

Honors Biology REVIEW NAME: _____ Per: _____
Ch 2.3-2.4

TRUE OR FALSE(Write "TRUE" or "FALSE" in the space provided.

1. _____ Lipids are polar molecules that do not dissolve in water.
2. _____ Unsaturated fatty acids are found in plants and contain one or more double bonds between carbons
3. _____ Chitin forms the main portion of the body of plants
4. _____ The building blocks of lipids are amino acids
5. _____ An amino acid consists of an amine group on one side of the molecule and a hydroxyl group on the other side.
6. _____ Living organisms use 40 different amino acids.
7. _____ There are 12 essential amino acids for humans.
8. _____ Flagella in single celled organisms and cilia on the cell membrane are composed of carbohydrates.
9. _____ Enzymes are always used up in the reactions which they catalyze.
10. _____ A nucleotide consists of a 5 carbon sugar, a nitrogenous base, and a sulfur group.
11. _____ Phospholipids are the main component of cell membranes.
12. _____ A sucrose molecule consists of a glucose bonded to a fructose in a condensation reaction.
13. _____ Isomers are molecules that have the same formula but are different because they are arranged differently.
14. _____ Cholesterol is a steroid .
15. _____ About 15 % of a person's cholesterol is produced by their own liver.
16. _____ Polymers are the building blocks of monomers.
17. _____ Carbon is the "backbone" of organic molecules.
18. _____ Fats are solid at room temperature and found in animals.
19. _____ Glucose is an example of a monosaccharide.
20. _____ Benedict's solution will turn black in the presence of a polysaccharide.

MATCHING:

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|------------------------|-------------------------------------|
| 21. _____ Estrogen | A. a nucleic acid |
| 22. _____ ATP | B. a polysaccharide |
| 23. _____ Glycogen | C. an enzyme |
| 24. _____ Lactase | D. a steroid |
| 25. _____ Phospholipid | E. forms structure of cell membrane |

MULTIPLE CHOICE:

26. _____ Which of the following is NOT one of the four main types of organic molecules: A) proteins; B) carbohydrates; C) nucleotides; D) lipids

27. ____ The type of bond which joins two amino acids together to form a protein is called: A) a peptide bond and is a condensation reaction; B) an ionic bond and is a condensation reaction; C) a hydrogen bond and is a precipitation reaction
28. ____ The monomers of carbohydrates are: A) simple sugars; B) amino acids; C) nucleotides; D) fatty acids
29. ____ Cholesterol, among other things, is needed to: A) catalyze the breakdown of hydrogen peroxide; B) produce vitamin D; C) produce vitamin E; D) catalyze the breakdown of lactose
30. ____ Nucleic acids contain carbon, hydrogen, oxygen, nitrogen and: A) Phosphorus but not sulfur; B) Sulfur but not phosphorus
31. ____ Waxes are an example of a: A) protein; B) Carbohydrate; C) Lipid; D) Nucleic Acid
32. ____ Starch is a: A) monosaccharide; B) disaccharide; C) polysaccharide
33. ____ Two examples of a nucleic acid are: A) Glycogen and chitin; B) estrogen and testosterone; C) DNA and RNA
34. ____ An enzyme is: A) a biological catalyst; B) always used up in the reaction it promotes; C) unusual in that it is not affected by temperature, pH, or ionic conditions
35. ____ Phospholipids contain: A) a hydrophilic head and a hydrophobic tail; B) a hydrophobic head and a hydrophilic tail
36. ____ The amount of energy that is needed to get a reaction started is: A) always less than 98 degrees Fahrenheit; B) constant for all reactions; C) called activation energy; D) so small that it is considered insignificant
37. ____ Large proteins embedded in the cell membrane that allow substances to pass through the membrane are called: A) Cilia; B) flagella; C) collagen; D) transport proteins
38. ____ Insulin is composed of: A) three fatty acids and a glycerol; B) 51 amino acids; C) unsaturated fatty acids
39. ____ The difference between saturated and unsaturated fatty acids is that saturated fatty acids are "saturated" with: A) grease; B) fat; C) oxygens; D) hydrogens
40. ____ Eating foods with large amounts of high fructose corn syrup and hydrogenated vegetable oils is: A) a unhealthy food choice; B) an unhealthy food choice

Write "N" for Non-soluble and "S" for Soluble

41. ____ starch
42. ____ glycogen
43. ____ glucose
44. ____ cellulose
45. ____ chitin