

**YEAR 7 SCIENCE  
EARTH & SPACE SCIENCES  
TEST 1 - THE EARTH AND MOON**

NAME: SOLUTIONS

CLASS: \_\_\_\_\_

MARK: 30

**Achievement standards being tested**

Predictable phenomena on Earth, including seasons and eclipses, are caused by the relative positions of the Sun, Earth and the Moon.

Mark	ND	NW	C	HC	O
Mark Range	0-8	9-14	15-18	19-21	22-30

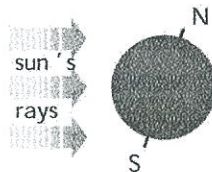
**Multiple Choice** Write the answer to each question in the appropriate box at right.

1. The main cause of day and night is:

- A rotation of the Earth.
- B revolution of the Earth.
- C orbit of the Earth.
- D the tilt of the Earth on its axis.

2. The diagram below relates to which season in Australia?

- A Winter
- B Spring
- C Summer
- D Autumn



3. The Moon, stars, planets and the Sun all rise in the:

- A west.
- B north.
- C south.
- D east.

4. Which of the following is **correct**?

- A The rotation of the moon allows us to view most parts of its surface at various times.
- B The moon does not rotate on its axis, so we see only one side of it.
- C The moon rotates on its axis once in the time it orbits the Earth, so we always see the same side.
- D The moon is too far from Earth to be able to distinguish which side is facing us.

5. The different shapes of the Moon as seen from Earth are called:

- A stages.
- B phases.
- C fractions.
- D crescents.

QUESTION	ANSWER
1	A
2	C
3	D
4	C
5	B
6	C
7	B
8	C
9	D

6. The time taken for the moon to orbit the Earth once is closest to:
- A 24 hours.
  - B 14 days.
  - C 27 days.
  - D 365 days.
7. The force that causes high and low tides on Earth is:
- A friction.
  - B gravity.
  - C electric.
  - D magnetic.
8. Which of these has the greatest effect on the tides on Earth?
- A Mars
  - B Venus
  - C The Moon
  - D The Sun
9. Only one face of the moon is visible from Earth. This is because:
- A Earth and moon rotate at the same rate.
  - B the moon does not rotate and thus only presents one area facing Earth.
  - C there is no change from day to day of the moon's position relative to Earth.
  - D the moon's period of rotation equals its period of revolution around Earth.

**Short Answer**

Write the answer to the questions in the spaces provided.

1. Choose the correct definition for the term in the first column of the table below. Write the **correct letter** in the second column.

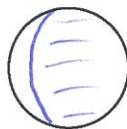
TERM	CORRECT LETTER	DEFINITION
Rotation	E	A: Describes the Earth's movement around the Sun.
New moon	G	B: When the whole of the Moon's surface has sunlight reflected from it.
Tides	D	C: When the Moon passes into the Earth's shadow.
Lunar eclipse	C	D: Caused by the gravity of the Moon.
Revolution	A	E: Causes the Earth to have night and day.
Full moon	B	F: When the Moon passes across the Sun.
Solar eclipse	F	G: When no light is reflected from the Moon.

[1 mark each]

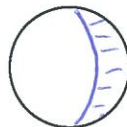
(7)

2. Sketch the shape of:

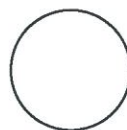
(a) a crescent moon



(b) a gibbous moon



(c) a full moon.

