

## SMART EXAM RESOURCES

### CAMBRIDGE PRIMARY STAGE 6 PHYSICS

#### TOPIC: MASS AND WEIGHT- MCQ's

1. Select the correct answer option:

Which statement describes the relationship between mass and weight?

- A** Mass is the effect of a gravitational field on a weight.
- B** Mass is the effect of a magnetic field on a weight.
- C** Weight is the effect of a gravitational field on a mass.
- D** Weight is the effect of a magnetic field on a mass.

- A) A
- B) B
- C) C
- D) D

2. Select the correct answer option:

Which statement about the mass and the weight of an object is correct?

- A** They are both affected by changes in the acceleration of free fall.
- B** They are both forces.
- C** They have different units.
- D** Weight is calculated by dividing mass by the acceleration of free fall.

- A) A
- B) B
- C) C
- D) D

3. Select the correct answer option:

Which property of a body results from the effect of a gravitational field on its mass?

- A** the ability of the body to resist a change in motion
- B** the density of the body
- C** the volume of the body
- D** the weight of the body

- A) A
- B) B
- C) C
- D) D

4. Select the correct answer option:

An astronaut in a space station orbits above the Earth.

In the space station, the acceleration due to gravity is  $7.5 \text{ m/s}^2$ .

On Earth, the acceleration due to gravity is  $10 \text{ m/s}^2$ .

Which statement about the astronaut's mass and weight in the space station is correct?

	mass of astronaut	weight of astronaut
<b>A</b>	same as on the Earth	less than on the Earth
<b>B</b>	same as on the Earth	greater than on the Earth
<b>C</b>	lower than on the Earth	less than on the Earth
<b>D</b>	lower than on the Earth	greater than on the Earth

- A) A
- B) B
- C) C
- D) D

5. Select the correct answer option:

A cup contains hot liquid.

Some of the liquid evaporates.

What happens to the mass and what happens to the weight of the liquid in the cup?

	mass	weight
<b>A</b>	decreases	decreases
<b>B</b>	decreases	stays the same
<b>C</b>	stays the same	decreases
<b>D</b>	stays the same	stays the same

- A) A
- B) B
- C) C
- D) D

6. Select the correct answer option:

A space probe is taken from the Earth to Mars.

The force of gravity on the surface of Mars is less than the force of gravity on the surface of the Earth.

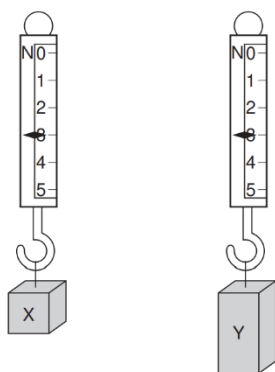
How do the weight and the mass of a space probe on the surface of Mars compare to their values when the probe is on the surface of the Earth?

	weight on Mars	mass on Mars
<b>A</b>	decreased	decreased
<b>B</b>	decreased	unchanged
<b>C</b>	unchanged	decreased
<b>D</b>	unchanged	unchanged

- A) A
- B) B
- C) C
- D) D

7. Select the correct answer option:

Two blocks of metal X and Y hang from spring balances as shown in the diagram.



What does the diagram show about X and Y?

- A They have the same mass and the same volume but different weights.
- B They have the same mass and the same weight but different volumes.
- C They have the same mass, the same volume and the same weight.
- D They have the same weight and the same volume but different masses.

- A) A
- B) B
- C) C
- D) D

8. Select the correct answer option:

What is the unit for force and what is the unit for weight?

	force	weight
<b>A</b>	kg	kg
<b>B</b>	kg	N
<b>C</b>	N	kg
<b>D</b>	N	N

- A) A
- B) B
- C) C
- D) D