

Page 335- Physical Properties

8. What are the 3 types of asteroids? And a brief description of their properties.

a. ___-type:

b. ___-type:

c. ___- type:

9. What is unique about Vesta?

Page 337-340 - Earth Crossing Asteroids

10. Most asteroids have eccentricities lying in the range from ___ to ____, and always remain between the orbits of _____ and _____.

11. What is and Earth-Crossing Asteroid?

12. What is an Apollo asteroid (discuss orbit)?

13. What is an Aten asteroid (discuss orbit)?

14. What is an Amor asteroid (discuss orbit)?

15. Between 2000 and 2010, more than _____ asteroids passed with 0.05 AU of our planet.

16. **True or False:** Most Earth-Crossing Asteroids (E.C.A.) will eventually collide with Earth.

17. Most E.C.A are relatively small, about 1 km in diameter. What would happen if one hit?

a. Devastated area: _____

b. Explosive power: _____

c. _____x more than all nuclear weapons on Earth.

18. With enough time, scientists are confident in doing “what” to the asteroid to avoid a collision?

Orbital Resonances – Page 340

19. What is a Trojan asteroid?

20. **True or False:** Trojan asteroids will eventually impact Jupiter.

21. Out of the 5 Lagrangian points, which 2 are stable? _____ and _____

Comets – Page 340-343

22. What is a comet?

23. Sketch a comet (label: Nucleus, Coma, Dust Tail, Ion Tail, Hydrogen Envelope)

24. What two features (from above) are only visible from Earth on a comet?

a. _____ and _____

25. Why does the ion tail always point away from the sun?

26. Why is the dust tail curved on a comet?

27. Sketch a comet orbiting the sun, make 5 comets on the path showing how its tails change as they go around the sun. Have two comets before its closest approach, 1 at closest approach to sun, and 2 after its closest approach. (see fig 14.10).

28. When is Halley's Comet next visit? _____

Comet Orbits -page 346

29. What is a long-period comet? (discuss years)

30. What is a short-period comet? (discuss years)

31. What is the Kuiper Belt?

32. What is the Oort Cloud?

Beyond Neptune - page 248

33. What are Kuiper Belt Objects?

34. What is a trans-Neptunian object?

Pluto's Orbital and Physical Properties & Prop of Trans. N. Objects page 348-352

35. What are the 3 qualifications to be a planet?

a. _____

b. _____

c. _____

36. After reading about Pluto and Trans-Neptunian Objects, do you think Pluto should or should NOT be a planet? Give multiple reasons why or why not as discussed in the book. This is YOUR option based on facts. BTW good way to see if you copied or actually read!!!

37. How many dwarf planets are in our solar system currently? _____

Meteoroids -page 353-354

38. What is a meteor?

39. What is a meteoroid? (discuss size in meters)

40. What is a meteorite?

41. What is a meteoroid swarm?

42. What are micrometeoroids?

43. How is a meteor shower named? From their _____ (test question)

44. What speed do “fireballs” have and what is else do they produce?

- a. Speed _____ and Produce: _____
- b. Fastest speed: _____

45. How many craters are still visible on Earth? _____

Meteorite Properties - page 356

46. What is a carbonaceous meteorite?

47. How old are meteorites?

48. Meteorites provide clues about what?