

- 1) Saturn's shape is even more "squashed" than Jupiter's. This tells you immediately that:
  - (a) it is made mainly out of rocky materials, like silicon and iron.
  - (b) it is even more gaseous in composition than Jupiter is.
  - (c) it will have bright rings.
  - (d) it will have fewer moons than Jupiter.
  - (e) none of the above.
  
- 2) If you could build a big enough bath tub, fill it with water, and place Saturn inside, it would:
  - (a) float on the surface.
  - (b) immediately burst into flames, killing every living thing on the planet.
  - (c) float just below the surface of the water.
  - (d) Trick question: There are no bath tubs big enough to do this.
  - (e) answers (a) and (b).
  
- 3) Which of the following statements about Saturn's rings are FALSE:
  - (a) The rings are extremely thin, being no more than a few meters thick in places.
  - (b) The rings are solid rotating objects, i.e., like giant CDs or DVDs.
  - (c) The rings are so bright because they are made of small bits of rock that are coated with ice.
  - (d) The rings are just outside Saturn's Roche Limit.
  - (e) answers (b) and (d).
  
- 4) Which of the following properties are NOT common to all the Jupiter-like planets:
  - (a) They all have lots of moons.
  - (b) They all spin rapidly on their axes.
  - (c) Their magnetic fields are centered on the planets' cores.
  - (d) They all show bands or "stripes" on photographs.
  - (e) They are all found in the outer parts of the Solar System.
  
- 5) Uranus' axis is tilted into its orbital plane (it's laying on its side!). Which of the following statements are TRUE as a result of this fact:
  - (a) Uranus has extreme seasons.
  - (b) Uranus has a Big Dark Spot, a smaller version of Jupiter's Great Red Spot.
  - (c) Winter and Summer on Uranus both last for 40-years.
  - (d) During Winter on Uranus, the Sun is never in the sky.
  - (e) answers (a), (c), and (d) are all true.
  
- 6) Uranus was discovered:
  - (a) accidentally by the ancient Greeks.
  - (b) using a predicted position derived from oddities in Neptune's orbit.
  - (c) accidentally by Hershell using his telescope.
  - (d) using Bode's Law, which predicted that a planet would be found between Jupiter & Neptune.
  - (e) accidentally using a flying infrared telescope (the Kuiper Airborn Observatory).

- 7) Mathematics played a key role in the discovery of which of the following bodies:
- (a) Uranus, Neptune, and Pluto.
  - (b) Uranus and Ceres.
  - (c) Uranus and Pluto.
  - (d) Mars and Pluto.
  - (e) only Neptune.
- 8) The largest body in the Kuiper Belt that we know of currently is:
- (a) Sedna.
  - (b) Pluto.
  - (c) Chiron.
  - (d) Ceres.
  - (e) Triton.
- 9) At one time it was thought that the asteroid belt represented the remains of a planet. This idea fell out of favor when:
- (a) it was found that Bode's Law was not really a Scientific Theory.
  - (b) it turned out that flying saucers were really just swamp gas after all.
  - (c) it turned out that the asteroids are too different in composition to have come from one planet.
  - (d) it was discovered that there wasn't enough mass in the asteroid belt to make a planet.
  - (e) both answers (c) and (d).
- 10) Which of the following statements of Comet Tails are TRUE:
- (a) The dust tail can only be seen from space.
  - (b) The ion tail always points away from the Sun.
  - (c) Comets only show tails when they are very far from the Sun.
  - (d) The dust tail appears blue in color when photographed.
  - (e) answers (a), (b), and (c) are all true.

Answers: 1) b; 2) a; 3) e; 4) c; 5) e; 6) c; 7) e; 8) a; 9) e; 10) b