Name:_____

Intro Astro Lab Prep Quiz: Lab 5: Planets

Instructions: There are 10 to 20 multiple-choice problems each 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.	O	O	O	O	O	11.	O	O	O	O	O
2.	O	O	O	O	O	12.	O	O	O	O	O
3.	O	O	O	O	O	13.	O	O	O	O	O
4.	O	O	O	O	O	14.	O	O	O	O	O
5.	O	O	O	O	O	15.	O	O	O	O	O
6.	O	O	O	O	O	16.	O	O	O	O	O
7.	O	O	O	O	O	17.	O	O	O	O	O
8.	O	O	O	O	O	18.	O	O	O	O	O
9.	O	O	O	O	O	19.	O	O	O	O	O
10.	O	O	O	O	O	20.	O	O	O	O	O

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005 qmult 00100 1 1 3 easy memory: geocentric solar system

1. Before circa 1500, everyone in the context of ancient-Greek-derived astronomy (i.e., in European and the Mideastern astronomy) and perhaps nearly everywhere else believed that the Solar System was:

   a) heliocentric. b) Venusocentric. c) geocentric. d) Martiocentric. e) egocentric.

   SUGGESTED ANSWER: (c)

   Wrong answers:
   a) Exactly wrong.

   Redaction: Jeffery, 2013jan01

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005 qmult 00110 1 1 3 easy memory: epicycle models

2. Ancient Greek mathematical astronomers used _____ models to obtain quantitatively accurate predictions of celestial events.

   a) flat Earth b) ethereal sphere c) epicycle d) epic e) pillar Earth

   SUGGESTED ANSWER: (c)

   Wrong answers:
   b) These were used in Aristotelian cosmology which was never quantitatively predictive.

   Redaction: Jeffery, 2013jan01

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005 qmult 00130 1 4 5 easy deducto-memory: Ptolemy

3. "Let's play *Jeopardy*! For $100, the answer is: He created a complete epicycle model for the Solar System which continued to be used for astronomical prediction and was somewhat believed in for 13 centuries."

   Who is _____, Alex?

a) Aristotle (384–322 BCE) b) Berossos, priest of Bel Marduk (3rd century BCE)
c) King Ptolemy I (c. 367–c. 283 BCE) d) Cleopatra (69–30 BCE)
e) Ptolemy (circa 100–175 CE)

SUGGESTED ANSWER: (e)

Wrong answers:
b) Berossos of Babylon (3rd century BCE) moved to the Greek island of Kos and founded a school astronomy/astrology (No-38–39).
c) The Macedonian dynasty of Egypt had many King Ptolemys but none were astronomers to my knowledge.
d) The gender should be the give away. Actually Cleopatra in after-legend was credited with arcane wisdom and is the apocryphal author of a work on alchemy I believe.
a) As Lurch would say AAAARGH.

Redaction: Jeffery, 2013jan01

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005 qmult 00160 1 1 1 easy memory: wrongness of epicycle models

4. The epicycle theory has two major deficiencies. It is _____ and it gives _____ of the solar system.

a) wrong; no uniquely good model b) right; a uniquely good model
c) right; no uniquely good model d) wrong; a uniquely good model
e) right; two uniquely good models

SUGGESTED ANSWER: (a)

Wrong answers:
b) Exactly wrong.

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005 qmult 00200 1 4 2 easy deducto-memory: Copernicus proposed heliocentric model

5. "Let's play *Jeopardy*! For $100, the answer is: This astronomer introduced into the permanent historical record the heliocentric model of the solar system as a well-supported hypothesis, and therefore as one that could not be ignored."

Who is _____, Alex?

a) Aristarchus of Samos (c. 310–c. 230 BCE) b) Nicolaus Copernicus (1473–1543)
c) Galileo Galilei (1564–1642) d) Johannes Kepler (1571–1630)
e) Isaac Newton (1642/3–1727)

SUGGESTED ANSWER: (b)

Wrong answers:
a) Aristarchus was the first proposer of heliocentrism known to history, but we have only a little information about his ideas and no supporting evidence. He is a precursor.

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005 qmult 00210 1 1 4 easy memory: time interval between Ptolemy and Copernicus

6. The time interval from Ptolemy to Copernicus is about _____ years.

a) negative 400 b) 250 c) 1200 d) 1400 e) 2000

SUGGESTED ANSWER: (d)

Wrong answers:
a) The interval to Aristarchos of Samos (c. 310–c. 230 BCE).
b) The interval to Hypatia.
c) The interval to Ibn al-Shatir.
e) The interval to Mr. Spock?

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005 qmult 00230 1 1 3 easy memory: solar system distances predicted in AU

7. The heliocentric theory allowed Copernicus to predict the locations of all the planets in units of the:

a) meter. b) kilometer. c) astronomical unit. d) mile. e) light-year.

SUGGESTED ANSWER: (c)

Wrong answers:
e) Oh, c'mon.

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005 qmult 00300 1 1 1 easy memory: planetary configuration defined

8. A _____ can be defined as an especially significant apparent position of a planet (i.e., its angular position position as see from Earth) relative to the Sun and the relationship of this apparent position to the 3-dimensional position of the planet in the solar system.

a) planetary configuration b) galactic coordinate c) lunar mare d) planetary orbit
e) magnitude

SUGGESTED ANSWER: (a)

Wrong answers:
c) As Lurch would say: AAAAAaaargh.

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005 qmult 00310 1 1 5 easy memory: inferior/superior planet defined

9. A/An _____ planet is one whose orbital radius is lesser/greater than the Earth's orbital radius.

a) elongated/compacted b) bad/good c) raw/cooked d) hot/cold
e) inferior/superior

SUGGESTED ANSWER: (e)

Wrong answers:
d) This too actually.

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005 qmult 00322 1 1 4 easy memory: inferior/superior conjunction defined

10. An inferior/superior conjunction is when an inferior planet—a low, depraved planet—is in conjunction and is _____ the Sun.

a) turned/rotated from b) on the far/near side of c) opposite/across from
d) on the near/far side of e) colder/hotter than

SUGGESTED ANSWER: (d)

Wrong answers:
a) A nonsense answer.

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005 qmult 00330 1 1 2 easy memory: syzygy defined

11. A syzygy is:

a) when black is white and white is black.
b) an alignment of three astronomical bodies in a gravitationally-bound system.
c) when a planet is in conjunction and opposition simultaneously.
d) an alignment of three bodies that also forms a right angle.
e) when a door is both open and closed.

SUGGESTED ANSWER: (b)

Wrong answers:
a) Since this is never how can there be a name for it?—well I guess there could be.

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005 qmult 00340 1 1 2 easy memory: elongation defined

12. Elongation is the angle between:

    a) a planet and a planet. b) a planet and the Sun. c) the Sun and the Sun.
    d) opposition and conjunction. e) conjunction and syzygy.

SUGGESTED ANSWER: (b)

Wrong answers:

c) As Lurch would say AAAAaarrrgh.

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005 qmult 00350 1 1 2 easy memory: greatest eastern/western elongation

13. Greatest or maximum eastern/western elongation occurs when an inferior planet is _____ the Sun.

    a) as far west/east as it can be on a given orbit from b) as far east/west as it can be on a given orbit from c) at 90° east/west from d) at 90° west/east from e) in opposition to/conjunction with

SUGGESTED ANSWER: (b)

Wrong answers:

c) Only a superior planet can be at 90° from the Sun.

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