

Collection of Clinical Nutrition MCQs

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By

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1. The body generate water during the:

- a) Buffering of acids
- b) Dismantling of bone
- c) Metabolism of minerals
- d) Breakdown of energy nutrients

Answer: D

2. The principal cation in extracellular fluids is:

- a) Sodium
- b) Chloride
- c) Potassium
- d) Phosphorus

Answer: A

3. Most of the body magnesium can be found in the:

- a) Bones
- b) Nerves
- c) Muscles
- d) Extracellular fluids

Answer: A

4. Calcium homeostasis depends on:

- a) Vitamin K, aldosterone, and renin
- b) Vitamin K, parathyroid hormone, and renin
- c) Vitamin D, aldosterone, and calcitonin
- d) Vitamin D, calcitonin, and parathyroid hormone

Answer: D

5. Calcium absorption is hindered by:

- a) Lactose
- b) Oxalates

- c) Vitamin D
- d) Stomach acid

Answer: B

6. Negative nitrogen balance is seen during:

- a) Lactation
- b) Infection
- c) Growth
- d) Pregnancy

Answer: B

7. This is the best index of the nutritive value of protein:

- a) Biological value.
- b) Protein energy ratio.
- c) Net protein utilization.
- d) Protein digestibility.

Answer: C

8. Which of the following substance is released by adipose tissue and converted to pyruvate by the liver?

- a) Glucose
- b) Glycerol
- c) Lactate
- d) Acetoacetate

Answer: B

9. Increased formation of ketone bodies during starvation is due to:

- a) Increased level of free fatty acids.
- b) Decreased level of glucagon.
- c) Decreased formation of acetyl CoA.
- d) Inhibition of β -oxidation of fatty acids.

Answer: A

10. After fasting for 12 hours, if a person has a breakfast consisting of carbohydrates the meal will:

- a) Replenish liver glycogen stores.
- b) Increased blood glucagon level.
- c) Reduce the rate of lipogenesis.
- d) Increased gluconeogenesis.

Answer: A

11. The following does not act as an antioxidant:

- a) Vitamin E
- b) Vitamin D
- c) Vitamin A
- d) Vitamin C

Answer: B

12. Pellagra is due to the deficiency of:

- a) Pantothenic acid
- b) Nicotinic acid
- c) Pyridoxine
- d) Biotin

Answer: B

13. The preferred treatment of an infant with metabolic acidosis and increased urinary excretion of methylmalonate is with:

- a) Folic acid
- b) Thiamine
- c) Pyridoxine
- d) Vitamin B12

Answer: D

14. A diet of only plant products can lead to:

- a) Pellagra
- b) Megaloblastic anemia.
- c) Scurvy
- d) Marasmus

Answer: B

15. In adults, a severe deficiency of vitamin D causes:

- a) Skin cancer
- b) Pellagra
- c) Osteomalacia
- d) Night blindness

Answer: C

16. A deficiency of folate leads to:

- a) Hypochromic microcytic anemia
- b) Pernicious anemia
- c) Megaloblastic anemia
- d) Aplastic anemia

Answer: C

17. Free fatty acids in plasma are transported in association with:

- a) Albumin
- b) HDL
- c) VLDL
- d) LDL

Answer: A

18. The concentration of following is inversely related to cardiovascular disease:

- a) VLDL
- b) LDL
- c) IDL
- d) HDL

Answer: D

19. Ketone bodies are:

- a) Produced in large amounts during starvation and diabetes
- b) Converted to HMG CoA in the peripheral tissues
- c) Synthesized mainly in extra hepatic tissue
- d) Used by the brain in preference to glucose

Answer: A

20. Which of the following compound accumulates in the urine in phenylketonuria (PKU) patients?

- a) Homocysteine
- b) Tryptophane
- c) α -ketoacids
- d) Phenyl pyruvate

Answer: D

21. Gout is generally associated with:

- a) Smoking
- b) Low protein diet
- c) Increased xanthine oxidase activity
- d) Increased urate deposits in joints

Answer: D

22. Residue is used to describe:

- a) The food before it enters the body
- b) The indigestible protein of the food
- c) The form of the food that reaches the large intestine
- d) Fiber

Answer: C

23. Malabsorption syndrome is characterized by:

- a) Poor protein absorption
- b) Calcium absorption
- c) Foamy stool
- d) Infrequent diarrhea

Answer: C

24. Ulcerative colitis is characterized by:

- a) Alternating constipation and diarrhea.
- b) Passage of large amount of mucous.
- c) Spasmodic pain
- d) Anemia incidence is frequent

Answer: D

25. Celiac disease is not caused by protein found in:

- a) Wheat
- b) Rice
- c) Oats
- d) Sorghum

Answer: B

26. Celiac disease patients are required to follow a gluten free diet. Gluten (prolmines) is referred to the protein founds in wheat, rye and barley. What is the name of protein found in wheat?

- a) Hordein

- b) Gliadin
- c) Secalin
- d) Gloverin

Answer: B

27. Which of the following tests is commonly used for celiac disease screening?

- a) Anti-tissue transglutaminase anti-TTG
- b) Antinuclear Antibody (ANA)
- c) Extractable Nuclear Antigen Antibodies (ENA)
- d) None of the above

Answer: A

28. Diverticulosis is usually caused by:

- a) low fat diet.
- b) low fiber diet.
- c) low protein diet.
- d) low carbohydrate diet.

Answer: B

29. This diet recommended for peptic ulcer patient is:

- a) Plain baked white potato
- b) Fried potatoes
- c) Fried fish
- d) Spicy food

Answer: A

30. Which of the following statement is TRUE regarding to hepatitis A?

- a) Hepatitis A is caused by contaminated food
- b) Hepatitis A is caused by unsterilized syringe
- c) Hepatitis A may be caused by alcoholic drinks
- d) It is difficult to recover from hepatitis A

Answer: A

31. Many factors can increase the risk of developing liver cirrhosis. Which of the following is true?

- a) Viral hepatitis
- b) High pepper consumption
- c) High fat diet
- d) Low carbohydrate diet

Answer: A

32. Which of the following is a risk factor for cardiovascular disease?

- a) Strenuous physical exercise
- b) Hypertension
- c) High salt intake
- d) High carbohydrate intake

Answer: B

33. Atherosclerosis is characterized by

- a) Rise in blood urea
- b) Elevated HDL levels
- c) Thickening of the walls of the blood vessels
- d) Low LDL levels

Answer: C

34. Which of the following can be caused due to vitamin A deficiency?

- a) Beriberi
- b) Scurvy
- c) Pernicious anemia
- d) Xerophthalmia

Answer: D

35. Protein requirements expressed per Kg body weight are higher during:

- a) Playing football in hot weather
- b) Childhood as compared with adults
- c) Traveling in space
- d) Elderly

Answer: B

36. In term to Iodine deficiency, which of the following is true?

- a) Iodine deficiency causes anemia
- b) Iodine deficiency causes fluorosis
- c) Iodine deficiency can lead to low thyroxine levels in plasma
- d) Iodine deficiency leads to rickets

Answer: C

37. Which if the following is true regarding to iron?

- a) Iron is essential for bone formation
- b) Iron is important for erythrocyte multiplication
- c) Iron is part of haemoglobin molecule
- d) Iron is low in all pregnant women

Answer: C

38. Which of the following is statement is true?

- a) Anemia is caused by riboflavin deficiency
- b) Anemia is caused by vitamin B6 deficiency
- c) Anemia could be controlled only by iron supplements
- d) Anemia could be caused by heavy parasitic infestation

Answer: D

39. Which of the following values considered as anemia?

- a) A 4 years old child with Hb level 11g/dL
- b) A non-pregnant woman with Hb level 13g/dL

- c) A pregnant woman with Hb level 10g/dL
- d) A man with a Hb level 14g/dL

Answer: C

40. Which of the following statement is true in term to diabetes mellitus type II?

- a) DM type II may be caused by pituitary gland injury
- b) DM type II is characterized by high fructose level in blood
- c) DM type II might by precipitated by high carbohydrate diet
- d) DM type II might be caused by obesity

Answer: D

41. Which of the following statement is true in term to latent diabetes?

- a) Latent diabetes patient may have abnormal insulin level
- b) Latent diabetes patient might develop abnormal GTT during treatment by cortisone
- c) Latent diabetes patient will complain of glycosuria
- d) Latent diabetes patient will complain of polyuria

Answer: B

42. A child with diabetes mellitus type I will/is _____ ?

- a) need high protein than normal child
- b) is usually obese
- c) need to follow a low calorie diet
- d) is prone to ketoacidosis

Answer: D

43. Cataract in diabetes may develop due to the accumulation of _____ in lens.

- a) Fructose
- b) Glucose
- c) Lactose
- d) Sorbitol

Answer: D

44. Which of the following tissue that needs insulin for glucose transport across the cellular membrane?

- a) Hepatocytes
- b) Kidney tubules
- c) Nerve cells
- d) Striated muscles

Answer: D

45. Obesity is caused by:

- a) High protein intake
- b) Large volume of fluids intake
- c) Lack of physical exercise only
- d) High calorie intake

Answer: D

46. Obesity is:

- a) Best treated by intestinal bypass
- b) Does not consider as health hazard
- c) Does not increase free fatty acids in blood
- d) Predisposes to DM

Answer: D

47. Obesity is best controlled by:

- a) Anti-obesity drugs
- b) Intragastric filler
- c) Fasting
- d) Lifestyle behaviour modification

Answer: D

48. Exercise for obese help to:

- a) Burn calories
- b) Inactivates insulin

- c) Suppresses catecholamine secretion
- d) Activates insulin receptor

Answer: D

49. Dietary gorging (taking one big meal) during obesity has the following effects on:

- a) Decreases activity of pancreatic enzymes
- b) Enhances synthesis of protein and nucleic acids in adipose tissue
- c) Decreases sensitivity to diabetogenic agents
- d) Enhances oxidation of glucose at the cellular level

Answer: B

50. Obesity plays a role in:

- a) Decreasing cardiac output
- b) Decreasing cardiac work
- c) Decreasing heart size
- d) Increasing the risk of gallstones

Answer: D

51. Obesity can:

- a) Suppresses insulin secretion
- b) Enhances insulin sensitivity
- c) Suppresses lipogenesis
- d) Increases fasting level of free fatty acids

Answer: D

52. The best method for obesity control is:

- a) Liposuction
- b) Gastric partition surgery
- c) Jaw wiring
- d) Decrease calorie intake

Answer: D

53. This waist-hip ratio is a risk indicator of CVD for females. Which of the number below consider as high risk?

- a) > 2
- b) > 1.5
- c) > 1
- d) > 0.08

Answer: C

54. Which of the following is an indicator of morbid obesity?

- a) BMI > 25
- b) BMI > 27
- c) BMI > 30
- d) BMI > 40

Answer: D

55. Which of the following triceps skinfold thickness (TSFT) values is an indicator of obesity?

- a) $\geq 18\text{mm}$
- b) $\geq 20\text{mm}$
- c) $\geq 22\text{mm}$
- d) $\geq 25\text{mm}$

Answer: D

56. The best method of food behavior modification is to:

- a) Eating only one big meal a day
- b) Fasting alternating days
- c) Bingeing
- d) Lifestyle self-monitoring

Answer: D

57. Regarding to anorexia nervosa which of the following is true?

- a) Anorexia nervosa is common among adolescent males
- b) Anorexia nervosa is seen among low economic class families
- c) Anorexia nervosa treatment consist of high protein diet
- d) Anorexia nervosa treatment is comprised of psychotherapy & nutrition

Answer: D

58. Normal value for serum LDL in healthy adult is:

- a) < 150 mg/dL
- b) < 130 mg/dL
- c) < 100 mg/dL
- d) < 160 mg/dL

Answer: C

59. Normal value for serum triglycerides for adult male is:

- a) 150 - 199 mg/dL
- b) < 150 mg/dL
- c) 200 – 400 mg/dL
- d) 500 mg/dL

Answer: B

60. The desirable value for serum HDL cholesterol in healthy adult is:

- a) < 40 mg/dL
- b) < 35 mg/dL
- c) < 30 mg/dL
- d) \geq 60 mg/dL

Answer: D

61. The desirable value for serum total cholesterol is in healthy adult is:

- a) > 200 mg/dL
- b) > 220 mg/dL

c) < 250 mg/dL

d) < 200 mg/dL

Answer: D

62. Normal fasting blood sugar (FBS) in healthy adult is:

a) < 60 mg/dL

b) < 110 mg/dL

c) > 130 mg/dL

d) > 150 mg/dL

Answer: B

63. Sixty percent of the circulating cholesterol turn over takes place in the:

a) Kidney

b) Liver

c) Stomach

d) Heart

Answer: B

64. Omega-3 fatty acids are found in:

a) Olive oil

b) Soybean oil

c) Sunflower oil

d) Fish oil

Answer: D

65. Omega-3 fatty acids can help in:

a) Lowering LDL significantly

b) Increasing HDL significantly

c) Lowering triglycerides significantly

d) Increasing VLDL

Answer: C

66. Food with the lowest glycemic index of this group is:

- a) Sucrose
- b) Lactose
- c) Whole wheat bread
- d) Chick peas

Answer: D

67. The liver is the main site for:

- a) Catabolism of cholesterol
- b) Fat storage
- c) Synthesis of cholesterol.
- d) Protein storage

