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CODE - HBGGFD - ISP 205, sec 1 - Visions of the Universe - Spring 2005 8
Test2
Name:

1 pt Which equation is the Roche limit for the case where the moon and planet have the same density? [Use these equations as a reminder.]

1. **A**◯KE=3/2kT, where T is temperature.
B◯R=2.5R_{planet}.
C◯KE=1/2 m v^2, where v is the speed
D◯v^2>2GM_{planet}/R_{planet}, where v is the speed.

---

1 pt The specific purpose of the 4.1-meter primary mirror of the SOAR Telescope is to

2. **A**◯refract light.
B◯take pictures.
C◯analyze light into its colors.
D◯collect light.

---

1 pt To achieve the same angular resolution, a radio telescopes is much larger than an optical telescope because

3. **A**◯radio waves are weaker.
B◯the wavelength of radio waves is much longer.
C◯radio telescopes must be more precise.
D◯optical telescopes must be more precise.

---

1 pt [*] Consider this hypothetical discovery, which consists of three statements. S1: A planet is discovered beyond the orbit of Pluto. S2: Its density is 5 times the density of water. S3: It has many craters.would be very surprising.

4. **A**◯None of the statements
B◯S1, S2, & S3
C◯S2 & S3
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1 pt Which is not a moon of Jupiter?

5. **A**◯Callisto
B◯Ganymede
C◯Titan
D◯Io
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---

1 pt You are equiped with a suit that supplies air to breathe and keeps you warm or cool. On which of these moons or planets could you not land?

6. **A**◯Mars
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---

1 pt The planet that is fourth closest to the sun is

7. **A**◯Mars.
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---

1 pt Potassium 40, which decays into argon 40, is used to figure out the age of meteorites. Why is there no argon 40 in the meteor when it formed?

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B◯Argon condenses at an extremely low temperature.
C◯Argon collected in the massive asteroids.
D◯All the argon collected in the jovian planets.

---

1 pt The age of the solar system is ___ years.

9. **A**◯13 Billion
B◯1 Billion
C◯4.5 Billion
D◯65 Million

---

1 pt Whattriggered the collapse of the gas cloud that became the solar system.

10. **A**◯A supernova, an exploding star
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