

Sci 265
Quiz 2 – post test

Name: _____ Group: _____

1. Polymers are
 - a. fun stuff like slime, silly putty or jelly marbles
 - b. anything made of plastics such as chairs, computer cases, soda bottles
 - c. awesome clothing like GORE-Tex, UnderArmour Heat Gear, Nike DRI-Fit, etc...
 - d. A & C only
 - e. all of the above

2. Which of the following is a natural polymer
 - a. Styrofoam
 - b. Polyethylene
 - c. Nylon
 - d. Silk

3. Which of the following is a synthetic polymer
 - a. Cellulose
 - b. Spider web
 - c. Nylon
 - d. Silk

4. A monomer is
 - a. Individual unit that makes up a polymer.
 - b. A monomer is like a single chain link in a long chain.
 - c. The monomer that is used to make polyamide would be called monoamide.
 - d. a and b only
 - e. a, b and c

5. The primary type of chemical bonds that connect monomers into polymer is
 - a. Hydrogen bond
 - b. Ionic bond
 - c. Covalent bond
 - d. Peptide bond

6. How many monomers typically make up a polymer chain?
 - a. 2-10
 - b. 10 – 100
 - c. Thousands or more
 - d. All of the above

7. Synthetic polymers are mainly made from
 - a. Petroleum
 - b. Any carbon containing material
 - c. Corn, cotton fiber, wood
 - d. All of the above

8. What is the building block/monomer of starch?
- a. Starch
 - b. Sugar
 - c. Carbon
 - d. Water
9. Poly(Vinyl Chloride) is a very versatile polymer. Which of the following is a use for PVC?
- a. Clear plastic wrap for food
 - b. 5 gallon plastic bucket
 - c. Plumbing pipe
 - d. Kevlar vest
10. How do the structures of Low Density Polyethylene (LDPE) and High density Polyethylene (HDPE) compare?
- a. Both contain branched polymer chains
 - b. Both contain linear polymer chains
 - c. LDPE contains branched polymer chains and HDPE contains linear polymer chains
 - d. LDPE contains linear polymer chains and HDPE contains branched polymer chains
11. What is the difference between typical things made of LDPE and HDPE?
- a. Things made of LDPE are more flexible and stronger
 - b. Things made of LDPE are more rigid and stronger
 - c. Things made of HDPE are more flexible and stronger
 - d. Things made of HDPE are more rigid and stronger
12. An example of Low Density Polyethylene (LDPE) is
- a. Clear plastic wrap for food
 - b. 5 gallon plastic bucket
 - c. Plumbing pipe
 - d. Kevlar vest

Natural rubber straight from the tree is a polymer, yet we vulcanize it before creating tires, boots and other products with it.

13. What happens to natural rubber during vulcanization?
- a. it is mixed with sulfur
 - b. it is mixed with borax
 - c. It is heated
 - d. Both a and b above
 - e. Both a and c above
14. How have the properties of rubber changed after vulcanization?
- a. It stretches more
 - b. It is more absorbent
 - c. It is tougher and more leather-like
 - d. None of the above

15. Plastic water and soda bottles are likely to be made of
- High density polyethylene (HDPE)
 - Low density polyethylene (LDPE)
 - Poly(vinyl chloride) (PVC)
 - Polyethylene terephthalate (PETE, or polyester)
16. In lab, what did you find is the most useful property of sodium polyacrylate?
- Bouncy
 - Stretchy
 - Absorbent
 - Flexible
17. Which of the following will affect the properties of consumer products made of polymers?
- Shape of polymer chains
 - Type of polymer material
 - Proportions of ingredients used to make the polymer
 - All of the above
18. Which of the following statements about polymer is FALSE?
- Polymer is a large molecule made up of repeating units of small molecules
 - Different polymers typically have different properties
 - A certain type of polymer can only be used to make a specific kind of thing
 - All of the above are true.
19. Describe two characteristics of plastics that make them both desirable and a big concern with using them. Explain why these two characteristics are both good and bad.

20. Describe all the information you can extract from this symbol:

