1. Cholesterol is the best known of the:  
   a. phospholipids.  
   b. lipids.  
   c. sterols.  
   d. triglycerides.  

2. All of the following are found mainly in foods that contain fat except:  
   a. vitamin A.  
   b. vitamin C.  
   c. vitamin D.  
   d. vitamin K.  

3. Triglycerides consist of:  
   a. three fatty acids.  
   b. *trans* fatty acids.  
   c. glycerol.  
   d. a and b  
   e. a and c  

4. If the fat in a container is solid at room temperature, what type of fat is it?  
   a. polyunsaturated fat  
   b. monounsaturated fat  
   c. saturated fat  
   d. short-chain fatty acids  

5. The role of bile in fat digestion is to:  
   a. digest fats in the stomach.  
   b. emulsify fats in the small intestine.  
   c. transport fats through the circulatory system.  
   d. split fats into smaller components.
6. Which of the following is not a desirable blood lipid value?  
   a. low total cholesterol  
   b. high LDL  
   c. high HDL  
   d. low blood triglycerides

7. The best way to increase consumption of omega-3 fatty acids is to:  
   a. increase intake of seed oils.  
   b. consume 2 fish meals per week.  
   c. limit intake of polyunsaturated fats.  
   d. take fish oil in supplements.

8. The major storage form of fats in our body is:  
   a. triglycerides, which are made up of fatty acids and glycerol.  
   b. fatty acids, which are made up of trans fats and bile.  
   c. cholesterol, which is stored in the blood.  
   d. lecithin, which is stored in the liver.

9. What does the term “point of unsaturation” mean?  
   a. the area on a fatty acid chain where the carbon bond is holding a hydrogen  
   b. the area on a fatty acid chain where a nitrogen is attached  
   c. the area on a fatty acid chain where a hydrogen is missing from the bond  
   d. the area on the fatty acid chain where there is a zig-zag formation.

10. Which of the following mechanisms is important for the digestion of fat in foods?  
    a. in the mouth chewing and enzyme action dissolve the fat in saliva  
    b. lecithin in the stomach emulsifies the fat and begins its digestion  
    c. bile in the small intestine emulsifies the fat for enzyme action  
    d. if the gallbladder is removed, the body is not able to digest fat
Matching: match the fat related terms on the right to their appropriate definitions on the left.

11. a lipid that is solid at room temperature  D a. cholesterol

12. one of the three main classes of dietary lipids; chief form of fat in foods E b. phospholipid
c. sterol

13. one of the sterols manufactured in the body A d. fat

14. one of the three main classes of lipids with a structure similar to cholesterol C e. triglyceride

15. one of the three main classes of lipids, which is similar to a triglyceride B f. oil

16. a lipid that is liquid at room temperature F

17. Which of the following is found in protein but not in carbohydrate or fat? C
   a. carbon
   b. hydrogen
   c. nitrogen
d. oxygen

18. Which of the following accounts for the differences among the various amino acids? B
   a. the amine group
   b. the side chain
c. the acid group
d. a and b
e. b and c

19. A(n) ____ bond is formed between the amine group end of one amino acid and the acid group end of the next amino acid in a protein. A
   a. peptide
   b. amino acid
c. denatured
d. sulfur
20. When amino acids are absorbed by the cells of the small intestine:  
   a. they are absorbed best in large doses of a single amino acid.  
   b. they are absorbed without preference at all sites on the cells.  
   c. they must be broken into single amino acids before they can be absorbed.  
   d. they can be circulated in the bloodstream to other cells and linked together to create new proteins.

21. Proteins attract water and hold it within blood vessels, preventing it from freely flowing into the spaces between the cells. This is an example of how a protein is used for:  
   a. supporting growth and maintenance.  
   b. building enzymes, hormones, and other compounds.  
   c. building antibodies.  
   d. maintaining fluid and electrolyte balance.

22. If amino acids are oversupplied:  
   a. the body stores them until they are needed.  
   b. the body removes and excretes their amine groups.  
   c. the body converts amino acid residues to glycogen or fat.  
   d. a and b  
   e. b and c

23. Our body has the need to eat protein-containing foods regularly because:  
   a. we need essential amino acids that can only be provided by foods.  
   b. our bodies are not able to make any amino acids for protein structure.  
   c. the function of protein is to maintain our muscle strength.  
   d. protein is broken down quickly during digestion and lost from the body.

