True/False
Indicate whether the statement is true or false.

1. Fats should not exceed 5-15% of your daily calories.
2. Monosaccharides are the smallest units of sugars (or carbohydrates).
3. Protein is the body's first choice to burn as fuel/ use as an energy source.
4. One important function of fats in the body is to make up part of the cell membrane.
5. The calories per gram (fuel factor) for fats is 9 Cal/gram.
6. The role of mucus in digestion is that of lubrication and protection of the GI tract.
7. Consumption of alcohol contributes to overall energy intake in the form of calories, but performs no nutritional essential function in the body.
8. Food that has been chewed in the mouth, moistened with saliva, and combined with mucus and acid in the stomach is called chyme as it descends into the lower stomach.

Multiple Choice
Identify the choice that best completes the statement or answers the question.

9. Who is the professional on the hospital health care team mainly responsible for the nutritional care planning for a patient?
   a. nurse
   b. registered dietician
   c. physician
   d. respiratory therapist

10. What are the basic building blocks of proteins?
    a. cholesterol
    b. enzymes
    c. amino acids
    d. hormones

11. What are wave-like contractions of the muscle fibers of the stomach and intestinal walls called?
    a. absorption
    b. peristalsis
    c. metabolism
    d. digestion

12. Carbohydrates play a major role in nutrition because they
    a. contain nitrogen.
    b. are digested completely in the stomach.
    c. are expensive sources of calories.
    d. are the fuel of choice for all body cells.
13. Which is **not true** about excess calories from carbohydrates:
   a. they are first stored as glycogen in muscles and the liver.
   b. they can be converted into fat and stored after glycogen storage is full.
   c. they can be converted into amino acids and stored as muscle tissue.
   d. they can lead to weight gain if intake is consistently higher than needs.

14. What substance transports fats in the blood stream?
   a. glycogen
   b. lactose
   c. hemoglobin
   d. lipoproteins

15. An essential fatty acid is one that
   a. can be produced in the body by cholesterol.
   b. comes from only a plant source.
   c. must come from dietary intake.
   d. the body can compose for itself.

16. Pepsin is an enzyme that digests (breaks down)
   a. glycogen.
   b. lactose
   c. triglycerides.
   d. proteins

17. What is the growth and repair (build up) phase of metabolism called?
   a. digestion
   b. anabolism
   c. glycolysis
   d. catabolism

18. The main storage form of carbohydrate in the body is
   a. glycogen.
   b. fatty acids.
   c. amino acids.
   d. cholesterol.

19. Which of the following is not true about dietary fiber?
   a. Dietary fiber swells in the stomach to slow digestion.
   b. Dietary fiber traps bile acids and cholesterol for excretion.
   c. Dietary fiber increases the risk of cardiovascular disease.
   d. Dietary fiber increases stool bulk to reduce constipation.

20. The person most at risk for protein malnutrition would be a (n)
   a. an active young adult who eats 2200 calories per day.
   b. a toddler in a developing country who’s mother just weaned him.
   c. a neighbor on the Atkins diet who is active on your softball team.
   d. a lacto-ovo vegetarian who runs half marathons.

21. What is the body’s secondary source of heat and energy?
   a. carbohydrates
   b. vitamins and minerals
   c. fats
   d. proteins
22. Proteins should provide how much of the daily kilocalorie intake?
   a. 5 - 8%
   b. 10 - 35%
   c. 40 - 45%
   d. 50 - 60%

23. Which of the following is the location most nutrients are absorbed?
   a. small intestine
   b. large intestine
   c. liver
   d. gallbladder

24. The sugar to which all other sugars are converted and the one that circulates in the blood to provide major fuel for the cells of the body is ________________.
   a. sucrose
   b. fructose
   c. glucose
   d. maltose

25. What are some major functions of the liver?
   a. production of hemoglobin for red blood cell formation.
   b. bile production, metabolism of hormones, and regulation of glucose levels.
   c. hormone production, secretion of lipase, and control of pepsin.
   d. production of creatinine for the breakdown of nitrogen.

26. What is the primary task that occurs in the large intestine (colon)?
   a. digestion of fat
   b. absorption of water
   c. breakdown of glucose
   d. production of enzymes

27. What do the Dietary Reference Intakes (DRI) address the needs of?
   a. elderly adults
   b. most healthy population groups
   c. minority and ethnic groups
   d. pregnant women, infants, and children

28. What is the form of malnutrition seen most often in toddlers, age 18-24 months, after being weaned from breastmilk and placed on a carbohydrate rich, low protein diet?
   a. galactosemia
   b. phenylketonuria
   c. kwashiorkor
   d. lactose intolerance

29. The best food choices for dietary fiber include which of the following?
   a. hamburgers and hot dogs
   b. white rice and white toast
   c. steak and pork chops
   d. brown rice and beans

30. Which of the following foods does an ovo-vegetarian consume?
   a. A diet of dairy products and eggs along with a diet of only plant derived foods.
   b. A diet of only plant derived foods with an addition of eggs to complement.
   c. No animal foods or products derived from animals.
   d. None of the above.
31. Which of the following foods is low in carbohydrates?
   a. sugar cookies
   b. sirloin steak
   c. steamed rice
   d. baked potato

32. What are the three components of chemical digestion in the stomach?
   a. mucus, chymotrypsin, lingual lipase
   b. pancreatic lipase, mucus, trypsin
   c. hydrochloric acid, mucus, and pepsin
   d. lactase, bile, carboxypeptidase

