# UNIT 3 – SCIENCE REVISION TEST

Multiple Choice • Choose the best answer. Each question has three choices.

Name: _____ Class: _____ Date: _____

## 3.1 Write the word used to describe each of these.

**a. The force of gravity on an object is called:**

A. Weight

B. Mass

C. Energy

**b. The quantity of matter in an object is called:**

A. Mass

B. Weight

C. Force

## 3.2 Gravity and weight

**a. Why does the Sun have more gravity than any of the planets?**

A. The Sun has a larger mass than the other planets.

B. The Sun is smaller than the planets.

C. The Sun has no gravity.

**b. What is the strength of gravity on Earth used in these questions?**

A. 10 N/kg

B. 1 N/kg

C. 100 N/kg

**c(i). What is the weight of a book with a mass of 1 kg on Earth?**

A. 10 N

B. 1 N

C. 100 N

**c(ii). A calculator has a mass of 150 g. What is its weight on Earth?**

A. 1.5 N

B. 15 N

C. 0.15 N

**d(i). How does the weight of Luna 2 compare on Earth and on the Moon?**

A. Its weight is less on the Moon than on Earth.

B. Its weight is greater on the Moon than on Earth.

C. Its weight is the same in both places.

**d(ii). How does the mass of Luna 2 compare on Earth and on the Moon?**

A. Its mass is the same in both places.

B. Its mass is less on the Moon.

C. Its mass is greater on the Moon.

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## 3.3 Orbits

**a. What keeps the Earth in its orbit around the Sun?**

A. The Sun's gravity

B. Air resistance

C. Sound energy

**b. Why does Mercury travel faster in its orbit than Earth?**

A. The Sun's gravitational force is stronger on Mercury because it is closer to the Sun.

B. Mercury is farther from the Sun.

C. Mercury has no gravity.

## 3.4 Tides

**a. In the original diagram, where will there be high tide on Earth?**

A. At B and D

B. At A and C

C. At A and B

**b. If there is low tide at a place, how many hours until the next low tide at the same place?**

A. 12 hours

B. 6 hours

C. 24 hours

**c. Which arrangement produces the highest tides (spring tides)?**

A. The Sun, Earth and Moon are in a straight line.

B. The Sun, Earth and Moon form a right angle.

C. The Moon is far away from the Earth and Sun.

**d. The Moon causes a tidal _____ on the Earth.**

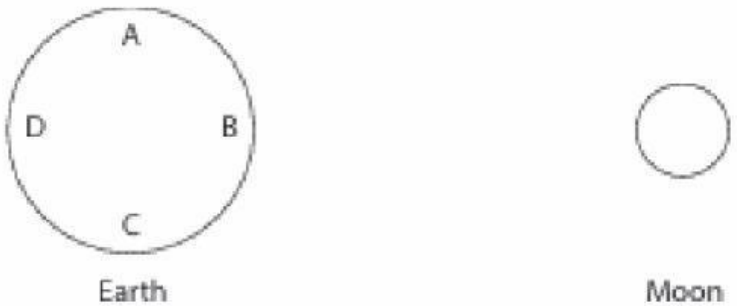
A. force

B. mass

C. energy

**Original Earth–Moon diagram**

e diagram is not to scale. [1]




[1]

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## 3.5 Units

**Which two measurements have the same units?**

A. Weight and force

B. Weight and mass

C. Mass and energy

## 3.6 Energy

**a. Which word means to spread out and become less useful?**

A. Dissipate

B. Increase

C. Concentrate

**b. Which energy transfer in an electric motor is useful?**

A. Kinetic energy

B. Thermal energy

C. Sound energy

**c. Which two forms of energy are wasted by an electric motor?**

A. Thermal energy and sound energy

B. Kinetic energy and light energy

C. Chemical energy and nuclear energy

## 3.7 Forces on a planet in orbit

**Which row correctly shows the forces on a planet orbiting the Sun?**

A. Air resistance: No; Gravity: Yes

B. Air resistance: Yes; Gravity: No

C. Air resistance: Yes; Gravity: Yes

## 3.8 Energy transfer

**a. What type of energy is transferred from the fire to the water?**

A. Thermal energy

B. Sound energy

C. Chemical energy

**b. Where can some of the energy go instead of being transferred to the water?**

A. Into the container and the surrounding air

B. It disappears completely

C. It changes only into mass

## ANSWER KEY

All correct answers are A. 3.1(a–b), 3.2(a–d), 3.3(a–b), 3.4(a–d), 3.5, 3.6(a–c), 3.7 and 3.8(a–b).

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