24. The recycling system for amino acids in the body is used to:  
   a. primarily provide fuel for the cells to preserve glucose for emergencies.  
   b. convert nonessential amino acids into essential amino acids if needed by the body.  
   c. provide the cells with materials to build body proteins.  
   d. add protein to muscles when there is a shortage of energy from foods.
25. Why is milk used as a first-aid remedy for someone who has swallowed a heavy-metal poison?  
   a. The poison acts on the protein in the milk rather than on the protein of the gastrointestinal tract.  
   b. Milk will cause the person to vomit and expel the poison.  
   c. Milk will provide calcium which serves to render the poison harmless  
   d. a and b  
   e. b and c  

26. The roles of enzymes formed by body proteins are important when foods are eaten because:  
   a. each enzyme is responsible for numerous different chemical reactions.  
   b. an enzyme acts as a catalyst to speed up a reaction without being altered itself.  
   c. enzymes signal certain organs to respond to a change in conditions in the body.  
   d. some enzymes can become chemical messengers in the nervous system.  

27. Proteins use the process of active transport to move substances in or out of the cell by:  
   a. opening passages in the membrane and escorting substances through the cell.  
   b. attaching to minerals to carry them throughout the bloodstream.  
   c. decreasing the water content in cells to get rid of excess acid or base levels.  
   d. sending antibodies to cells to carry excess proteins out to where they are needed.  

28. In times of energy shortage from carbohydrates or fats in foods, the body uses protein in what way?  
   a. it decreases the breakdown of food proteins for energy and uses stored glycogen  
   b. it stores amino acids in the cells to be used later for energy  
   c. it removes the nitrogen portion and burns the remaining fragments for energy  
   d. it converts it to fat to provide more concentrated energy  

29. By definition, a vitamin is all of the following except:  
   a. an organic compound.  
   b. indispensable to body function.  
   c. needed in minute amounts.  
   d. a non-essential nutrient.
30. A compound in food that can be converted into an active vitamin inside the body is known as a(an):  
   a. precursor.  
   b. antivitamin.  
   c. coenzyme.  
   d. enzyme.  
   **A**

31. All of the following are fat-soluble vitamins except:  
   a. A.  
   b. D.  
   c. C.  
   d. K.  
   **C**

32. Any disease that produces _____ malabsorption can bring about deficiencies of vitamins A, D, E, and K.  
   a. carbohydrate  
   b. protein  
   c. fat  
   d. a and b  
   e. b and c  
   **C**

33. True statements concerning the water-soluble vitamins include:  
   a. They are stored in body tissues to a large extent.  
   b. They are easily excreted in the urine.  
   c. They can be leached out of foods by cooking in water.  
   d. a and b  
   e. b and c  
   **E**

34. Vitamin A plays an important role in:  
   a. maintenance of body linings.  
   b. blood clotting.  
   c. reproduction.  
   d. a and b  
   e. a and c  
   **The rest of the answers are dependent on what test you had**
35. The active form of vitamin A stored in the liver is:
   a. retinol.
   b. bright orange.
   c. yellow.
   d. beta-carotene.

36. Symptoms of vitamin A deficiency include:
   a. reduced food intake.
   b. blindness.
   c. joint pain.
   d. a and b
   e. a and c

37. All of the following foods contain active vitamin A except:
   a. liver.
   b. fish oils.
   c. milk.
   d. french fries.

38. What is one symptom of a beta-carotene toxicity?
   a. bright yellow skin
   b. night blindness
   c. rough, dry skin
   d. hardening of the macula in the eye

39. Characteristics of water-soluble vitamins include all of the following except:
   a. they seldom reach toxic levels.
   b. they are easily absorbed and excreted.
   c. they dissolve in water.
   d. they are stored extensively in tissues.
40. The niacin deficiency disease is known as:
   a. pellagra.
   b. osteomalacia.
   c. scurvy.
   d. beriberi.

41. An individual has developed heart disease and high blood lipid values and does not want to go on lipid lowering medication because of their side effects. Which vitamin has been used by physicians in treatment plans as a more natural treatment for heart disease?
   a. vitamin A
   b. niacin
   c. vitamin C
   d. thiamin

42. Which of the following would be most likely to develop pellagra?
   a. a person who consumes a mixed diet of meat and plant foods
   b. a person who does not consume meats and eats corn as the dietary staple
   c. a person who is a vegetarian but consumes milk
   d. a and b
   e. b and c

43.