Answer: A

68. The liver is storage site for:

- a) Water-soluble vitamins
- b) Fat-soluble vitamins
- c) Bile
- d) Triglycerides

Answer: B

69. Liver cirrhosis is caused by which of the following?

- a) High carbohydrate diet
- b) High fat ingestion
- c) Chloroform ingestion
- d) Low protein diet

Answer: C

70. In the first stage of liver cirrhosis provide the patient with:

- a) Low protein intake and calories
- b) Normal protein and calories intake

- c) High protein and low calories intake
- d) High calories and low protein intake

Answer: B

71. In liver cirrhosis without encephalopathy with GIT bleeding, protein intake should be:

- a) 0.8g/kg body weight
- b) 0.5g/kg body weight
- c) 0.7g/kg body weight
- d) 1.5g/kg body weight of high biological value

Answer: D

72. In liver cirrhosis without steatorrhea the percentage of calories recommended from fat is:

- a) 10%
- b) 15%
- c) 25-40%
- d) 12%

Answer: C

73. In impaired liver function, which if the following nutrition intervention should be initiated?

- a) Increase B-vitamins, C, K and vitamin A
- b) Increase B-vitamins, C, K without vitamin A
- c) Decrease glucose intake
- d) Increase meal size

Answer: B

74. To manage hepatic encephalopathy, the RD should:

- a) Increase calories intake
- b) Increase fat intake
- c) Increase aromatic amino acids supplements
- d) Increase branched chain amino acids supplements

Answer: D

75. In impaired liver function with ascites, the RD should:

- a) Increase potassium intake in the patient diet
- b) Increase sodium intake in the patient diet
- c) Increase fluid intake for the patient
- d) Decrease sodium intake in the patient diet

Answer: D

76. In liver cirrhosis with steatorrhea, what is the most correct statement?

- a) Increase olive oil intake
- b) Fat-free diet is advised
- c) Fat intake is replaced by medium chain fatty acids.
- d) Provide fish oil

Answer: C

77. In acute attack of cholecystitis:

- a) Food should be hold for few days
- b) Patient is maintained on IV fluids for 12-24hrs
- c) Provide high fat diets
- d) Coffee can help in relieving the pain

Answer: B

78. which of the following is a good source of MCT?

- a) Safflower
- b) Olive oil
- c) Peanut
- d) Coconut

Answer: D

79. which of the following is an important essential fatty acid?

- a) Stearic acid
- b) Linoleic acid

- c) Octanoic acid
- d) Oleic acid

Answer: B

80. Peptic ulcer patients with gastroesophageal reflux may benefit from:

- a) Consuming chocolate
- b) Omitting tomatoes or tomato juice
- c) Consuming pepper mint
- d) Drinking coffee

Answer: B

81. In congestive heart failure the patient should be given at first:

- a) Boiled egg with salt
- b) Regular meals
- c) Full cream milk
- d) Water and fruit juices only

Answer: D

82. In myocardial infarction, which of the following should be given to the patient during the first 3 days of the attack?

- a) Normal diet
- b) Fluids only
- c) High protein diet
- d) Low carbohydrate diet

Answer: B

83. Hypertension management consist of:

- a) Restricted protein intake
- b) 65% of calories should be from carbohydrate
- c) Normal fat intake
- d) Restricted sodium intake

Answer: D

84. In nephrotic syndrome the objectives of treatment are to:

- a) Provide 0.8g/kg of protein daily
- b) Provide low protein diet
- c) Provide no sodium restriction
- d) Restrict carbohydrate intake

Answer: A

85. In acute renal injury, the RD should make sure to:

- a) Increase sodium intake in the patient diet
- b) Increase fluid intake
- c) Decrease potassium intake in the patient diet
- d) Increase protein intake in the patient diet

Answer: C

86. In renal calculi of uric acid, a high alkaline ash food such are provided. Which of the following is an example of an alkaline food?

- a) Bread
- b) Eggs
- c) Cereals
- d) Tomatoes

Answer: D

87. Folic acid deficiency could be caused by:

- a) Low protein intake
- b) Contraceptives usage
- c) Low fat intake
- d) Low carbohydrate intake

Answer: B

88. Clear liquid of basic hospital diet includes:

- a) Milk
- b) Mango juice
- c) olive oil
- d) Clear broth soup

Answer: D

89. Peptic ulcer patients are advised to consume:

- a) Fried food
- b) Sweets
- c) Dairy products
- d) Raw vegetables

Answer: C

90. The following could relieve hepatic encephalopathy

- a) Aromatic amino acids supplement
- b) Administration of lactulose
- c) High protein diet
- d) High carbohydrate diet

Answer: B

91. Obesity could be caused by:

- a) Drinking cold water for a long time
- b) Hypothalamus injury
- c) Lack of exercise
- d) Living in very cold climate

Answer: B

92. Obesity can lead to metabolic changes, which of the following is an example of these changes?

- a) Decreased insulin secretion
- b) Hypotriglyceridemia

- c) Increase insulin sensitivity
- d) Increased fasting level of ketone bodies

Answer: D

93. Insulin shock in the diabetics is caused by:

- a) Inadequate insulin
- b) Failure to take regular insulin
- c) Infection
- d) Failure of the patient to take some food

Answer: D

94. If glucose appears in urine where blood sugar is 180mg/dl, the patient has:

- a) Diabetes mellitus type II
- b) Diabetes mellitus type I
- c) Insensitive to insulin
- d) Renal glycosuria

Answer: D

95. Ulcerative colitis patients should be advised to take:

- a) Milk
- b) Juices
- c) Nuts
- d) Enriched white bread

Answer: D

96. Diabetes mellitus type I is managed by:

- a) Hypoglycemic drugs
- b) Diet
- c) Hypoglycemic drugs and diet
- d) Insulin and diet

Answer: D

97. The kidneys beside excretory function is responsible for the synthesis of:

- a) Glucagon
- b) Erythropoietin
- c) Cholesterol
- d) LDL

Answer: B

98. Dietary management of chronic glomerulonephritis include:

- a) High protein diet
- b) Normal sodium intake
- c) Increased fluid intake
- d) Low protein intake

Answer: D

99. Dietary management of nephrotic syndrome consist of:

- a) Low calories intake
- b) High sodium intake
- c) High protein intake
- d) Low protein intake

Answer: C

100. Dietary management of celiac disease consist of:

- a) Low carbohydrate intake
- b) High fat intake
- c) Low protein intake
- d) Vitamins and minerals supplement

Answer: D

101. Uncontrolled phenylketonuria in children causes:

- a) Bone fragility
- b) Epilepsy

- c) Mental retardation
- d) Large fontanel

Answer: C

102. Sickle cell anemia is managed by:

- a) Normal folate supply
- b) Low iron diet
- c) Zinc supplement.
- d) High vitamin C with meals.

Answer: B

103. Megaloblastic anemia is due to the deficiency of:

- a) heme iron.
- b) folic acid.
- c) vitamin C.
- d) vitamin B6.

Answer: B

104. Dietary management of familial hyperlipidemia includes:

- a) Drink whole milk
- b) Consumption of whole bread
- c) Consumption of fish
- d) Consumption of chicken with skin

Answer: C

105. Phenylketonuria is managed by:

- a) High branched chain amino acid intake
- b) Low carbohydrate intake
- c) Formula containing high tyrosine
- d) High fat diet

Answer: C

106. Maple syrup urine disease is due to the deficiency of which enzyme:

- a) Arginase
- b) Galactokinase
- c) Keto acid decarboxylase
- d) Propionyl CoA carboxylase

Answer: C

107. Dietary management of maple syrup urinary disease consist of:

- a) Low phenylalanine diet
- b) High arginine diet
- c) Low leucine, isoleucine and valine diet
- d) Low tryptophan diet

Answer: C

108. Failure to thrive in infancy could be caused by:

- a) Introduction of whole fat milk after 2 years
- b) Low consumption of fruit juices
- c) Poverty
- d) Breast feeding

Answer: C

109. Osteodystrophy is a result of:

- a) Low calcium intake.
- b) Low phosphorus intake.
- c) Kidney disease.
- d) Lack of exposure to sun.

Answer: C

110. Pernicious anemia is caused by the lack of:

- a) Folic acid
- b) Vitamin C

- c) Intrinsic factor
- d) Vitamin B6

Answer: C

111. Microcytic anemia is caused by the deficiency of:

- a) Ascorbic acid
- b) Vitamin B12
- c) Folate
- d) Iron

Answer: D

112. During metabolic changes of stress, the patient should be given:

- a) High fat diet
- b) Low protein diet
- c) High cholesterol diet
- d) High protein diet

Answer: D

113. For a patient with 20% burned surface, you should provide:

- a) High calorie diet
- b) Low protein diet
- c) Low protein and high carbohydrate diet
- d) Low fluid intake

Answer: A

114. During nausea and vomiting the patient nutritional plan is:

- a) High carbohydrate diet
- b) Hold food for first few days
- c) Liquid diet till the patient recovers
- d) High protein diet

Answer: B

115. The following intervention may help anorexic patients to maximize their food intake:

- a) Increase dietary fat
- b) Limit spices in the food
- c) Provide small frequent meals.
- d) Increase protein intake

Answer: C

116. For patients with dumping syndrome the plan should be including:

- a) sweetened fruit juices
- b) Five to six small meals daily
- c) Creamed vegetables
- d) Sweetened cereals

Answer: B

117. Hypertensive patients should be advised to:

- a) Decrease physical activity
- b) Increase sodium intake
- c) Eat bananas they're on diuretics
- d) Increase carbohydrate intake

Answer: C

118. Which of the following statement is true?

- a) Total parenteral nutrition (TPN) does not alter the acid base balance
- b) Total parenteral nutrition (TPN) could cause hypocalcemia
- c) Total parenteral nutrition (TPN) could cause hyperglycemia
- d) Total parenteral nutrition (TPN) could cause hematoma

Answer: D

119. Which of the following statement is true regarding food balance sheet?

- a) Food balance sheet is accurate method for determining individual dietary intake
- b) Food balance sheet depends on memory

- c) Food balance sheet is difficult to carry out
- d) Food balance sheet give an idea about food availability in the country.

Answer: D

120. Weighed food record, a method of estimating food intake, is:

- a) Depending on memory
- b) An easy method to carry out
- c) not expensive method to carry out
- d) A method that provide a quantitative data

Answer: D

121. Food record for obtaining Food Consumption data is:

- a) Low in accuracy
- b) Depending on the skill of the interviewer
- c) Not a time consuming
- d) A method that can be used to quantify nutrients

Answer: D

122. The 24-hours recall method of data collection:

- a) Requires long time to collect
- b) Is representative of usual food intake
- c) Does not rely on memory of the subject
- d) Interview bias may affect result

Answer: D

123. Diet history method:

- a) Is not time consuming
- b) Does not depend on the cooperation of the subject
- c) Does not require trained interviewer
- d) Provide helpful trends in food habits

Answer: D

124. Which of the following food items is most appropriate to be provided to a patient on a clear liquid diet?
- a) Cooked fruits
 - b) Cooked vegetables with low fiber
 - c) Milk
 - d) Strained fruit juices

Answer: D

125. In jejunostomy enteral feeding, one of the enteral nutrition access, which of the following statement is true?
- a) High risk of aspiration
 - b) High risk of misplacing the tube in the trachea
 - c) Cannot be used for intermittent or bolus feeding.
 - d) Small diameter tubes are not easy to become clogged.

Answer: C

126. In nasogastric tube feeding ____?
- a) Placement and removal of tube is difficult
 - b) dumping syndrome less likely to occur than nasoduodenal or nasojejunal tube feeding
 - c) Patient will not complain of nose irritation
 - d) It is applicable for patients at high risk of aspiration

Answer: B

127. In protein-calorie malnutrition:
- a) There is hyper metabolism during starvation
 - b) Metabolism slows during stress
 - c) Malnutrition does not affect the body's ability to adapt to stress
 - d) Increase protein and calorie needs are higher during extensive burns than any other stress

Answer: D

128. Diet advised for Dumping Syndrome patients:

- a) Creamed vegetables
- b) Cakes
- c) Sweetened cereals
- d) Meat

Answer: D

129. For patient with lactose intolerance, the following is allowed to be within the patient diet:

- a) Milk
- b) Cheese
- c) Cream caramel
- d) Chicken breast

Answer: D

130. Blend diet during acute stage of dyspepsia consist of:

- a) Heavy pudding
- b) Sweet custard
- c) Refined and well-cooked ground rice
- d) French fries

Answer: C

131. Some of the benefits of weight loss in obese people are:

- a) Lower blood pressure only in normotensive people.
- b) Lower triglycerides levels
- c) Lower HDL levels
- d) Lower blood glucose in only non-diabetics.

