Physical Quantities & Measurement Techniques

Question Paper

Course	CIE IGCSE Physics
Section	1. Motion, Forces & Energy
Topic	Physical Quantities & Measurement Techniques
Difficulty	Medium

Time Allowed 10

Score /4

Percentage /100

Question 1

A person wishes to roast a chicken. The chicken requires 1 hour and 20 minutes in the oven to be properly cooked.

The oven must be switched on 10 minutes before any food is put in, in order to pre-heat, and reach the correct temperature for cooking.

The chicken needs to be ready at 4:30 pm. At what time must the oven be switched on?

A. 2:10 pm

B. 3:10 pm

C. 2:00 pm

D. 3:00 pm

[1 mark]

Question 2

A particularly diligent student wants to measure the volume of some liquid for an experiment. She has two measuring cylinders available, a large 250 ml one and a small 50 ml one. The liquid will fit into either of the two measuring cylinders.

As expected, the liquid forms a meniscus where it touches the sides of either measuring cylinder.

Which cylinder should the student use to get the most accurate result, and from where should she measure the liquid level?

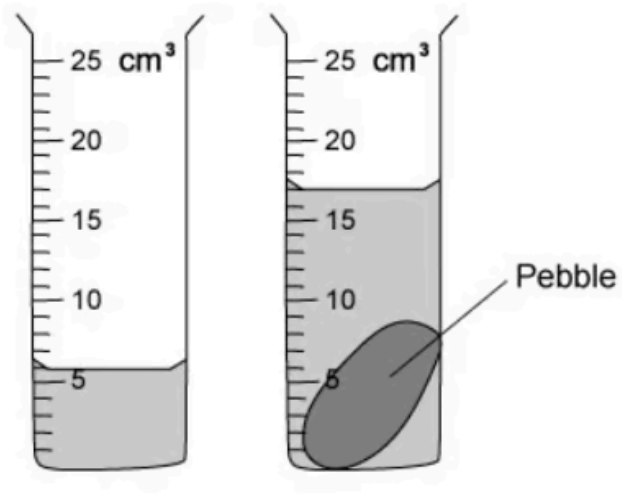
	Measuring cylinder	Reading taken from
A	large	Top of meniscus
B	large	Bottom of meniscus
C	small	Top of meniscus
D	small	Bottom of meniscus

[1 mark]

Question 3

A geologist wants to measure the volume of a particularly interesting pebble she has found in a river.

She uses the apparatus shown below.



What is the volume of the pebble?

A. 11 cm^3

B. 23 cm^3

C. 6 cm^3

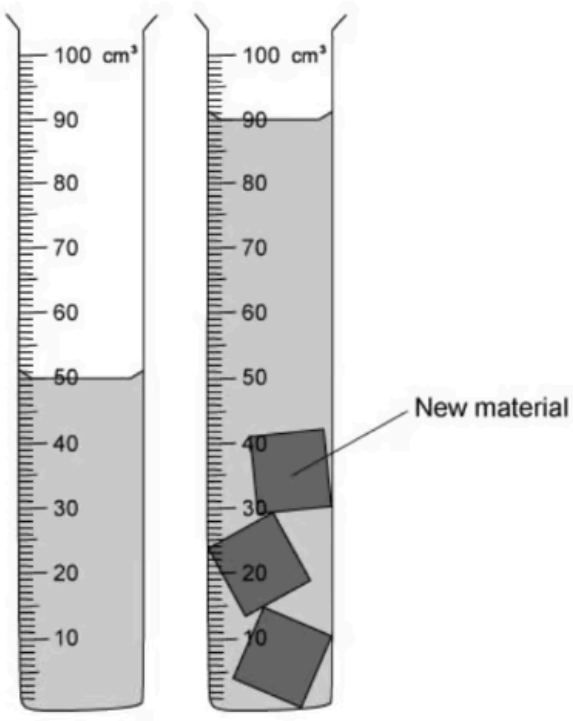
D. 17 cm^3

[1 mark]

Question 4

A scientist is trying to determine the volume of three identical pieces of a new material. She places them in a measuring cylinder, as shown in the diagram.

The first cylinder shows the level of water in the measuring cylinder before the pieces are added, and the second cylinder shows the measuring cylinder with the pieces of the new material inside.



What is the volume of each piece of the new material?

A. 30.0 cm^3

B. 13.3 cm^3

C. 16.7 cm^3

D. 40.0 cm^3

[1 mark]