33. What is the purpose of the mucosal folds, villi, and microvilli located on the intestinal wall?
   a. the build-up of triglycerides
   b. enzyme secretion during digestion
   c. storage of glucose for energy
   d. increase the surface area for absorption

34. The process of digestion involves _______ and _______ actions.
   a. thermal, chemical
   b. chemical, electrical
   c. mechanical, chemical
   d. mechanical, thermal

35. Which of the following is a low protein food?
   a. tuna
   b. ham and cheese sandwich
   c. peanut butter
   d. fresh fruit salad

36. Which of the following food items contains a saturated fatty acid?
   a. bacon
   b. olive oil
   c. green tomatoes
   d. whole grain bread

37. What is the recommended percentage of daily caloric intake for carbohydrates
   a. 10-35%
   b. 20-35%
   c. 45-65%
   d. None of the above

38. Which of the following is an example of a monosaccharide?
   a. Glucose
   b. Sucrose
   c. Glycogen
   d. Starch

39. Which of the following is an example of an unsaturated fat?
   a. Lard
   b. Butter
   c. Vegetable oil
   d. Ice cream

40. Excessive use of vitamin or mineral supplements “megadose,” can result in which of the following
   a. Overnutrition / toxicity
   b. Marasmus / protein malnutrition
   c. Obesity / weight gain
   d. All of the above

41. Food or body fats are made up of which components?
   a. amino acids
   b. glycogen
   c. glycerol and fatty acids
   d. chains of glucose
42. A slice of Reese's Peanut Butter chocolate cheesecake from The Cheesecake Factory contains 113.0 g carbohydrates, 38.0 g fat, and 0 g protein. How many total kilocalories will be generated from one slice of this tasty desert?
   a. 342 kcal
   b. 452 kcal
   c. 794 kcal
   d. 1359 kcal
   e. None of the above

43. Alex is a 22 year old college student who's daily diet generally consists of the following: 3 Tim Hortons doughnuts and a medium black coffee for breakfast, a Wendy's Baconator, large fry, and a large frosty, for lunch, and 4 slices of pizza, and 2 cups of Pepsi for dinner. Alex does not like vegetables so to compensate he takes twice the recommended dose of daily vitamins daily. Alex works out playing basketball 3 days a week and is currently a healthy weight. However, which of the following complications may he experience later in life if he continues his current dietary practices.
   a. Overnutrition / toxicity
   b. Marasmus / protein malnutrition
   c. Obesity / weight gain
   d. All of the above
   e. Answer choices A and C

44. Which of the following artificial sweeteners should a nurse recommend to a client who has been diagnosed with phenylketonuria (PKU)?
   a. Equal - Key ingredient aspartame
   b. Sweet 'n Low - Key ingredient saccharin
   c. Aspartame - Contains phenylalanine
   d. None of the above artificial sweeteners should be recommended to a client who has PKU
   e. Only choices A and C should be recommended to a client who has PKU

45. Which of the following consequences would a nurse anticipate in a client who has prolonged carbohydrate deficiency?
   a. Ketosis and metabolic acidosis
   b. Anemia and edema
   c. Skin lesions and weight loss
   d. Dental caries and obesity

Continues on next page!
46. The nutrition label below is for a baked potato loaded with butter, cheese, sour cream and bacon. Use the food label to answer the following question.

<table>
<thead>
<tr>
<th>Nutrition Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serving Size 1 piece 299g (299 g)</td>
</tr>
<tr>
<td>Amount Per Serving</td>
</tr>
<tr>
<td>Calories 452</td>
</tr>
<tr>
<td>% Daily Value*</td>
</tr>
<tr>
<td>Total Fat 26g</td>
</tr>
<tr>
<td>Saturated Fat 10g</td>
</tr>
<tr>
<td>Trans Fat</td>
</tr>
<tr>
<td>Cholesterol 30mg</td>
</tr>
<tr>
<td>Sodium 972mg</td>
</tr>
<tr>
<td>Total Carbohydrate 44g</td>
</tr>
<tr>
<td>Dietary Fiber</td>
</tr>
<tr>
<td>Sugars</td>
</tr>
<tr>
<td>Protein 18g</td>
</tr>
<tr>
<td>Vitamin A 13%</td>
</tr>
<tr>
<td>Calcium 31%</td>
</tr>
</tbody>
</table>

This food contains ____ kilocalories from saturated fats.

a. 26  

b. 40  

c. 90  

d. 234

47. A nurse explains to a client who is following a low protein diet that which of the following consequences could possibly occur?
   a. Increased risk of coronary artery disease 
   b. Frequent episodes of steatorrhea 
   c. Development of chronic kidney disease 
   d. Impaired immune function 
   e. All of the above consequences could result from a low protein diet.

48. A nurse has instructed a client on complementary proteins. Which diet selection by the client illustrates that the client has understood the material presented?
   a. Eggs and bacon  
   b. Pinto beans and rice  
   c. Fish and chips  
   d. Hamburger and fries

49. Which of the following statements is an accurate description of the function of proteins.
   a. Proteins are required for tissue rebuilding and repair 
   b. Proteins are the body's primary source of energy 
   c. Proteins are required by the body to maintain osmotic pressure and water balance 
   d. All of the above statements accurately describe functions of proteins 
   e. Only statements a and c accurately describe functions of proteins

50. Depletion of which of the following macronutrients will result in a negative nitrogen balance?
   a. Carbohydrates  
   b. Fats  
   c. Protein  
   d. Vitamins