Answer: B

132. Behavior modification ideas for an obese individual include:

- a) Skip lunch
- b) Don't eat unless you are starving

- c) Eat before bedtime
- d) Use small plate and leave some food on the plate when you finish your meal

Answer: D

133. To reduce diarrhea in short bowel syndrome, advise the patient to:

- a) Eat two meals daily
- b) Drink water before the meal
- c) Take a glass of milk twice daily
- d) Avoid concentrated sweets

Answer: D

134. Nutrition therapy for hepatitis consist of:

- a) Increase protein to 1-2g protein/kg per day
- b) Decrease calorie intake
- c) Multivitamins are not needed
- d) Eat two large meals daily

Answer: A

135. For a diabetic patient it is recommended to:

- a) Nutrition therapy is less important for diabetic taking oral hypoglycemic agent
- b) Frequent treatment of hypoglycemia cannot lead to weight gain
- c) Type-2 diabetic may benefit from higher monounsaturated oil intake
- d) Pregnant diabetics should eat more carbohydrate than normal

Answer: C

136. Drug that potentiates hyperglycemia is:

- a) Aspirin
- b) Bactrim
- c) Corticosteroids
- d) Allopurinol (antihypertensive drugs)

Answer: C

137. To maximize teaching effectiveness for adult diabetics you need to:

- a) Increase the time of the teaching session
- b) Maximize directions
- c) Go slowly and summarize frequently
- d) Do not include family member

Answer: C

138. Nutrition therapy for patients with cancer include:

- a) Nutritional problems are not likely to develop until cancer metastasize
- b) Cachexia is more responsible for death than cancer itself
- c) Cachexia is directly related to the amount calories consumed
- d) All patients with cancer need higher calorie diet

Answer: B

139. In Nephrotic Syndrome it is recommended for the patient to:

- a) Follow a very high protein diet
- b) Increase calorie intake
- c) Eat sodium with no restriction
- d) Unlimited fat intake

Answer: B

140. With weight loss, fat cells:

- a) Decrease in size only
- b) Decrease in number only
- c) Decrease in both number and size
- d) Decrease in number, but increase in size

Answer: A

141. Obesity is caused by:

- a) Overeating
- b) Inactivity

- c) Defective genes
- d) Multiple factors

Answer: D

142. The biggest problem associated with the use of drugs in treatment of obesity is the:

- a) Cost
- b) Chronic dosage
- c) Ineffectiveness
- d) Adverse side effects

Answer: D

143. A realistic goal for weight loss is to reduce body weight by:

- a) down to the ideal weight in the weight-for-height tables
- b) by 5 percent over a week
- c) by 10 percent over six months
- d) by 20 percent over three months

Answer: C

144. A nutritionally sound weight-loss diet might restrict daily energy intake to:

- a) 1000-calorie-per-month deficit
- b) 500-calorie-per-month deficit
- c) 500-calorie-per-day deficit
- d) 1000-calorie-per-day deficit

Answer: C

145. Successful weight loss depends on:

- a) Avoiding fats and limiting water
- b) Taking supplements and drinking water
- c) Increasing proteins and restricting carbohydrates
- d) Reducing energy intake and increasing physical activity

Answer: D

146. Physical activity does not help a person to:

- a) Lose weight
- b) Retain muscle
- c) Maintain weight loss
- d) Lose fat in trouble spots

Answer: D

147. Which strategy would not help an overweight person to lose weight?

- a) Exercise
- b) Eat slowly
- c) Limit high-fat foods
- d) Eat energy-dense foods regularly

Answer: D

148. Which strategy would not help an underweight person to gain weight?

- a) Exercise
- b) Drink plenty of water
- c) Eat snacks between meals
- d) Eat large portions of foods

Answer: B

149. Which of the following statements is correct?

- a) Standard formulas contain whole proteins or protein isolates
- b) Standard formulas contain free amino acids or small peptide chains
- c) Hydrolyzed formulas are made from pure meats
- d) Hydrolyzed formulas may contain protein isolates or whole proteins

Answer: A

150. When client cannot meet nutrient needs from table foods due to a poor appetite it is recommended:

- a) parenteral nutrition is preferred over tube feedings
- b) parenteral nutrition is preferred over enteral formulas provided orally

- c) Enteral formulas are inappropriate
- d) Enteral formulas provided orally are preferred over formulas provided by tube feeding

Answer: D

151. For a client expected to be able to eat table foods in a month, but with a high risk of aspiration, an appropriate placement of a feeding tube would likely be:

- a) Nasogastric
- b) Nasoenteric
- c) Gastrostomy
- d) Jejunostomy

Answer: B

152. In selecting appropriate enteral formula for a client the primary consideration is the:

- a) Formula's osmolality
- b) Client's nutrient needs
- c) Availability of infusion pumps
- d) Formula's cost and availability

Answer: B

153. What step can health care professionals take to prevent bacterial contamination of tube feeding formulas?

- a) Deliver the formula continuously
- b) Do not change the feeding bag and attached tubing
- c) Discard all opened containers of formula not used within 24 hours
- d) Add formula to the feeding container before it empties completely

Answer: C

154. When compared to intermittent feedings, continuous feedings:

- a) Require a pump for infusion
- b) Allow greater freedom of movement
- c) Are more like normal patterns of eating

d) Are associated with more GI side effects

Answer: A

155. A client needs 1800 ml of formula a day. If the client is to receive the formula intermittently every 4 hours, he will need _____ ml of formula at each feeding:

a) 225

b) 300

c) 400

d) 425

Answer: B

156. The term that describes the volume of formula that remains in the stomach from a previous feeding is:

a) Residue

b) Osmolar load

c) Gastric residual

d) Intermittent feeding

Answer: C

157. The nurse using the feeding tube to deliver medications should recognize that:

a) Medications generally do not result in GI complaints.

b) Medications can be added directly to the feeding container.

c) Thick or sticky liquid medications and crushed tablets can clog feeding tubes.

d) Enteral formulas do not interact with medications in the same way that foods do.

Answer: C

158. Tube feedings can gradually be discontinued when:

a) Discharge planning begins

b) The client experiences hunger

c) The medical condition resolves

d) The client is able to eat foods or drink formula in sufficient amounts

Answer: D

159. Which of the following cannot be delivered intravenously?

- a) Dextrose
- b) Amino acids
- c) Lipid emulsions
- d) Hydrolyzed enteral formulas

Answer: D

160. A simple IV solution is most appropriate for people who are:

- a) Malnourished
- b) In high need of nutrients
- c) Not able to eat for long periods of time
- d) Well-nourished and are expected to eat in a few days

Answer: D

161. For a client receiving central TPN who also receives IV lipid emulsions two or three times a week, the lipid emulsions serve primarily as a source of:

- a) Vitamin C
- b) Essential fatty acids
- c) Fat-soluble vitamins
- d) Concentrated energy

Answer: B

162. Compared to solutions delivered by peripheral vein, solutions delivered by central vein provide:

- a) more fat, less dextrose.
- b) more dextrose, less fat.
- c) a lower osmolality.
- d) more vitamins and minerals.

Answer: B

163. Among the following, the people least likely to benefit from PPN are those:

- a) who need long-term IV nutrition support.

- b) on oral or tube feedings who need additional nutrition temporarily
- c) with normal renal function who need short-term IV support.
- d) in whom inserting an IV catheter into a central vein would be difficult.

Answer: A

164. The person who is a good candidate for central TPN rather than PPN:

- a) is well-nourished.
- b) does not have high nutrient requirements.
- c) needs long-term parenteral nutrition support.
- d) has strong peripheral veins and moderate nutrient needs.

Answer: C

165. The health care team evaluating a client's ability to manage a home enteral or parenteral nutrition program would be least concerned with:

- a) the client's financial resources.
- b) the client's psychological status.
- c) the exact composition of the enteral formula or IV solution.
- d) the client and caregivers' abilities to learn the necessary techniques and follow medical instructions.

Answer: C

166. In surgical patient's severe stresses describe as:

- a) chronic malnutrition.
- b) tissue damage and hyper metabolism.
- c) reduced protein synthesis in the liver
- d) hormonal changes that protect skeletal muscle.

Answer: B

167. Cytokines are proteins that:

- a) repair damaged tissues
- b) destroy microorganisms
- c) direct stress responses

- d) oppose insulin's action and result in the catabolism of protein in skeletal muscle, liver and the gut

Answer: C

168. If the immune system fails to control an infection following a severe stress, the most serious complication that can occur from the list below is:

- a) sepsis.
- b) catabolism of protein.
- c) essential fatty acid deficiency.
- d) low serum albumin and transferrin.

Answer: A

169. Which of the following metabolic changes accompany acute stress?

- a) proteins are broken down in the liver.
- b) protein synthesis in the liver decreases.
- c) the body conserves protein as it does in simple fasting.
- d) proteins are broken down in skeletal muscle, connective tissue, and gut.

Answer: D

170. All of the following parameters help to assess a person's fluid needs during stress except:

- a) urinary output.
- b) nitrogen balance.
- c) blood pressure.
- d) body temperature.

Answer: B

171. Which of the following statements correctly describes an appropriate diet for severe stress?

- a) the diet is always high calories.
- b) the diet has little effect on blood glucose levels.
- c) the amounts of carbohydrates, lipids, and proteins that supply energy make little difference.
- d) although the diet must supply adequate energy, energy needs are generally not high, except for some people with extensive burns or head injuries.

Answer: D

172. Depending on the type of stress, the amount of protein a stressed person who weighs 150pounds needs can range from about _____ gm of protein per day
- a) 100 to 150
 - b) 151 to 200
 - c) 201 to 250
 - d) 251 to 300

Answer: A

173. The use of oral diets in the immediate post-stress period is not possible because severe stress
- a) slows gastric motility.
 - b) decreases the appetite.
 - c) alters plasma amino acid levels.
 - d) results in increased blood flow to the GI tract.

Answer: A

174. Which of the following statements with respect to nutrition and severe stress is true?
- a) a person with preexisting malnutrition who suffers an acute stress does not require immediate attention to energy and nutrient needs.
 - b) a previously well-nourished person can develop acute malnutrition if the stress is extreme or prolonged.
 - c) a person with either acute or preexisting malnutrition has the energy reserves and protein needed to respond successfully to stress.
 - d) a person with malnutrition who suffers an acute stress generally does not need tube feedings or TPN unless he will be unable to eat for 7 to 10 days.

Answer: B

175. The major reason early enteral nutrition must be introduced by tube following a severe stress is that:
- a) appetite is depressed.

- b) hydrolyzed diets are necessary.
- c) gastric feeding is not medically possible.
- d) oral diets cannot meet energy and nutrient needs.

Answer: C

176. Oral diets after bone marrow transplants may

- a) limit calcium.
- b) test tolerance for lactose.
- c) restrict high-protein foods.
- d) restrict raw fruits and vegetables.

Answer: D

177. Mouth sores in people with HIV infections are most frequently due to

- a) dehydration.
- b) oral infections.
- c) malabsorption.
- d) food-borne illnesses.

Answer: B

178. A tube feeding or TPN is most likely to benefit people with cancer or HIV infection if

- a) they do not wish to prolong their lives.
- b) no further treatments are available to them.
- c) they have been told they have no other alternatives.
- d) malnutrition may have an undesirable effect on their ability to receive additional treatments.

Answer: D

179. Which of the following statements is true with respect to the diarrhea that often occurs as a consequence of HIV infection?

- a) mega doses of vitamin C can help resolve it.
- b) HIV and secondary infections can play roles in its development.
- c) fibers from wheat bran and raw vegetables are useful in controlling it.

d) diarrhea can always be corrected with appropriate nutrition therapy and fluid replacement.

Answer: B

180. Which people are most prone to infections arising from foods, enteral formulas, and TPN?

- a) people who have undergone radiation therapy.
- b) people with oral infections or cancer of the GI tract.
- c) people who have undergone chemotherapy or surgery.
- d) people with HIV infections or those who have undergone bone marrow transplants.

Answer: D

181. The changes in body fat seen in some people with HIV infections include

- a) increased central and peripheral fat.
- b) decreased central and peripheral fat.
- c) increased central and decreased peripheral fat.
- d) decreased central and increased peripheral fat.

Answer: C

182. Which of the following statements is true?

- a) People with HIV infections may gain weight.
- b) People with cancer never have to worry about gaining weight.
- c) People with cancer never have to worry about losing weight.
- d) People with HIV infections never have to worry about losing weight.

Answer: A

183. Which of the following is not a function of the kidneys?

- a) activation of vitamin K.
- b) maintenance of acid-base balance.
- c) elimination of metabolic waste products.
- d) maintenance of fluid and electrolyte balance.

Answer: A

184. Treatment for all kidney stones includes

- a) a protein-restricted diet.
- b) a methionine- restricted diet.
- c) a calcium intake that meets but does not exceed the DRI.
- d) a fluid intake to maintain urine volume of at least 2 liters a day.

Answer: D

185. People with calcium oxalate stones may benefit from diets that restrict

- a) oxalate and sodium.
- b) calcium and potassium
- c) protein and methionine.
- d) calcium and phosphorus.

Answer: A

186. A person with nephrotic syndromes is prone to infections due to loss of

- a) albumin.
- b) transferrin.
- c) lean body mass.
- d) immunoglobulins.

