

Name: _____

Intro Astro Lab Prep Quiz: Lab 4: The Moon

Instructions: There are 10 to 20 multiple-choice problems worth 1 mark for a total of 10 to 20 marks altogether. Choose the **BEST** answer, completion, etc., and **DARKEN** fully the appropriate circle on the table provided below. Read all responses carefully. **NOTE** long detailed responses won't depend on hidden keywords: keywords in such responses are bold-faced capitalized.

This is a 10 minute quiz.

Answer Table for the Multiple-Choice Questions

	a	b	c	d	e		a	b	c	d	e
1.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	11.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	12.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	13.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	14.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	15.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	16.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	17.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	18.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	19.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	20.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- The Earth and Moon orbit _____ in _____ to 1st order.
 - the Earth's center; circles
 - the Earth's center; ellipses
 - their mutual center of mass; ellipses
 - their mutual center of mass; ovals
 - the Moon's center; ovals
- "Let's play *Jeopardy!* For \$100, the answer is: It is the center of mass of a gravitationally bound system."

What is _____, Alex?

 - pericenter
 - apogee
 - perigee
 - barometer
 - barycenter
- Newtonian physics was always defined with respect to inertial frames. However, our understanding of inertial frames has evolved since the days of Isaac Newton (1643–1727). Newton thought the fixed stars defined a fundamental inertial frame (which he called absolute space) and reference frames unaccelerated with respect to that inertial frame were also exactly inertial frames. Other reference frames could be approximately inertial frames like the Earth's surface (at any point). However, according to general relativity (which has been fully confirmed so far), _____ in uniform external gravitational fields are exact inertial frames. Among other things, this means that it is still true that the Earth's surface is approximately an inertial frame for most purposes.
 - rotating frames
 - free-fall frames
 - non-free-fall frames
 - spherical frames
 - picture frames
- "Let's play *Jeopardy!* For \$100, the answer is: This effect causes the lunar orbital rotation rate and axial rotation rate to be exactly equal on average."

What is _____, Alex?

 - lunar libration
 - lunar phase
 - the ocean tide
 - the tide in the affairs of men
 - tidal locking
- The standard lunar phases in time sequence are: new moon, waxing crescent, _____, waxing gibbous, full, waning gibbous, 3rd quarter, _____.

- a) quarter lit; waning crescent b) quarter full; morning crescent
c) 1st quarter; waning crescent d) half lit; morning crescent
e) quartic; Mornington Crescent
6. Describe the Moon's phase on 1999 January 20. **HINT:** You could look up the answer (except in an exam situation), but do you really have to?
- a) Waning crescent in the western sky at sunset.
b) Waxing crescent in the western sky at sunset.
c) A new moon in opposition.
d) A full moon in the western sky at sunset.
e) Waning gibbous moon in the eastern sky at sunrise.
7. "Let's play *Jeopardy!* For \$100, the answer is: This creature changes into a wolf on the night of the full moon."
What is a _____, Alex?
- a) vampire b) zombie c) ghoul d) sasquatch e) werewolf
8. A rare event is said to happen once in a:
- a) red moon. b) blue moon. c) wolf moon. d) black swan moon. e) harvest moon.
9. Full moons occurring at particular times of the year often have traditional names associated with them that vary with culture. The traditional English name for a full moon in or near January is:
- a) June Moon. b) Wolf Moon. c) Juney Moon. d) Green Cheese Moon.
e) Waning Moon.
10. Three prominent lunar craters on the near side of the Moon are:
- a) Copernicus, Plato, Tycho. b) Copernicus, Plato, Groucho. c) Copernicus, Plato, Tycho.
d) Copper-nickel, Plato, Tycho. e) Copper-nickel, Pluto, Groucho.