

## Density – 2020 IGCSE 0625

### 1. March/2020/Paper\_12/No.6

On the Moon, the gravitational field strength  $g$  is  $1.6 \text{ N/kg}$ .

An object has a mass of  $2.0 \text{ kg}$ .

What is the weight of the object on the Moon?

- A**  $0 \text{ N}$                       **B**  $1.3 \text{ N}$                       **C**  $3.2 \text{ N}$                       **D**  $20.0 \text{ N}$

### 2. March/2020/Paper\_22/No.6

A measuring cylinder contains  $40 \text{ cm}^3$  of water.

A solid metal ball is dropped into the water and the water level rises to  $56 \text{ cm}^3$ .

The mass of the ball is  $80 \text{ g}$ .

What is the density of the metal from which the ball is made?

- A**  $0.20 \text{ g/cm}^3$       **B**  $1.4 \text{ g/cm}^3$       **C**  $2.0 \text{ g/cm}^3$       **D**  $5.0 \text{ g/cm}^3$

### 3. June/2020/Paper\_11/No.6

The mass of a measuring cylinder is  $190 \text{ g}$ .

$400 \text{ cm}^3$  of liquid is put into the measuring cylinder.

The total mass of the measuring cylinder and the liquid is  $560 \text{ g}$ .

Four solid objects are lowered in turn into the liquid. The densities of the objects are shown.

- 1  $0.40 \text{ g/cm}^3$
- 2  $0.90 \text{ g/cm}^3$
- 3  $1.2 \text{ g/cm}^3$
- 4  $2.7 \text{ g/cm}^3$

Which objects will float in the liquid?

- A** 1 only      **B** 1 and 2 only      **C** 1, 2 and 3      **D** 3 and 4 only

4. June/2020/Paper\_21/No.6

The mass of a measuring cylinder is 190 g.

400 cm<sup>3</sup> of liquid is put into the measuring cylinder.

The total mass of the measuring cylinder and the liquid is 560 g.

Four solid objects are lowered in turn into the liquid. The densities of the objects are shown.

1 0.40 g/cm<sup>3</sup>

2 0.90 g/cm<sup>3</sup>

3 1.2 g/cm<sup>3</sup>

4 2.7 g/cm<sup>3</sup>

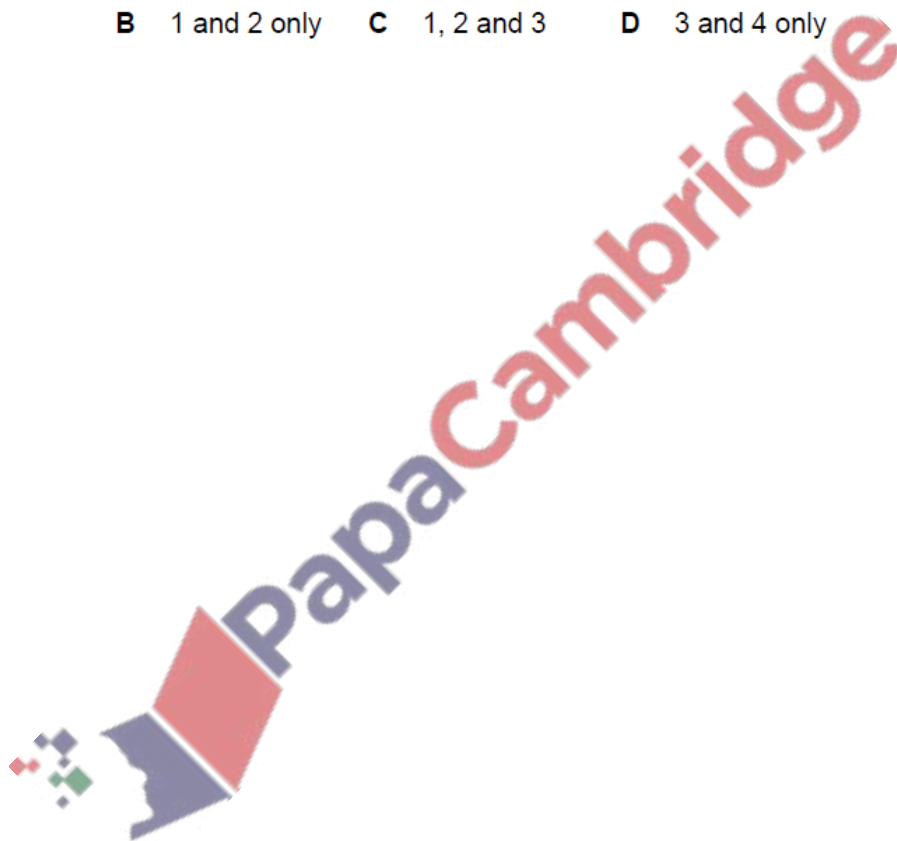
Which objects will float in the liquid?

A 1 only

B 1 and 2 only

C 1, 2 and 3

D 3 and 4 only



5. June/2020/Paper\_31/No.1(b),(c)

(b) The volume of the wire in the coil is  $16.6\text{cm}^3$  and its mass is  $148\text{g}$ .

Calculate the density of the metal used for the wire in the coil.

density = .....  $\text{g/cm}^3$  [3]

(c) The student has a measuring cylinder and a beaker of water, as shown in Fig. 1.2.

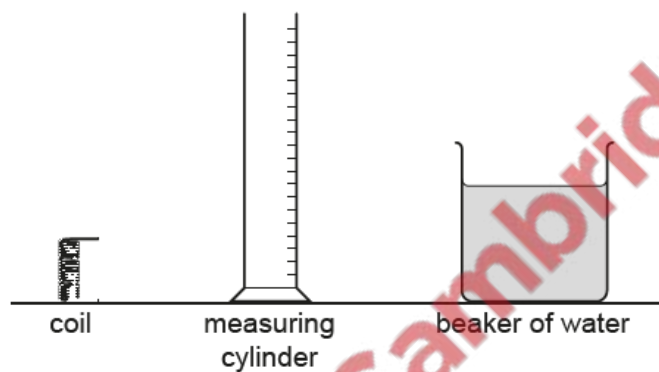


Fig. 1.2

Describe how the student can determine the volume of the coil by using the equipment shown in Fig. 1.2.

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