Answer: D

187. Diet recommendations for the nephrotic syndrome include

- a) no diet restrictions
- b) sodium restriction
- c) protein intake that are less than RDA
- d) protein intake that are 1.5 to 2.0 times the RDA.

Answer: B

188. The electrolytes that may rise rapidly in people with acute renal failure who are catabolic include:

- a) sodium, phosphorus, and calcium.

- b) sodium, potassium, and phosphorus
- c) potassium, and phosphorus
- d) potassium, phosphorus, calcium, and magnesium.

Answer: C

189. The health care team estimates fluid requirements for clients with acute renal failure by adding..... ml to the amount of urine output.

- a) 100
- b) 300
- c) 500
- d) 750

Answer: C

190. Complications commonly associated with chronic renal failure may include

- a) growth failure and renal colic.
- b) nausea, vomiting, and reflux esophagitis.
- c) anemia, edema, and potassium deficiency.
- d) anemia, bone disease, cardiovascular disease, and malnutrition.

Answer: D

191. Which of the following nutrients may be unintentionally restricted when a person follows a renal diet?

- a) fluid.
- b) calcium.
- c) potassium.
- d) phosphorus.

Answer: B

192. the health care professional recognizes that compared to the person with renal failure who is not on dialysis, the diet of a person on dialysis is:

- a) lower in protein.

- b) higher in protein.
- c) lower in potassium, and phosphorus.
- d) higher in potassium, and phosphorus.

Answer: B

193. Which of the following diet strategies would be most appropriate for helping to reverse fatty liver associated with diabetes mellitus?

- a) low-protein diet.
- b) fat-restricted diet.
- c) fluid-and sodium- restricted diet.
- d) energy to achieve or maintain a desirable weight with consistent intake of carbohydrate.

Answer: D

194. Which of the following statements about hepatitis is true?

- a) chronic hepatitis can progress to cirrhosis.
- b) Regardless of the type of hepatitis, symptoms are severe.
- c) people with hepatitis always need high-calorie, high- protein diet.
- d) HCV infections are often mild and can be spread through contaminated food and water.

Answer: A

195. The consequences of cirrhosis primarily due to:

- a) chronic malnutrition.
- b) chronic alcohol abuse.
- c) liver cell damage and altered hepatic blood flow.
- d) elevated blood ammonia, amino acid, and sodium levels.

Answer: C

196. Esophageal varices are a dangerous complication primarily because they:

- a) interfere with the food intake.
- b) can lead to massive bleeding.
- c) divert blood flow from the GI tract.

d) cause portal hypertension and collateral development.

Answer: B

197. The condition (s) in liver disease most likely to lead to ascites is (are)

- a) portal hypertension.
- b) rising blood ammonia levels.
- c) elevated serum albumin levels.
- d) insulin resistance and diabetes mellitus.

Answer: A

198. For the person with cirrhosis short-term memory loss and an inability to concentrate are signs of:

- a) coma.
- b) encephalopathy.
- c) hyperammonemia.
- d) hepatorenal syndrome.

Answer: B

199. Medical nutrition therapy for people with cirrhosis includes diets that are

- a) restricted in fat
- b) high calories - high protein
- c) based on symptoms and responses to treatment
- d) restricted in protein, carbohydrate, sodium, and fluid

Answer: C

200. which of the following statements regarding diet and cirrhosis is false?

- a) people with ascites need to restricted sodium.
- b) people with steatorrhea may need to restrict fat.
- c) people with ascites and low blood sodium levels need to restrict sodium and fluid.
- d) people who are protein sensitive always need to restricted protein to 0.5 to 0.7 grams of protein per day.

Answer: D

201. With respect to vitamins and minerals, people with cirrhosis

- a) may develop calcium deficiencies.
- b) seldom require nutrient supplements.
- c) frequently develop vitamin C deficiencies.
- d) may develop clotting abnormalities associated with vitamin A deficiency

Answer: A

202. for the person undergoing a liver transplant

- a) immunosuppressant drugs seldom alter nutrient needs.
- b) enteral nutrition is contraindicated following the transplant.
- c) attention to nutrition before a transplant improves chances of recovery.
- d) status before surgery has little impact on recovery

Answer: C

203. A health care professional advising an elderly client with constipation eat a

- a) low-fat diet rich in potassium
- b) low-fiber diet rich in calcium
- c) diet rich in fiber and drink plenty of fluids.
- d) gluten-free diet rich in protein.

Answer: C

204. Patient with permanent lactose intolerance should follow a lactose-restricted diet which:

- a) include lactose-containing foods according to individual tolerances
- b) strictly limit lactose from all sources.
- c) require the use of lactose-containing digestive aids.
- d) require careful review of the client's intakes of folate and vitamin B12.

Answer: A

205. Nutritional problems associated with fat malabsorption syndromes typically include all the following except;

- a) weight loss and PEM
- b) essential amino acid deficiencies
- c) bone disease
- d) oxalate kidney stones

Answer: B

206. Client with chronic pancreatitis benefits from the following

- a) follow a very-low-fat diet.
- b) moderately restrict alcohol.
- c) eat three meals a day and avoid snacks.
- d) use enzyme replacements to improve fat absorption

Answer: D

207. Dietary recommendations for people with cystic fibrosis include

- a) limited use of table salt
- b) a high-calorie, high-protein diet
- c) a fat-restricted diet
- d) a fluid restriction

Answer: B

208. The dietitian working with a client with an inflammatory bowel disease recognizes that all of the following can affect nutrient needs except:

- a) the portion of the intestinal tract affected by disease
- b) medications.
- c) dumping syndrome.
- d) fistulas.

Answer: C

209. The common nutrition problems associated with bacterial overgrowth in the stomach and small intestine include

- a) sensitivity to gluten and gliadin
- b) fat malabsorption and vitamin B12 deficiencies
- c) increased absorption of bile salts and constipation
- d) permanent loss of digestive enzymes

Answer: B

210. The health care professional recognizes that a client understands the basic of a gluten-free diet when the client states

- a) "I must avoid all products containing barley, soy-beans, and corn".
- b) "I must avoid all products containing wheat, barley, rye, and oats".
- c) "I must avoid all products containing wheat, barley, and rye".
- d) "I must limit my use of products containing wheat, barley, rye, and oats"

Answer: C

211. Diets for people who have undergone extensive intestinal restrictions but whose colons remain intact should be

- a) gluten-free
- b) low in simple sugars and high in protein and fat
- c) low in carbohydrate to prevent lactose intolerance
- d) high complex carbohydrate and restricted in fat

Answer: D

212. Long-term management of diverticular disease includes a

- a) high-fiber diet
- b) low-fiber diet that omits foods with seeds.
- c) high-fiber, lactose-free diet
- d) low-fiber, lactose-free diet

Answer: A

213. The health care professional working with a client on a mechanical soft diet recognizes that
- a) only pureed foods should be given to minimize the risk of aspiration.
 - b) the client can have any food that can be comfortably and safely chewed and swallowed.
 - c) highly seasoned foods are always restricted.
 - d) such diets cannot be planned to meet total nutrient and supplements are always necessary.

Answer: B

214. For people with dysphagia:
- a) the diet requires a great deal of experimentation to uncover which foods the person can tolerate.
 - b) meals should be eaten in bed with the head tilted back.
 - c) the diet is based on health care team's assessment of the person's ability to handle different foods.
 - d) coughing during meals indicates that the person is able to clear the throat and is not at risk for aspiration.

Answer: C

215. Reflux esophagitis is
- a) an inflammation of the esophagus caused by the backflow of acidic gastric juices from the stomach.
 - b) a protuberance of a portion of the stomach above the cardiac sphincter
 - c) an erosion of the lining of the stomach caused by excess acid in gastric juices.
 - d) an obstruction of the lower esophagus that results in dysphagia.

Answer: A

216. The health care professional working with a client with reflux esophagitis recognizes that the client understands her diet when she says
- a) "I need to eat three meals a day and drink liquids with my meals".
 - b) "I need to eat food slowly, relax during meals and lie down after meals".
 - c) "I need to drink more citrus juices and tomato based products at the first sign of heartburn".
 - d) "I need to limit my intake of fat, alcohol, caffeine, and decaffeinated coffee, and tea".

Answer: D

217. For client with persistent vomiting, the major nutrition-related concern(s) is/are:

- a) dehydration and malnutrition
- b) reflux esophagitis
- c) emotional distress
- d) peptic ulcer

Answer: A

218. Dietary suggestions that help client with gastritis or active ulcer discourage foods that

- a) are high in fiber
- b) irritate the gastric mucosa
- c) are easy to chew and swallow.
- d) contain simple sugar

Answer: B

219. Nutrition concerns most commonly associated with chronic gastritis include

- a) malnutrition and pernicious anemia.
- b) iron-deficiency anemia and protein malabsorption.
- c) dumping syndrome and pernicious anemia.
- d) dehydration and electrolyte imbalances

Answer: A

220. Which of the following snacks would be an appropriate choice for a client on a post-gastrectomy diet?

- a) milk shake.
- b) saltine crackers with peanut butter.
- c) cookies and milk.
- d) eggnog.

Answer: B

221. The health professional assessing a client who underwent a gastrectomy three years ago should be alert to signs of
- a) problems with chewing and swallowing.
 - b) vitamin C deficiency.
 - c) zinc deficiency.
 - d) iron-deficiency anemia.

Answer: D

222. To conduct complete nutrition assessments, dietitians rely on several sources of information, which include all of the following except
- a) nutrition care plane.
 - b) body measurement.
 - c) health, medication, personal, and diet histories.
 - d) physical findings.

Answer: A

223. Both height and weight measurements
- a) are affected by fluid status.
 - b) cannot be taken on bedridden clients.
 - c) are routine measurements in health care facilities.
 - d) require equipment that is not readily available in most health care facilities.

Answer: C

224. The %IBW of a person who weighs 185 pounds and has a desirable body weight of 150 pounds is
- a) 123 percent.
 - b) 150 percent.
 - c) 23 percent.
 - d) 50 percent.

Answer: A

225. A client has just begun to eat after days without significant amounts of food. Which of the following laboratory tests would be expected to respond most quickly to changes in energy and protein intake?

- a) albumin.
- b) transferrin.
- c) total lymphocyte count.
- d) retinol-binding protein.

Answer: D

226. Physical signs of PEM might include all of the following expect:

- a) low serum albumin.
- b) dull, brittle hair.
- c) poor grip strength.
- d) wasted appearance

Answer: A

227. Over-the-counters and prescription medications

- a) must be use under the supervision of a physician.
- b) cannot make health claims.
- c) do not require approval of the FDA prior to reaching the market.
- d) require research to support their safety and effectiveness before they reach the market

Answer: D

228. For a client taking the antibiotic tetracycline, which foods and medications should not be taken the same time as the tetracycline?

- a) milk, calcium-containing antacids, mineral supplements.
- b) milk, calcium-containing antacids, folate supplements.
- c) grapefruit juice, caffeine, mineral supplements.
- d) grapefruit juice, Milk, calcium-containing antacids.

Answer: A

229. A client is taking the anticoagulant warfarin. The health care professional should periodically evaluate the client's intake of
- a) Folate.
 - b) vitamin K, herbs, and dietary supplements.
 - c) vitamin D, caffeine, oxalates, and phytate
 - d) calcium, vitamin D, caffeine, and licorice.

Answer: B

230. Which of the following tools and methods that are not used for evaluating dietary intakes?
- a) Standards of recommended nutrient intake
 - b) Food guides
 - c) Anthropometric measurements
 - d) Dietary guidelines

Answer: C

231. The food exchange system is a method of planning meals that helps in the following except
- a) in controlling energy consumption.
 - b) ensure adequate nutrient intake.
 - c) allows variety in food selection.
 - d) prepare meals for large groups.

Answer: D

232. Among the weaknesses of the 24-Hour Recall method of assessment that it is
- a) Inexpensive.
 - b) easy to administer.
 - c) low respondent burden.
 - d) relies on memory.

Answer: D

233. Among the weaknesses of Food Record Method of assessment that it is
- a) does not depend on memory.

- b) can provide detailed intake data.
- c) can provide data about eating habits.
- d) requires a lot of cooperation.

Answer: D

234. Among the weaknesses of Food Frequency Questionnaires

- a) self-administrated.
- b) machine readable.
- c) modest demand on respondents.
- d) subject needs to describe diet

Answer: D

235. which nutrients seem to protect against cataract development:

- a) minerals.
- b) Lecithin.
- c) Antioxidants.
- d) amino acids.

Answer: D

236. the best advice for a person with osteoarthritis might be to

- a) void milk products.
- b) take a fish oil supplements.
- c) take vitamin E supplements.
- d) lose weight, if overweight.

Answer: D

237. which characteristic is not commonly associated with atrophic gastric?

- a) inflamed stomach.
- b) vitamin B12 toxicity.
- c) bacterial overgrowth.
- d) lack of intrinsic factor.

Answer: B

238. Pregnant women should not take supplements of

- a) Iron.
- b) folate.
- c) vitamin A.
- d) vitamin C.

Answer: C

239. To help prevent neural tube defect, grain products are now fortified with

- a) iron.
- b) folate.
- c) protein.
- d) vitamin C.

