



Unit 11 • The Earth and Space: the Moon and eclipses

Name _____ Class _____ Roll no. _____ Date _____ Marks _____ / 33

1 Key words

[4]

Fill in the blanks with words from the box. Two words in the box are not needed. Each blank carries 0.5 mark.

adhik maas	bright half	corona	dark half	kshay maas	lunar eclipse	penumbra	phases
sidereal month				umbra			

The changes in the shape of the bright part of the Moon seen from the Earth are called the _____ of the Moon. The fortnight from a new moon to a full moon, when the bright part grows every day, is the _____, and the fortnight from a full moon to a new moon is the _____. The time the Moon takes to go once round the Earth, measured against the stars, is the _____. An extra lunar month with a repeated name is called _____. The dark central part of a shadow is the _____, and its paler outer part is the _____. When the Earth's shadow falls on the Moon, there is a _____.

2 Multiple choice

[5]

Choose the correct option for each of the following questions.

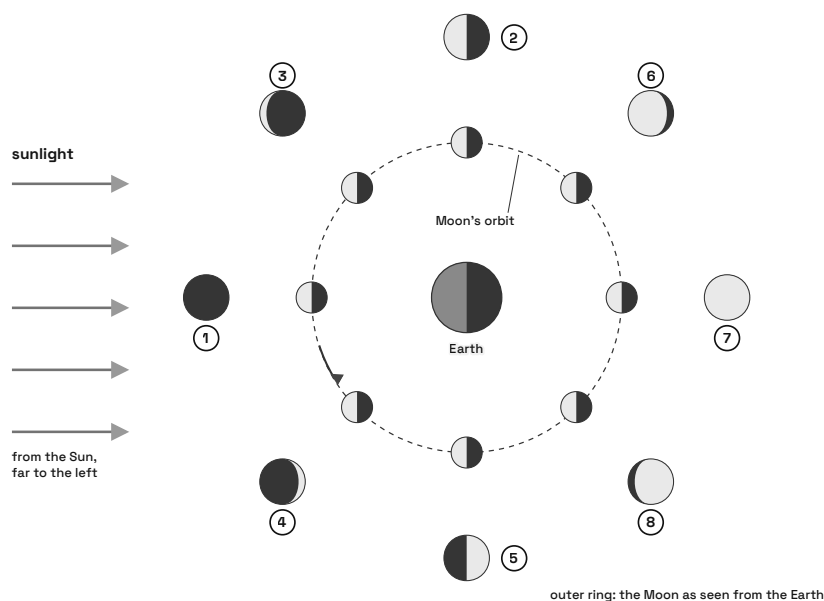
- Which are the first and last days of the bright half? [1]
 - full moon and new moon
 - pratipada and full moon
 - new moon and full moon
 - pratipada and new moon
- Which gives the lengths of the bright half, the dark half, the sidereal month and the synodic month, in that order? [1]
 - 15 d, 29.5 d, 15 d and $27\frac{1}{3}$ d
 - $27\frac{1}{3}$ d, 29.5 d, 15 d and 1 month
 - 15 d, 15 d, $27\frac{1}{3}$ d and 29.5 d
 - 15 d, 30 d, 15 d and 29.5 d
- Which list gives the Moon fully bright, half bright, and bright only at the edge, in that order? [1]
 - full moon, new moon and crescent
 - crescent, first quarter and new moon
 - full moon, last quarter and new moon
 - full moon, first quarter and crescent
- Which order is correct for a lunar eclipse? [1]
 - Earth, Sun and Moon
 - Moon, Sun and Earth
 - Sun, Moon and Earth
 - Sun, Earth and Moon
- Which kind of eclipse is seen from the penumbra? [1]
 - total solar
 - partial solar
 - total lunar
 - partial lunar



3 Label the diagram

[4]

The diagram shows the Moon going round the Earth. Write the name of the phase at each place numbered 1 to 8. Each carries 0.5 mark.



1. _____
3. _____
5. _____
7. _____

2. _____
4. _____
6. _____
8. _____

4 Very short answers

[4]

Write very short answers to the following questions.

- a. About how many days long is a synodic (lunar) month?

[1]

- b. On which tithi can a solar eclipse happen?

[1]

- c. How does the Moon look during a total lunar eclipse?

[1]

- d. The Moon has no light of its own. Why can we see it?

[1]



5 Short answers

[10]

Write short answers to the following questions.

- a. Write any two differences between the dark half and the bright half.

[2]

- b. Write any two differences between the umbra and the penumbra.

[2]

- c. Give a reason: a lunar eclipse occurs only on a full moon.

[2]

- d. Give a reason: a solar eclipse occurs only on a new moon.

[2]

- e. What is a lunar month? Write one importance of it.

[2]

6 Long answer

[4]

Write a long answer to the following question.

When the Earth comes between the Sun and the Moon, what kind of eclipse occurs?
Describe it with a labeled diagram.



7 Think

[2]

Think, then answer.

Why does a total lunar eclipse last much longer than a total solar eclipse?

8 Activity: A shadow with two parts (Activity 11.6)

(not marked)

In a dark room, put a ball between a candle or torch and a white screen. Look at the ball's shadow, then move the ball closer to the light and closer to the screen.

Where the ball is	What the shadow looks like
halfway	
close to the light	
close to the screen	

Is the whole shadow equally dark? Name its two parts.

