Extraordinary properties of Water ppt Questions

1. What is the formula for a molecule of water?

2. Which atom in water attracts more negative electrons?

3. Water is a _______________ molecule because it has an equal number of _______________ and _______________.

4. What is water’s net charge?

5. Water is called a _______________ molecule because the oxygen end “acts” _______________ charged and the hydrogen end “acts” _______________ charged.

6. One hydrogen bond is _______________, but many hydrogen bonds are _______________.

7. How do hydrogen bonds form?

PROPERTIES OF WATER

8. At sea level, water boils at _______________ and freezes at _______________.

9. What happens to the boiling point of water at higher elevations where the atmospheric pressure is less?

10. Where will it take longer for an egg to boil ---- in Death Valley or Mt. Everest?

11. Name 5 more properties of water that are important to life.
   a. 
   b. 
   c. 
   d. 
   e. 

12. What is cohesion?
13. Cohesion produces ________________ _______________ when one water molecule
attracts other ________________ molecules.
14. What is surface tension a measure of?
15. How does the film produced by surface tension help organisms?
16. What is adhesion?
17. How does adhesion DIFFER from cohesion?
18. Adhesion produces ________________ ______________ as water is
attracted to and pulled into a tube.
19. What process in plants is due to capillary action (one word)?
20. Plants absorb water through their ____________ and use ________________ action or
______________ to move water upward against gravity to the leaves.
21. Name 2 other things observed in nature that are the result of adhesion.
   a.
   b.
22. Define specific heat.
23. Water ______________ a change in temperature and can absorb or release
____________ amounts of energy with very little temperature change.
24. What is heat of vaporization?
25. In order to evaporate, water must break its ________________ bonds.
26. When water evaporates from a surface, it removes a lot of ________________.
27. What is water's heat of vaporization?
28. In order for a gram of water at 100°C to change into steam at that same temperature, it
must ________________ ________________ calories of energy. Therefore, which would
contain more energy at 100°C, steam or boiling water?
29. How does water warm the Earth?

30. Why does ice float in water?

31. Frozen water forms ____________ holding the molecules at fixed distances from each other.

32. Which is denser ---- ice or water?

33. Define homeostasis.

34. List 5 ways that water helps maintain homeostasis.
   a. 
   b. 
   c. 
   d. 
   e. 

35. Solutions and suspensions are two types of ________________ that both contain ________________.

36. The ________________ is the substance being dissolved and the ________________ is what the substance is dissolved in.

37. What acts as a “universal solvent” because it dissolves so many substances?

38. How does a suspension form?

39. What keeps particles suspended?
ACIDS, BASES, & pH

40. Write the equation for the dissociation (separation) of water and label the hydrogen & hydroxide ions?

41. What does the pH scale actually measure?

42. The pH scale ranges from ________________ with a pH of ______ being neutral.

43. Where are acids found on the pH scale?

44. Where are the bases found on the pH scale?

45. Each pH unit represents a factor of __________ change in concentration.

46. How much stronger is a substance with a pH of 3 than a pH of 6. Show how you got your answer.

47. Acids produce a lot of ____________ ions, while bases contain lots of ____________ ions.

48. What is a buffer?

49. Buffers are produced by the body to ______________ acids and bases to maintain homeostasis.

50. What pH do you think is best for most parts of the body --- cells, blood, etc?