Answer: B

240. An individual has maintained his weight at 170 pounds on his normal diet which provides 2500 calories daily. If he wants to lose 10 pounds in 70 days he will have to reduce his daily total caloric intake to:

- a) 1800 kcal
- b) 1900 kcal
- c) 2000 kcal
- d) 2100 kcal

Answer: C

241. Body mass index is defined as:

- a) $\text{body weight in pounds}/(\text{height in feet})^2$.
- b) $\text{body weight in kilograms}/\text{weight in meters}$.
- c) $\text{body weight in pounds}/(\text{height in meters})^2$.
- d) $\text{body weight in kilograms}/(\text{height in meters})^2$.

Answer: D

242. An excessive intake of one of the following for several years causes teeth to become discolored and mottled:
- a) fluorine.
 - b) cobalt.
 - c) chromium.
 - d) nickel.

Answer: A

243. One of the following is an index of body muscle mass
- a) urinary excretion of methyl histidine.
 - b) urinary excretion of methyl lysine.
 - c) urinary excretion of urea.
 - d) urinary excretion of methyl arginine

Answer: A

244. One gram of aspartame provides:
- a) no calories.
 - b) 1 calorie.
 - c) 2 calories.
 - d) 4 calories.

Answer: D

245. Refsum's disease is caused by:
- a) a defect in the metabolism of phytanic acid.
 - b) a deficiency of copper.
 - c) a deficiency of selenium.
 - d) a defect in the metabolism of branched-chain amino acids.

Answer: A

246. As compared to adults the new born and especially premature infants, have reduced ability to synthesize from the endogenous precursor one of the following
- a) bilirubin.
 - b) cysteine.
 - c) tyrosine.
 - d) glycine.

Answer: B

247. Patients with celiac disease are especially sensitive to
- a) fructose.
 - b) fava beans.
 - c) gluten.
 - d) sorbitol.

Answer: C

248. In healthy adult's dietary deficiency of one of the following leads to negative nitrogen balance
- a) glycine.
 - b) serine.
 - c) cysteine.
 - d) leucine.

Answer: D

249. All of the following elevate total serum cholesterol levels, EXCEPT
- a) dietary cholesterol.
 - b) alcohol.
 - c) saturated fat.
 - d) obesity.
 - e) excess total dietary fat.

Answer: E

250. High consumption of simple sugars is associated with:

- a) elevated total cholesterol.
- b) elevated triglycerides.
- c) decreased HDL cholesterol.
- d) both a & b

Answer: D

251. How could a patient receiving insulin become overweight?

- a) insulin injections contain many calories.
- b) insulin leads to muscle inactivity.
- c) insulin increases lipogenesis.
- d) insulin stimulates hormone sensitive lipase.

Answer: C

252. Which of the sugars would be most likely beneficial for patients with diabetic neuropathy

- a) Fructose
- b) Galactose
- c) Inositol
- d) Sorbitol

Answer: C

253. In human, the majority of uric acid excretion is accomplished by

- a) bacterial oxidation of uric acid in the gut.
- b) Xanthine oxidase conversion of uric acid to xanthine.
- c) Renal excretion of filtered uric acid.
- d) Xanthine conversion to hypoxanthine.

Answer: C

254. Cholesterol normally is used by the body for all of the following EXCEPT

- a) in cell membranes.
- b) in the gut as a component of bile.

- c) in steroid synthesis.
- d) in the nuclei of myocardial cells.

Answer: D

255. The components of a nutritional assessment include

- a) Physical examination and Dietary assessment and Anthropometric measurements.
- b) dietary assessment & Laboratory tests.
- c) anthropometric measurements & Physical examination.
- d) physical examination, Dietary assessment, Anthropometric measurements, Laboratory tests.

Answer: D

256. Which of the following anthropometric measurements and comments is/are correct?

- a) triceps skinfold thickness: a good indicator of body fat or calorie reserves, height and weight: recent weight loss exceeding 10% of the usual weight is indicative of a need for nutritional assessment, mid-arm muscle circumference; indirect indicator of lean body or muscle mass.
- b) triceps skinfold thickness: a good indicator of body fat or calorie reserves, mid-arm muscle circumference; indirect indicator of lean body or muscle mass.
- c) height and weight: recent weight loss exceeding 10% of the usual weight is indicative of a need for nutritional assessment, anthropometry in children; not important, since they grow so rapidly.
- d) anthropometry in children; not important, since they grow so rapidly.

Answer: A

257. Which of the following laboratory tests and comments is/ are correct?

- a) serum albumin: indicator of prolonged protein depletion, creatinine height index: indicates the status of visceral protein in the body, serum transferrin: protein that transports iron and is a sensitive indicator of PCM.
- b) serum albumin: indicator of prolonged protein depletion, serum transferrin: protein that transports iron and is a sensitive indicator of PCM.
- c) creatinine height index: indicates the status of visceral protein in the body, stools: examined for the presence of water and fat-soluble vitamins.
- d) stools: examined for the presence of water and fat-soluble vitamins.

Answer: C

258. Which of the following are ways in which a dietary history is important for a hospitalized person?
- a) identifies the patient who is at high risk of having or developing a nutritional problem, finds out which foods are acceptable to the patient, serves as a check on the findings of the clinical examination.
 - b) identifies the patient who is at high risk of having or developing a nutritional problem, serves as a check on the findings of the clinical examination.
 - c) finds out which foods are acceptable to the patient, indicates the patient's current dietary deficiencies.
 - d) indicates the patient's current dietary deficiencies.

Answer: A

259. Absorption of drugs after oral administration is governed by the following factors in the gastrointestinal tract:
- a) pH, secretions, motility
 - b) secretions, length of the tract
 - c) length of the tract.
 - d) Motility.

Answer: A

260. Enteric-coated drugs such as _____ when administered with foods, result in _____.
- a) griseofulvin (Fulvicin) and ferrous sulfate (Entron) - increased alkalinity and decreased absorption.
 - b) aspirin and erythromycin - increased alkalinity and increased absorption.
 - c) griseofulvin (Fulvicin) and ferrous sulfate (Entron) - increased acidity and increased absorption
 - d) aspirin and erythromycin - increased acidity and increased absorption

Answer: D

261. Iron supplements such as ferrous sulfate (Entron, Feosol) are absorbed better when taken with ____ due to ____.
- a) base-forming foods - increased basicity changing ferric iron to the more absorbable ferrous form.

- b) acid-forming foods - increased acidity changing iron from the ferrous to the ferric form.
- c) base-forming foods - increased basicity changing iron from the ferrous to the ferric form.
- d) acid-forming foods - increased acidity changing iron from the ferric to the ferrous form.

Answer: D

262. The excretion of an acidic drug like Phenobarbital is ____ by the urine pH becoming more ____.

- a) decreased – acidic.
- b) increased – basic.
- c) decreased – basic.
- d) a & b.

Answer: D

263. Laxative-cathartic drugs such as phenolphthalein and bisacodyl (Dulcolax) can cause decreased absorption of:

- a) water
- b) potassium
- c) sodium
- d) all of the above.

Answer: D

264. Many elderly persons take antacids containing aluminum and magnesium hydroxide. Large doses of aluminum hydroxide can result in _____ and magnesium hydroxide can result in _____.

- a) constipation – diarrhea.
- b) dehydration - gastric ulcers.
- c) decreased iron absorption - macrocytic anemia.
- d) none of the above.

Answer: A

265. Elderly persons frequently take aspirin for rheumatoid arthritis and, when taken chronically without meals, it can result in:

- a) gastric irritation.
- b) gastric bleeding.
- c) iron deficiency anemia.
- d) all of the above.

Answer: D

266. Noninsulin diabetics who take oral hypoglycemic agents such as tolbutamide (Orinase) need to be counseled to:

- a) consume a low-carbohydrate diet.
- b) consume an adequate and regular diet.
- c) be aware that consumption of alcohol can result in facial flushing, nausea, and vomiting.
- d) b & c

Answer: D

267. The advantages of enteral nutrition are

- a) the intra cellular effect, infusion of hypertonic solutions and a normal insulin – glucagons ratio.
- b) the intracellular effect and a normal insulin glucagon ratio.
- c) infusion of hypertonic solutions, safety.
- d) safety.

Answer: C

268. Which of the following is (are) not correctly paired for tube feedings?

- a) elemental formula - contains proteins, fats, and carbohydrates; isotonic and supplies 1kcal/ml.
- b) isotonic formula - contains monosaccharides and amino acids that require digestion; hypertonic.
- c) fluid restriction formula - highly concentrated source of calories; hypertonic and supplies 2 kcal/ml.
- d) a & b

Answer: D

269. Conditions that can benefit from parenteral nutrition are

- a) anorexia nervosa, cancer of the gastrointestinal tract and shock.
- b) anorexia nervosa and shock.

- c) cancer of the gastrointestinal tract and malabsorption.
- d) malabsorption.

Answer: D

270. Three important reasons for including fat emulsions in parenteral solutions are:

- a) Provide concentrated calories in a hypertonic solution; provide essential amino acids; enable fat-soluble vitamins to be absorbed.
- b) Concentrated calories in an isotonic solution; provide essential fatty acids; enable absorption of fat-soluble vitamins.
- c) Provide nitrogen for tissue repletion; provide linoleic acid; enable absorption of water-soluble vitamins.
- d) none of the above.

Answer: B

271. A TPN solution is composed of the following nutrients:

- a) dextrose, cholesterol, proteins, vitamins, and minerals.
- b) starch, fatty acids, proteins, minerals, and water.
- c) sucrose, linoleic acid, proteins, minerals, and vitamins.
- d) dextrose, fatty acids, amino acids, vitamins, and mineral.

Answer: D

272. TPN solutions infused into peripheral veins differ from those infused into central veins by

- a) containing amino acids, dextrose, fatty acids, vitamins, and minerals.
- b) containing fewer calories and having a lower osmolality.
- c) containing more calories and having a higher osmolality.
- d) containing dextrose only.

Answer: B

273. Two advantages of central vein TPN compared to peripheral TPN are ____ and ____.

- a) continued over a longer period of time - achieve repletion of tissues.
- b) use of a less concentrated solution - less chance of hyperglycemia.
- c) less chance of infection - easier access to veins.

d) none of these.

Answer: A

274. Metabolic complications from the use of central vein TPN are

- a) hypoglycemia, azotemia & hyperammonemia
- b) hypoglycemia & hyperammonemia
- c) azotemia & hyperglycemia
- d) all of the above

Answer: D

275. A possible sequence of events that could lead to the development of diabetes mellitus type I is:

- a) recognition of degraded pancreas tissue by HLA cells, islet cell antibodies attack and destroy beta cells and virus invades and causes the release of degraded pancreas beta cell tissue.
- b) islet cell antibodies attack and destroy beta cells, virus invades and causes the release of degraded pancreas beta cell tissue, recognition of degraded pancreas tissue by HLA cells and decreased secretion of insulin followed by diabetes mellitus type I
- c) virus invades and causes the release of degraded pancreas beta cell tissue, islet cell antibodies attack and destroy beta cells, recognition of degraded pancreas tissue by HLA cells and decreased secretion of insulin followed by diabetes mellitus type I
- d) islet cell antibodies attack and destroy beta cells, virus invades and causes the release of degraded pancreas beta cell tissue, recognition of degraded pancreas tissue by HLA cells and decreased secretion of insulin followed by diabetes mellitus type I

Answer: D

276. Which of the following is (are) correctly paired when a person has an increased secretion of insulin?

- a) decreased blood glucose - increased uptake of glucose and synthesis of glycogen in the liver.
- b) increased blood fatty acids - increased breakdown of stored fats.
- c) decreased blood amino acids - increased uptake of amino acids and synthesis of proteins by muscle cells.
- d) a & c

Answer: D

277. Which of the following tests are indicative of diabetes or inadequate diabetic control?

- a) fasting blood glucose level of 110 mg/dL on two separate occasions, 1% glucose level in urine & oral glucose tolerance test (OGTT) values of 150 mg/dL at 1 hour and 130 mg/dL at 2 hours.
- b) 1% glucose level in urine.
- c) 1% glucose level in urine, oral glucose tolerance test (OGTT) values of 150 mg/dL at 1 hour and 130 mg/dL at 2 hours.
- d) fasting blood glucose level of 110 mg/dL on two separate occasions, oral glucose tolerance test (OGTT) values of 150 mg/dL at 1 hour and 130 mg/dL at 2 hours.

Answer: B

278. Two basic criteria determine the amount of insulin a patient with DM type I needs: -__ and ____

- a) stage of growth - activity level.
- b) age – weight.
- c) basal metabolic rate – age.
- d) time of meals - total calorie intake

Answer: A

279. Situations that might cause hypoglycemia or an insulin reaction are:

- a) overdose of insulin, under eating & excessive exercise
- b) overdose of insulin & excessive exercise
- c) under eating & edema
- d) Edema

Answer: A

280. Symptoms of hypoglycemia are:

- a) agitation, nervousness, trembling, vomiting & normal to rapid shallow breathing.
- b) agitation, nervousness, trembling & normal to rapid shallow breathing.
- c) vomiting & lack of hunger (appetite).
- d) lack of hunger (appetite)

Answer: B

281. A diet composition for an DM type I should be _____ % of total daily calories.

- a) carbohydrates 50 - 60; proteins, 20; fats 30.
- b) carbohydrates, 30 - 40; proteins, 30; fats 30.
- c) carbohydrates, 20 - 30; proteins, 30; fats 40.
- d) carbohydrates, 10 - 15; proteins, 50; fats 30.

