barrel.
- B. Cooling the iron ring.
- C. Soaking the barrel in water.
- D. Heating the iron ring.

[1 mark]

## Question 2

In order to calibrate a degrees Celsius thermometer, the lowest fixed point can be found by placing the thermometer in:

- A. Melting ice with a large quantity of salt mixed in.
- B. Pure distilled water.
- C. Pure boiling water.
- D. Pure melting ice.

[1 mark]

## Question 3

An iron cube is heated by a Bunsen burner.

Which of its properties decreases?

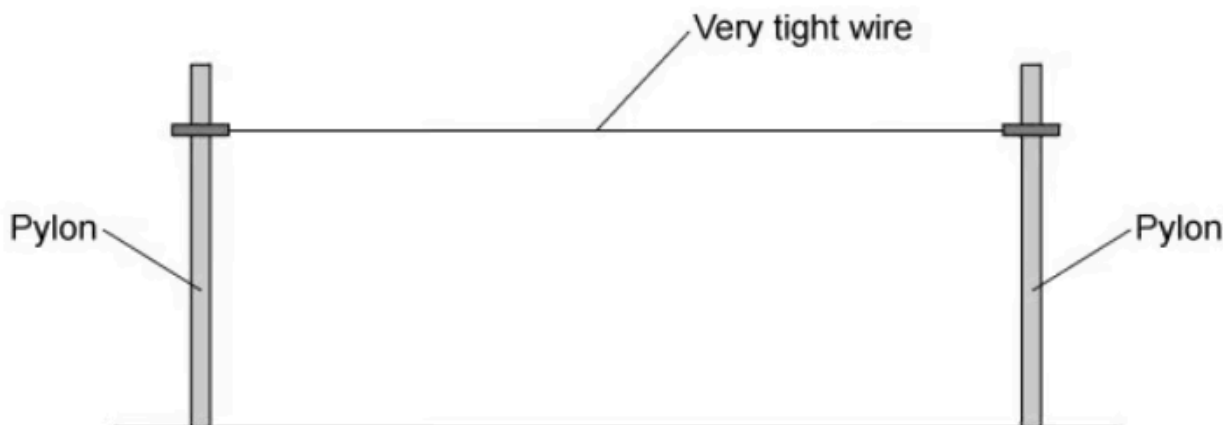
- A. Mass
- B. Density
- C. Volume
- D. Internal energy

[1 mark]

#### Question 4

A National Grid engineer connects an electrical cable between two pylons.

The cable is a bit too tight.



What could happen to the wire if the weather became very cold, and why?

	What could happen?	Why?
<b>A</b>	The wire sags low	It expands
<b>B</b>	The wire breaks	It contracts
<b>C</b>	The wire breaks	It becomes brittle
<b>D</b>	The wire's resistance increases	It contracts

[1 mark]

**Question 5**

Internal energy is affected by two properties of the particles which make up a substance.

Identify the two properties.

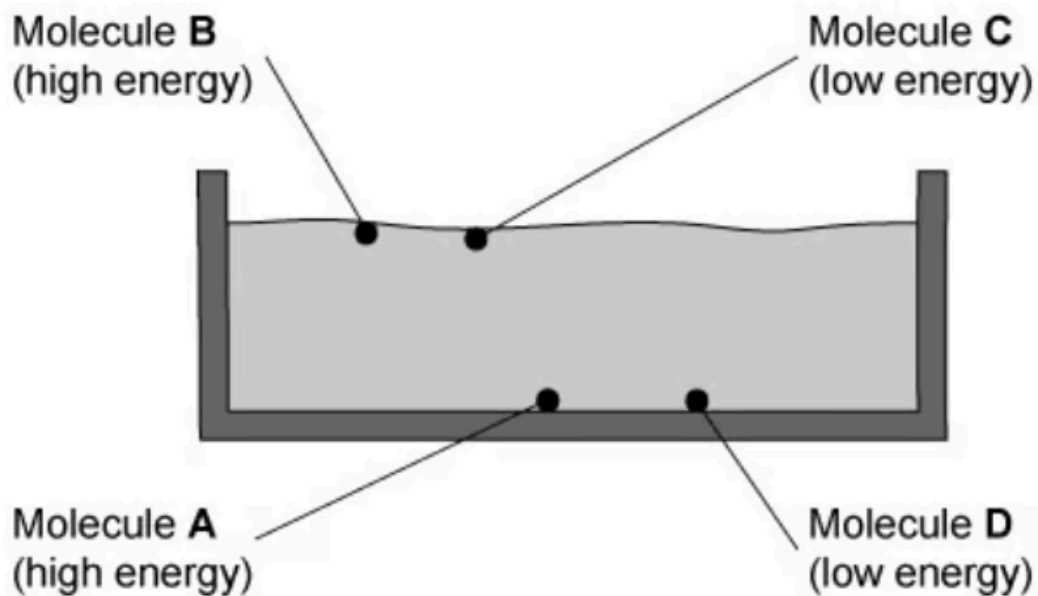
- A.** Motion and position
- B.** Acceleration and mass
- C.** Specific heat capacity and volume
- D.** State of matter and potential energy

[1 mark]

**Question 6**

The diagram shows four water molecules in a swimming pool. It also shows how much energy each molecule has.

Which of the water molecules is most likely to *evaporate* from the liquid?



- A. Molecule A
- B. Molecule B
- C. Molecule C
- D. Molecule D

[1 mark]

**Question 7**

The water in outdoor swimming pools gradually evaporates.

How does the process of evaporation affect the temperature of the water in the swimming pool and what is the effect on the average kinetic energy of the water molecules?

	Temperature	Average kinetic energy per molecule
<b>A</b>	reduces	reduces
<b>B</b>	stays the same	stays the same
<b>C</b>	increases	increases
<b>D</b>	reduces	stays the same

[1 mark]