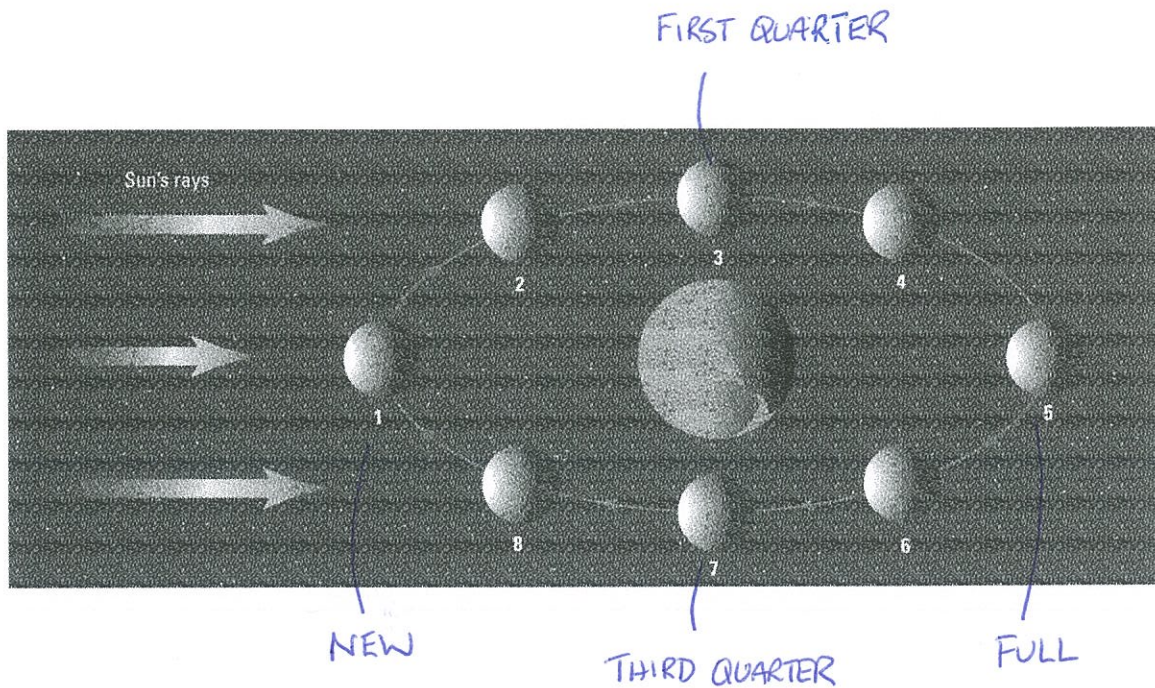


[1 mark each]

(3)

3. On the diagram below, show where a **full moon**, **new moon**, the **first-quarter** and **third-quarter moons** occur.

(2)



4. Look at the diagram below, which shows the Earth "tilted" with respect to its path around the Sun.



- (a) For Australia, which is in the southern hemisphere, does the diagram show us having summer or winter?

Winter.

(1)

- (b) Explain your answer briefly.

- Southern hemisphere is tilted away from the Sun. (1)
- Sun's rays hit at a large angle so it is cooler. (1)

[Be generous!]

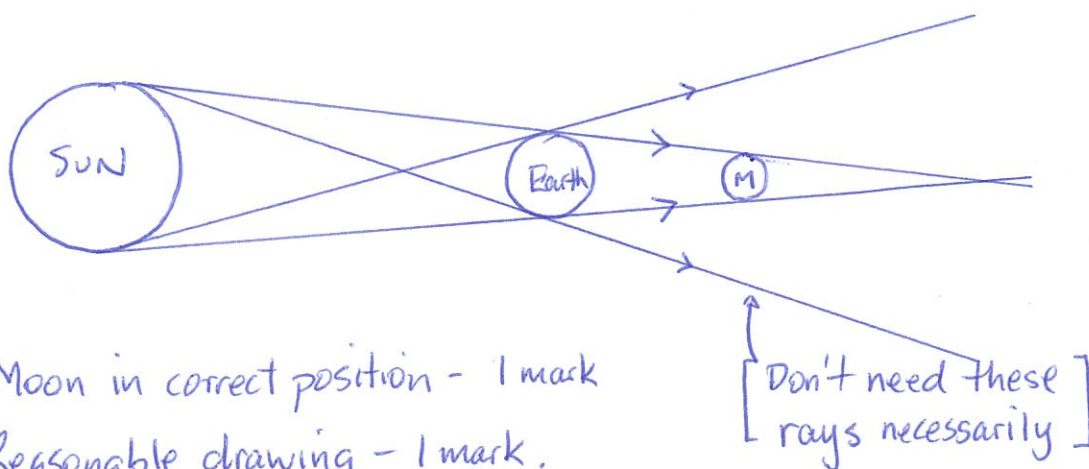
(2)

- (c) In which months would this season occur in Australia?

June, July, August.

(1)

5. Draw a diagram of a **lunar eclipse**, showing the position of the Sun, Moon and Earth. Include rays to show the path of the sunlight.



(2)

6. (a) When the **full Moon** is overhead in Australia, which type of tide is experienced?

High

(1)

- (b) Explain carefully why this tide occurs.

- Moon's gravity attracts the water, pulling it to one side of the Earth. (1 mark)

(1 mark)

- Some students may mention the Earth being pulled slightly towards the Moon, creating a high tide on the other side of the Earth. (2)

[Give full marks].