Answer: A

282. The benefit to a diabetic from a high-fiber diet is to ____ and a high-fiber diet is defined as dietary fiber that exceeds _____ g/day.

- a) help prevent hypoglycemia – 20.
- b) prevent a rapid rise in glucose level after a meal - 40
- c) prevent hyperglycemia - 30
- d) prevent colon cancer – 50

Answer: B

283. The treatment of DM type II consists of the following;

- a) low-calorie weight loss diet, increased exercise & oral hypoglycemic drugs for some DM type II patient
- b) low-calorie weight loss diet & oral hypoglycemic drugs for some DM type II patient
- c) Increased exercise & eating large amount of dietetic foods.
- d) eating large amount of dietetic foods

Answer: A

284. Hiatal hernia is characterized by:

- a) possibly being caused by aging and obesity, complaints of heartburn, reflux, and difficulty in swallowing, & diet therapy consisting of a bland diet and small, frequent feedings.
- b) possibly being caused by aging and obesity, diet therapy consisting of a bland diet and small, frequent feedings.
- c) complaints of heartburn, reflux, and difficulty in swallowing & no food being eaten 3 - 4 hours before bedtime.

d) all the above

Answer: D

285. Current dietary therapy for peptic ulcer includes:

- a) six small meals per day, a bedtime snack & consumption of whole milk as opposed to skim milk.
- b) six small meals per day & consumption of whole milk as opposed to skim milk.
- c) inclusion of a bedtime snack & limitation of black pepper, chili powder, and nicotine.
- d) consumption of whole milk as opposed to skim milk.

Answer: D

286. The dietary treatment for control of dumping syndrome is (are):

- a) an increased quantity of food at three meals, avoidance of simple sugars & drinking liquids with meals
- b) an increased quantity of food at three meals & drinking liquids with meals.
- c) avoidance of simple sugars, increasing the number of calories from polyunsaturated fat and proteins.
- d) increasing the number of calories from polyunsaturated fat and proteins.

Answer: C

287. Long-range nutritional problems that are possible following a subtotal gastrectomy are:

- a) hypocalcemia and osteoporosis, iron deficiency and pernicious anemia & fear of eating.
- b) hypocalcemia and osteoporosis, fear of eating.
- c) iron deficiency and pernicious anemia, high blood cholesterol level.
- d) high blood cholesterol level.

Answer: A

288. Infants who have congenital lactose intolerance can obtain necessary nutrients from

_____ and adults with secondary lactose intolerance can tolerate partially fermented dairy products such as _____ .

- a) fat formulas - skim milk and skim cheese.
- b) soybean - cottage cheese and buttermilk formulas.
- c) sucrose - low-fat butter and ice cream formulas.
- d) Whole milk-skim milk.

Answer: B

289. Initial treatment of an acute attack of diverticulitis consists of

- a) a high-fiber diet, stool softeners, a high-residue diet.
- b) a high-fiber diet, a high-residue diet.
- c) stool softeners, a liquid diet.
- d) a liquid diet.

Answer: C

290. Dietary and drug therapy for ulcerative colitis includes:

- a) total parenteral nutrition, decreased amounts of raw fruit and vegetables, iron and vitamin B12 supplements.
- b) decreased amounts of raw fruit and vegetables, administration of anticholinergic drugs.
- c) administration of anticholinergic drugs.
- d) all the above.

Answer: D

291. Major changes in a cirrhosis patient that leads to the development of ascites are:

- a) decreased albumin, portal hypertension, hyperaldosteronism
- b) decreased albumin, hyperaldosteronism
- c) portal hypertension, decreased bile production
- d) decreased bile production

Answer: A

292. Two sources of ammonia that can result in hepatic coma are _____ and _____

- a) deamination of amino acids - intestinal bacteria from the gastrointestinal tract
- b) conversion of urea in the liver - preformed ammonia in foods
- c) portal vein - liver
- d) all the above

Answer: A

293. Cholelithiasis and cholecystitis patients may receive relief from a diet that consists of
- a) low fat (60 - 80g/day), high protein (1.5g/kg/day), high carbohydrate (300 - 400g/day).
 - b) low fat (40g/day), normal protein (0.8 g/kg), decreased calories for weight loss.
 - c) moderate fat (90 - 120g/day), low protein (0.4 g/kg), normal carbohydrate (50% of total calories).
 - d) low fat (60 - 80g/day), low protein (0.4g/kg), high carbohydrate (400 - 500g/day).

Answer: B

294. Cystic fibrosis patients experience great difficulty in digesting and absorbing nutrients, especially fats; the reason is _____

- a) damage to the liver
- b) thick mucus blocks the secretion of enzymes from the pancreas
- c) there is no bile from the gallbladder
- d) an acidic condition in the stomach destroys enzymes

Answer: B

295. Dietary treatment for cystic fibrosis includes:

- a) high protein (6 - 8 g/kg) for growth, low calories for weight loss, high carbohydrate intake but a decrease in complex carbohydrates, since they require the enzyme amylase for digestion.
- b) high protein (6 - 8 g/kg) for growth, high carbohydrate intake but a decrease in complex carbohydrates, since they require the enzyme amylase for digestion.
- c) low calories for weight loss, low salt level due to the presence of edema.
- d) low salt level due to the presence of edema.

Answer: B

296. Modifiable risk factors in developing atherosclerosis include:

- a) elevated blood lipid levels, cigarette smoking, diabetes mellitus.
- b) elevated blood lipid levels & diabetes mellitus.
- c) cigarette smoking & age.
- d) age.

Answer: A

297. Which of the following presents the steps, in the proper sequence, for a stepped care treatment program for hypertension?

- a) dietary sodium restriction, drug therapy, weight control measures, and moderate exercise
- b) drug therapy, moderate exercise, weight control measures, and dietary sodium restriction
- c) dietary sodium restriction, weight control measures, moderate exercise, and drug therapy
- d) all of the above.

Answer: C

298. The mechanism of a low-sodium diet in lowering blood pressure is initial reduction of _____ which is followed by reduction of _____

- a) blood cholesterol—body weight and blood pressure.
- b) the volume of extracellular fluid—work on the heart and peripheral resistance.
- c) edema - sodium and calcium.
- d) all of the above

Answer: B

299. After a heart attack, which of the following help to reduce the workload of the heart?

- a) keep size of meals small, increase fiber in diet, eliminate excess body fluids.
- b) keep size of meals small, eliminate excess fluids.
- c) increase fiber in diet, increase foods like ice cream, which contain many calories in small portions.
- d) increase foods like ice cream, which contain many calories in small portions.

Answer: B

300. Common characteristics of emphysema patients are:

- a) overweight, thinness, recent weight gain
- b) overweight, recent weight gain
- c) thinness and muscle wasting
- d) muscle wasting

Answer: C

301. Some of the common nutritional problems of COPD patients are:

- a) increased metabolism and voracious appetite, negative nitrogen balance, decreased absorption of nutrients
- b) increased metabolism and voracious appetite, decreased absorption of nutrients
- c) negative nitrogen balance, large meals causing dyspnea
- d) large meals causing dyspnea

Answer: C

302. The basal energy expenditure (BEE) for patients who are in acute respiratory failure (ARF) or adult respiratory distress syndrome (ARDS) is:

- a) lower than when patients are not in this condition
- b) 1.2 - 1.5 times the BEE if the patients are stressed
- c) 0.5 - 1.0 times the BEE if the patients are stressed
- d) 2.5 - 2.5 times the BEE if the patients are stressed

Answer: B

303. The diet therapy for a person suffering from pneumonia is:

- a) an intake of 3,000ml or more of fluids per day, strictly parenteral intake of fluids and nutrients, intake of at least 1,500kcal/day to compensate for increased metabolism.
- b) an intake of 3,000 ml or more of fluids per day, intake of at least 1,500 kcal/day to compensate for increased metabolism.
- c) strictly parenteral intake of fluids and nutrients, low protein intake to reduce exudates lungs.
- d) low protein intake to reduce exudates lungs.

Answer: B

304. Diet therapy for tuberculosis includes:

- a) low protein, moderate fat, and low carbohydrate in order to relax the lungs.
- b) high iron, high folacin, vitamin B12, and a normal amount of protein.
- c) high protein, minerals (especially calcium) and vitamins.
- d) parenteral infusion of high-calorie, low-protein formulas.

Answer: C

305. Dietary treatment for lung cancer includes:

- a) a low-calorie, low-fat, low-protein diet to reduce the work of the lungs
- b) 0.8 g of protein per kilogram of ideal body weight, 1,200 kcal, and low fat
- c) high calcium, high levels of vitamin D, E, and K, and normal protein intake
- d) 1.2 - 1.5 g protein per kilogram of body weight per day, 4,000 kcal, and high vitamins plus minerals.

Answer: D

306. Substances that the kidneys excrete are:

- a) urea, uric acid and creatinine, rennin, excess amounts of sodium, potassium, and hydrogen ions.
- b) urea, uric acid, and creatinine, excess amounts of sodium, potassium, and hydrogen ions.
- c) rennin, active form of vitamin D.
- d) active form of vitamin D.

Answer: B

307. Kidney diseases can affect the functions of the nephrons, which are:

- a) Filtration, reabsorption, secretion
- b) Filtration and secretion
- c) reabsorption and synthesis of fats.
- d) synthesis of fats

Answer: A

308. The anemia of ESRD results from

- a) decreased synthesis of renin
- b) decreased synthesis of erythropoietin
- c) bleeding
- d) b & c

Answer: D

309. Uremia and uremic syndrome associated with ESRD results from a buildup of ____ due to decreased ____ in the nephrons.

- a) hydrogen ions – secretion.

- b) nitrogenous wastes – reabsorption.
- c) sodium and potassium – filtration.
- d) nitrogenous wastes – filtration

Answer: D

310. Increased intake of calcium in renal failure is necessary to reduce:

- a) loss of bone mass, or renal osteodystrophy.
- b) potential for cardiac arrhythmias.
- c) edema.
- d) anemia.

Answer: A

311. Concentrated sugars and fats such as honey, sugar, heavy cream, butter, and jam are included in a renal failure diet is to achieve a _____ without producing nitrogenous wastes.

- a) high level of protein.
- b) low level of calcium.
- c) high energy intake.
- d) all of the above

Answer: C

312. The health professional responsible for the practical application of nutritional science in the clinical setting is the:

- a) physician.
- b) nurse.
- c) public health nutritionist.
- d) registered dietitian.

Answer: D

313. The sum of the chemical processes inside living cells of the body that sustain life and health is

- a) science.
- b) digestion.

- c) metabolism.
- d) nutrition.

Answer: C

314. The recommended intake of fat for a healthy person is what percentage of total daily calories?

- a) 10-15 %
- b) 25-30 %
- c) 45-50 %
- d) 50-55 %

Answer: B

315. The Recommended Dietary Allowances have been updated about every_____ years.

- a) two.
- b) four.
- c) five.
- d) seven.

Answer: B

316. The rhythmic contractions of the stomach and intestine that propel food along are called

- a) segmentation
- b) peristalsis
- c) cardiospasm
- d) pendular movements

Answer: B

317. Which one of the following is not a gastrointestinal secretion?

- a) enzyme
- b) mucus
- c) water.
- d) bile.

Answer: D

318. The action of biting, chewing, and breaking up ingested food into smaller particles is called:

- a) peristalsis.
- b) segmentation.
- c) pendular movements.
- d) mastication

Answer: D

319. After a period of mixing and churning of the ingested food with the gastric secretions, the semifluid mass is called:

- a) chyle
- b) chyme
- c) rennin
- d) bolus

Answer: B

320. The release of the gastric secretions is stimulated by

- a) nerve stimuli.
- b) hormonal stimuli.
- c) the presence of food in the stomach.
- d) all of the above

Answer: D

321. Maltase, lactase, and sucrase are examples of:

- a) peptidase
- b) lipase
- c) enzymes
- d) disaccharidases

Answer: C

322. The lining of the stomach and intestine is protected from the strong enzymes by

- a) pepsinogen.
- b) bile.
- c) mucus.
- d) fat.

Answer: C

323. The hormone that stimulates the pancreas to release its secretions is

- a) gastrin
- b) enterogastrone
- c) cholecystokinin
- d) secretin

Answer: D

324. The stimulus for the release of the hormone cholecystokinin is

- a) the presence of food in the duodenum
- b) the presence of fat in the duodenum
- c) the entry of acid chyme into the duodenum
- d) the entry of bile into the duodenum

Answer: B

325. Electrolytes are absorbed by the process of

- a) Osmosis
- b) Diffusion
- c) Active transport
- d) Pinocytosis

Answer: B

326. After absorption, the end products of carbohydrate and protein digestion enter the

- a) Lacteal
- b) Gastrointestinal circulation

- c) Bile duct
- d) Portal blood system

Answer: D

327. The primary nutritional function of the large intestine is:

- a) absorption of fats
- b) excretion of bacteria
- c) completion of the digestive process of the nutrients
- d) absorption of water

Answer: D

328. The valve that controls the passage of the semi liquid chyme from the small intestine into the cecum is the:

- a) ileocecal valve
- b) pyloric valve
- c) cardiac sphincter
- d) anal sphincter

Answer: A

329. Bacteria found in the colon are significant because:

- a) they synthesize some vitamins
- b) they are a source of contamination
- c) they finish digesting whatever remains in the colon
- d) they are necessary for mineral absorption

Answer: A

330. The chemical compound that provides immediate energy to the cell is:

- a) Glucose
- b) Triglyceride
- c) ATP

d) pyruvic acid

Answer: C

331. The function of initiating and controlling the rate of chemical reactions is performed by:

- a) Enzymes
- b) the pH of the environment
- c) vitamins
- d) substrates

Answer: A

332. The chemical messengers that help to regulate and control enzyme activity are:

- a) Metabolites
- b) Keto acids
- c) Vitamins
- d) Hormones

Answer: D

333. The metabolic rate of the body is controlled by the hormone:

- a) Insulin
- b) Thyroxine
- c) Epinephrine
- d) Steroid

Answer: B

334. Women exhibit a lower BMR than men due to:

- a) the menstrual cycle
- b) a greater body surface area
- c) the sex hormones
- d) a smaller proportion of muscle mass compared to fat

Answer: D

335. To determine total energy requirements, one must add together:

- 1) food intake
- 2) basal metabolism
- 3) physical activity
- 4) thermic effect of food
- 5) calories in the food

- a) 1,2,3, and 4
- b) 1,2,3, and 5
- c) 1,2, and 3
- d) 2,3, and 4

Answer: D

336. Anthropometric measurements include:

- a) skinfold thickness
- b) weight
- c) height
- d) all of the above

Answer: D

337. Hydrostatic or underwater weighing can be used to determine body composition because:

- a) lean body tissue is heavier than adipose tissue
- b) adipose tissue is heavier than lean body tissue
- c) adipose tissue is mostly water in content
- d) body fluids are not being weighed

Answer: A

338. An eating disorder which is a form of self-induced starvation is:

- a) anorexia nervosa
- b) bulimia
- c) fasting
- d) dieting

Answer: A

339. Health problems that have been shown to be related to obesity include:

- a) Hypertension
- b) Diabetes
- c) Cancer
- d) a and b

Answer: D

340. An eating disorder which is characterized by gorging food and then inducing vomiting is called:

- a) anorexia nervosa
- b) bulimia
- c) fasting
- d) diet restriction

Answer: B

341. The calorie equivalent of one pound of body fat is:

- a) 500 kcal
- b) 1000 kcal
- c) 2500 kcal
- d) 3500 kcal

Answer: D

342. To lose one pound a week one would need to reduce caloric intake _____ kcal each day.

- a) 200

- b) 300
- c) 400
- d) 500

Answer: D

343. Which of the following is not a function of the placenta?

- a) transport oxygen
- b) transport red blood cells to the fetus
- c) transport nutrients
- d) transport waste products from fetus to mother

Answer: B

344. It is important that energy needs be met in a pregnancy because of the need to:

- a) spare vitamins
- b) spare adipose stores
- c) prevent fetal deformity
- d) spare protein

Answer: D

345. The calorie needs during pregnancy are increased above those required during a non pregnant state by about:

- a) 200 calories
- b) 300 calories
- c) 400 calories
- d) 500 calories

Answer: D

346. Two minerals which need to be increased significantly during pregnancy are:

- a) Calcium and iron
- b) Sodium and potassium
- c) Calcium and phosphorus

d) Iron and iodine

Answer: A

347. An excellent food source of iron is:

- a) Liver
- b) Lean meat
- c) Spinach
- d) Eggs

Answer: A

348. A deficiency of folic acid results in development of:

- a) Paralysis
- b) Megaloblastic anemia
- c) Pernicious anemia
- d) Pellagra

Answer: B

349. It is recommended that a woman drink 3-4 cups of milk a day during pregnancy because it is a good source of:

- a) Protein
- b) Calcium
- c) Vitamin D
- d) All of the above

Answer: D

350. Constipation during pregnancy is often caused by:

- a) Increased fluid intake
- b) The use of laxatives
- c) Placental hormones which cause intestinal muscles to relax

d) The intake of high fiber foods

Answer: C

351. An acceptable weight gain during pregnancy for the normal weight woman is:

a) 15-20 pounds

b) 25-35 pounds

c) 40-60 pounds

d) 60-65 pounds

Answer: B

352. An infant will triple its birth weight by age:

a) 12 months

b) 18 months

c) 24 months

d) 30 months

Answer: A

353. A child's growth may be monitored by:

a) Periodically checking weight

b) Making observations of physical features

c) Performing laboratory tests

d) All of the above

Answer: D

354. A valuable measure of growth in a child up to 3 years of age is:

a) skinfold thickness

b) mid-arm circumference

c) recumbent length

d) head circumference

Answer: D

355. About _____ of an infant's body weight is water.

- a) 20% - 25%
- b) 35% - 40%
- c) 40% - 60%
- d) 70% - 75%

Answer: D

356. An infant's fetal iron stores will begin to diminish between:

- a) 1-2 months
- b) 3-4 months
- c) 4-6 months
- d) 6-8 months

Answer: C

357. The first milk secreted by a new mother is called:

- a) Prolactin
- b) Colostomy
- c) Colostrum
- d) Chyme

Answer: C

358. The approximate age for addition of solid food to the diet of an infant is:

- a) 4 to 6 months
- b) 7 to 8 months
- c) 10 months
- d) 12 months

Answer: A

359. Production of breast milk is caused by the hormone _____ while the hormone _____ stimulates ejection of milk.

- a) Prolactin ; oxytocin.
- b) Lactogenic ; vasopressin.
- c) Estrogen ; prolactin.
- d) Progesterone ; estrogen.

Answer: A

360. It is important that standards of osmolality have been established for formulas because if too concentrated it may:

- a) cause rapid excessive weight gain.
- b) cause constipation.
- c) contain excessive water and strain the kidneys.
- d) cause diarrhea and dehydration.

Answer: D

361. Cow's milk is not recommended for infants during the early months because it:

- a) is not nutritionally adequate.
- b) does not contain enough protein.
- c) contains too much fat and is not digested easily.
- d) is too concentrated and may cause gastrointestinal bleeding.

Answer: D

362. Reduced fat content cow's milk should not be given to children under the age of 1 year because they:

- a) do not contain enough calories for energy or linoleic acid.
- b) do not contain enough protein.

- c) do not contain adequate calcium and phosphorus.
- d) all of the above.

Answer: A

363. A toddler continuing to drink milk in place of eating solid food may develop:

- a) Rickets
- b) Hypervitaminosis
- c) Milk anemia
- d) Pernicious anemia.

Answer: C

364. The action of the hormone aldosterone causes the kidney tubules to:

- a) excrete water.
- b) retain calcium.
- c) retain sodium.
- d) secrete hydrogen ions

Answer: C

365. Which of the following activities is not used for nutritional assessment?

- a) dietary evaluation.
- b) laboratory tests
- c) physical therapy.
- d) anthropometric measures.

Answer: C

366. The anthropometric measure which gives an estimate of subcutaneous fat reserves the:

- a) weight.
- b) height.
- c) mid-upper arm circumference.
- d) triceps skinfold thickness.

Answer: D

367. Serum albumin values are an indication of:

- a) dietary fat intake.
- b) dietary protein intake.
- c) dietary vitamin intake.
- d) dietary iron intake.

Answer: B

368. A lab test which indicates a patient's immune capacity is the:

- a) Serum albumin.
- b) hemoglobin.
- c) serum transferrin
- d) lymphocyte activity

Answer: D

369. The lab test used to determine the state of nitrogen balance is the:

- a) serum albumin.
- b) Hemoglobin
- c) Urinary urea nitrogen
- d) Serum transferrin.

Answer: C

370. A method of determining a person's basic eating habits is:

- a) 24-hour food record
- b) Urinalysis
- c) Blood test
- d) Diet history

Answer: D

371. Items included in the data base for each patient is/are:

- a) Drug therapy
- b) Past and present problems
- c) Allergies
- d) All of the above

Answer: D

372. The segment of the population most at risk for developing a drug-nutrient interaction are:

- a) Infants
- b) Adolescents
- c) Middle-age adults.
- d) Elderly.

Answer: D

373. Which of the following is not a general symptom of a drug-nutrient interaction?

- a) Decreased appetite
- b) Nausea
- c) Altered taste sensation
- d) Altered visual acuity

Answer: D

374. The term used to describe the loss of taste sensation is:

- a) Anosmia
- b) Kyphosis
- c) Dysgeusia
- d) Dyspepsia

Answer: C

375. A type of over-the-counter drug which can produce severe malabsorption is/are:

- a) Pain relievers
- b) Antacids
- c) Cough syrups
- d) Laxatives

Answer: D

376. The drug known to cause iron deficiency through chronic blood loss is:

- a) Aspirin
- b) Antibiotics
- c) Diuretic
- d) Insulin

Answer: A

377. Term used to describe difficulty in swallowing is:

- a) Pyrosis
- b) Polydypsia
- c) Dysphagia
- d) Dyspepsia

Answer: C

378. Dietary changes that will help reduce the incidence of constipation include:

- a) use of laxatives.
- b) increased fiber.
- c) increased fluid intake.
- d) b and c.

Answer: D

379. Diverticulosis is best treated with:

- a) bland diet
- b) low-fiber diet
- c) high-fiber diet
- d) full-liquid diet

Answer: C

380. Celiac disease is caused by a sensitivity to the gliadin portion of the protein:

- a) lactalbumin.
- b) casein.
- c) soy.
- d) gluten.

Answer: D

381. Which of the following are metabolic functions of the normal, healthy liver?

- a) lipolysis and fat storage.
- b) synthesis of bile salts and urea formation.
- c) synthesis of digestive enzymes.
- d) All the above.

Answer: B

382. Which of the following vitamins are stored in the liver?

- a) Vitamin A.
- b) Vitamin K.
- c) Vitamin B12.
- d) All of the above.

Answer: D

383. Which of the following factors is associated with development of cirrhosis?

- a) chronic malnutrition.
- b) biliary obstruction.
- c) chronic alcohol abuse.
- d) All of the above

Answer: D

384. Pathological changes in the liver caused by cirrhosis is/are:

- a) fatty infiltration.
- b) fibrous tissue formation.
- c) cell mutations.
- d) a and b.

Answer: D

385. The major nutritional problem related to development of ascites is:

- a) excess fat intake
- b) iron deficiency
- c) protein deficiency.
- d) deficiency of digestive enzymes

Answer: C

386. When blood circulation through the liver is impaired by fibrous tissue:

- a) Ammonia remains in the systemic circulation.
- b) portal hypertension develops.
- c) esophageal varices develop.
- d) all the above.

Answer: D

387. Sodium is often restricted in cirrhosis to control:

- a) kidney failure
- b) heart function
- c) neurological function
- d) fluid retention

Answer: D

388. A drug used to treat hepatic encephalopathy because it prevents absorption of ammonia in the intestine is:

- a) Leucine
- b) Levulose
- c) Lactulose
- d) Nitrosamine

Answer: C

389. Clinical symptoms of hepatic encephalopathy include:

- a) Gastrointestinal problems
- b) Confusion and impaired motor function
- c) urinary shutdown
- d) excessive urination

Answer: B

390. The important function of the gall bladder is to:

- a) produce bile
- b) synthesize cholesterol
- c) release lipase enzymes
- d) concentrate and store bile.

Answer: D

391. Diabetes insipidus is

- a) characterized by urinary fructose excretion
- b) a disease caused by high fructose ingestion
- c) caused by pituitary injury
- d) common among vegetarians

Answer: C

392. Inflammation of the gall bladder is called:

- a) cholecystitis.
- b) cholelithiasis.
- c) cholecystectomy.
- d) gollecystitis.

Answer: A

393. Nutritional therapy for gall bladder disorders include:

- a) Reduced cholesterol intake
- b) eliminate "gas forming" foods
- c) low fat
- d) high caloric intake.

Answer: C

394. Dietary protein is essential for recovery from hepatitis because:

- a) Protein catabolism is accentuated by the disease.
- b) it is needed to produce energy.
- c) it restores liver glycogen reserves.
- d) it is the only food well tolerated.

Answer: A

395. Adequate carbohydrate is important in hepatic encephalopathy because it:

- a) is the only nutrient that can be digested.
- b) doesn't contain nitrogen.
- c) Prevents catabolism of body protein and a rise in ammonia levels.
- d) is the only nutrient that can maintain the liver's function and its glycogen stores.

Answer: C

396. Atherosclerosis is a process whereby:

- a) The blood vessels vasoconstrict and reduce blood supply.
- b) a plaque-containing fibrous and fatty material is deposited on the interior surface of the blood vessels
- c) the blood vessels lose their elasticity and become rigid.
- d) the heart can no longer circulate adequate blood volume.

Answer: B

397. A reduced blood supply to a tissue or body part is referred to as:

- a) infarct.
- b) Hypotension
- c) Ischemia
- d) Hypoxia

Answer: C

398. Lipoproteins in the blood are produced in the:

- a) intestinal wall
- b) spleen
- c) liver
- d) a and c

Answer: D

399. The lipoprotein considered to be protective against cardiovascular disease is:

- a) Chylomicron
- b) VLDL
- c) HDL
- d) IDL

Answer: C

400. Two general principles of diet therapy for coronary heart disease and lipid disorders include:

1. Reduce total fat.
2. eliminate cholesterol from the diet
3. substitute unsaturated fats for some of the saturated fats
4. substitute unsaturated fats for some of the protein diet

what are the two correct principles?

- a) 2 and 3
- b) 1 and 3
- c) 1 and 4
- d) 1, 2 and 4

Answer: B

401. The nutritional therapy for congestive heart failure is to restrict:

- a) Fluids
- b) Sodium
- c) Potassium
- d) All of the above

Answer: B

402. Dietary treatment for severe hypertension includes:

- a) increase fluid intake
- b) sodium restriction and potassium replacement if diuretic drugs are used.
- c) reduced fat intake
- d) all of the above

Answer: B

403. A diet which restricts sodium intake to 2 grams would be considered a _____ restriction.

- a) Mild
- b) Moderate
- c) Severe
- d) None of the above

Answer: A

404. Soluble dietary fiber would be found in

- a) Cereal grains
- b) Animal protein

- c) Oil
- d) Oat bran and legumes.

Answer: D

405. The desirable blood level of cholesterol is:

- a) less than 100 mg/dL
- b) less than 200 mg/dL
- c) 250 to 300 mg/dL
- d) 300 to 350 mg/dL

Answer: B

406. Carbohydrates impair the physiological demand on the respiratory system in chronic obstructive pulmonary disease because they:

- a) increase oxygen consumption and carbon dioxide production
- b) don't provide enough calories to sustain respiratory muscular action
- c) cause hyperglycemia which in turn increases the respiratory rate
- d) automatically depresses respiratory function.

Answer: A

407. Most of the calories in the diet of a patient with COPD should come from:

- a) Carbohydrate
- b) Fat
- c) Protein
- d) Glucose

Answer: B

408. Fat should provide about _____ % of the non-protein calories in the diet for COPD:

- a) 10-20 %

- b) 20-30 %
- c) 30-50 %
- d) 50-70 %

Answer: C

409. The factors that seem to play a role in the development of diabetes mellitus is/are:

- a) Liver disease
- b) enzyme deficiencies
- c) weight and heredity
- d) childhood illnesses

Answer: C

410. Initial symptoms of the disease diabetes mellitus include:

- a) Polydipsia
- b) Polyphagia
- c) Polyuria
- d) All of the above.

Answer: D

411. Diabetes is especially related to the metabolism of:

- a) carbohydrates and proteins
- b) proteins and fats
- c) carbohydrates and fats
- d) protein.

Answer: C

412. The normal range of blood glucose is:

- a) 20-50 mg/dL
- b) 50-100 mg/dL
- c) 70-120 mg/dL
- d) 80 – 150 mg/dL

Answer: C

413. Identify the function which is not associated with the hormone insulin.

- a) moves glucose into the cell
- b) inhibits fat breakdown
- c) converts glucose into glycogen
- d) mobilizes liver glycogen to yield glucose

Answer: D

414. The accumulation of glucose in the blood is called:

- a) Glycosuria
- b) polydipsia.
- c) hyperglycemia.
- d) hypoglycemia.

Answer: C

415. If a glucose tolerance test is done and the results confirm the disease diabetes, we know the plasma glucose level was above:

- a) 100mg/dL
- b) 70mg/dL
- c) 110mg/dL
- d) 200 mg/dL

Answer: D

416. The three common complications of diabetes affect the cells of the:

- a) pancreas, liver and spleen.
- b) kidney, eye and nerve tissue.
- c) kidney, liver and spleen.
- d) heart, liver and brain.

Answer: B

417. It is recommended that about 50% of the calories in the diabetic diet come from:

- a) complex carbohydrates.
- b) fiber.
- c) protein.
- d) fats.

Answer: A

418. Commonly used non-nutritive sweeteners are:

- a) saccharin.
- b) aspartame.
- c) cyclamate.
- d) a and b.

Answer: D

419. The non-nutritive sweetener which is composed of two amino acids is:

- a) Saccharin
- b) Aspartame
- c) Cyclamate
- d) L-sugars.

Answer: B

420. If whole milk is used in place of skim milk in a diabetic diet, then two_____exchanges must be calculated into the diet.

- a) Milk
- b) Fat
- c) Fruit
- d) Sugar

Answer: B

421. The microscopic functional units of the kidney are called:

- a) Glomeruli
- b) Nephrons
- c) Tubules
- d) loop of Henle

Answer: B

422. The structure responsible for filtering the blood is the:

- a) Loop of Henle
- b) Proximal tubule
- c) Distal tubule
- d) Glomerulus

Answer: D

423. The presence of protein in the urine is called:

- a) Hematuria
- b) Oliguria
- c) Proteinuria
- d) Anuria

Answer: C

424. Nephrotic syndrome or nephrosis is a disease which:

- a) is caused by chronic hypertension
- b) allows large amounts of protein to escape into the filtrate
- c) causes the build-up of toxic wastes in the blood
- d) results in the formation of kidney stones

Answer: B

425. One of the first recommendations for any type of kidney stone is to:

- a) increase the fiber in the diet.
- b) reduce calcium intake.
- c) increase fluid intake.

d) decrease protein intake.

Answer: C

426. The bone disease osteodystrophy develops because of the kidney's inability to:

a) excrete calcium.

b) absorb vitamin D

c) excrete urea

d) activate vitamin D

Answer: D

427. The most common nutritional deficiency related to surgery is that of:

a) vitamin C

b) iron

c) protein

d) essential fatty acids

Answer: C

428. Usually nothing is given by mouth for at least _____ hours prior to general surgery:

a) 2 hrs

b) 8 hrs

c) 24 hrs

d) 48 hrs

Answer: B

429. Protein is especially needed in the postoperative recovery period because:

a) it is needed for tissue synthesis

b) it helps to control edema

c) it provides resistance to infection

d) all of the above

Answer: D

430. The vitamin which is necessary for the cementing of new tissues together during the healing process is:

- a) vitamin A
- b) vitamin C
- c) vitamin B12
- d) vitamin K

Answer: B

431. Foods which would be allowed on a full liquid diet include:

- a) Milkshakes
- b) pureed fruits
- c) cream soups
- d) all of the above

Answer: D

432. Parenteral feedings refer to feeding via a/an:

- a) nasogastric tube.
- b) tube directly into the stomach.
- c) central vein.
- d) None of the above

Answer: C

433. Which of the following foods would not be included on a clear liquid diet?

- a) Coffee
- b) apple juice
- c) seven-up
- d) milk

Answer: D

434. Following a cholecystectomy, the diet is usually low to moderate in:

- a) Protein

- b) Fat
- c) Carbohydrates
- d) fibrous foods

Answer: B

435. The major losses occurring as the result of a burn injury is/are:

- a) Fluids
- b) Electrolytes
- c) Protein
- d) All of the above

Answer: D

436. The importance of fat in the diet is to provide:

- a) a source of energy
- b) a source of linoleic acid
- c) a source of at-soluble vitamins
- d) all of the above

Answer: D

437. A 78 years old female is recovering from a stroke which impaired her ability and desire to eat.

You are the dietitian on the rehabilitation team. What are the characteristics of the foods you would offer in order to stimulate her appetite and motivate her to eat?

- a) familiar ethnic foods
- b) varied colors
- c) bland flavors
- d) a and b

Answer: D

438. There is research evidence that what dietary supplement may suppress synthesis of cytokines involved in rheumatoid arthritis:

- a) vitamin A.

- b) ascorbic acid.
- c) omega-3 fatty acids.
- d) iron.

Answer: C

439. A diet that eliminates foods that stimulate gastric acid secretion, irritate the gastric mucosa, or cause gastric problems for the individual is widely referred to as a:

- a) mechanical soft diet.
- b) liberal soft diet.
- c) liberal bland diet.
- d) mechanical bland diet.

Answer: B

440. In dumping syndrome:

- a) The large volume of hypertonic fluid and unabsorbed material in the small intestine causes pain and hyperperistalsis, and constipation results.
- b) The large volume of hypotonic fluid and unabsorbed material in the small intestine causes pain and hyperperistalsis, and diarrhea results.
- c) The large volume of hypertonic fluid and unabsorbed material in the small intestine causes pain and hyperperistalsis, and diarrhea results.
- d) The large volume of hypertonic fluid and unabsorbed material in the small intestine causes liver failure.

Answer: C

441. A peptic ulcer is a sore on the lining of the:

- a) stomach or duodenum.
- b) stomach.
- c) duodenum.
- d) spleen.

Answer: A

442. Uremia, usually found in patients with end stage-renal disease, is defined as:

- a) an increase in ammonia concentration in the blood.

- b) an increase in urea excretion in urine.
- c) a decrease in urea concentration in the blood.
- d) an increase in urea concentration in the blood.

Answer: D

443. The recommended protein intake for patients with acute-renal failure is:

- a) 0.5g to 0.8g/kg body weight for both non-dialysis and dialyzed patients.
- b) 1.0 to 2.0g/kg body weight for both non-dialysis and dialyzed patients
- c) 0.5g to 0.8g/kg body weight for dialyzed patients and 1.0 to 2.0g/kg body weight for nondialysis patients.
- d) 0.5g to 0.8g/kg body weight for non-dialysis patients and 1.0 to 2.0g/kg body weight for dialyzed patients.

Answer: D

444. Which of the following oils is a rich source of saturated fatty acids?

- a) Maize oil.
- b) Vegetable oil.
- c) Olive oil.
- d) Coconut oil.

Answer: D

445. One of the main functions of the kidney is:

- a) to regulate the pH of the plasma.
- b) to synthesized vitamin C
- c) to synthesized folic acid.
- d) to produce urea.

Answer: A

446. In uncomplicated hepatitis or cirrhosis without encephalopathy, protein requirements range from:

- a) 0.1 to 0.2 g/kg dry weight/day to achieve nitrogen balance.
- b) 0.4 to 0.6 g/kg dry weight/day to achieve nitrogen balance.
- c) 0.8 to 1.0 g/kg dry weight/day to achieve nitrogen balance.
- d) 2.0 to 3.0 g/kg dry weight/day to achieve nitrogen balance.

Answer: C

447. Angiotensin II is a powerful vasoconstrictor and caused the adrenal cortex to produce the hormone that increase sodium retention and increase urea potassium excretion. What hormone is it?

- a) Rennin
- b) Aldosterone
- c) Angiotensin
- d) Insulin

Answer: B

448. If an artery supplying the brain is occluded, the following result may occur:

- a) Myocardial infarction.
- b) Stroke
- c) Atherosclerosis
- d) Arteriosclerosis

Answer: B

449. Ischemia can be defined as:

- a) inadequate blood flow and lack of CO₂ due to constriction or obstruction of arteries
- b) overflow of blood and lack of O₂ due to constriction or obstruction of arteries
- c) inadequate blood flow and lack of O₂ due to constriction or obstruction of arteries
- d) overflow of blood and lack of CO₂ due to constriction or obstruction of arteries.

Answer: C

450. If you open a patient file and you read the word "oliguria", what does it mean?

- a) increase in urine output

- b) increase in urea concentration in urine
- c) decrease in urine output
- d) decrease in urea concentration in urine

Answer: C

451. Dialysis can be achieved by:

- a) nephrodialysis and peritoneal dialysis
- b) renodialysis and retoneal dialysis
- c) hemodialysis and hemotoneal dialysis
- d) hemodialysis and peritoneal dialysis

Answer: D

452. The occurrence of hepatic encephalopathy could be due to:

- a) decrease serum ammonia level with an increase in the ratio of branched chain amino acids to aromatic amino acids.
- b) decrease serum urea level with an increase in the ratio of branched chain amino acids to aromatic amino acids.
- c) increase serum ammonia level with a decrease in the ratio of aromatic amino acids to branched chain amino acids.
- d) increase serum ammonia level with an increase in the ratio of aromatic amino acids to branched chain amino acids.

Answer: D

453. Which of the following minerals may cause anorexia and taste alteration in a hemodialysis patient when the plasma level of this mineral is low?

- a) Phosphate
- b) Sodium
- c) Zinc
- d) Potassium

Answer: D

454. Peritoneal dialysis makes use of:

- a) the semi-permeable membrane of the liver
- b) the semi-permeable membrane of the kidney
- c) the semi-permeable membrane of the spleen
- d) the semi-permeable membrane of the abdomen

Answer: D

455. Ascites is defined as an accumulation of fluid in the

- a) Liver
- b) Kidney
- c) Abdomen
- d) Heart

Answer: C

456. Esophageal varices can be defined as:

- a) inflammation of the esophagus.
- b) enlargement and dilation of the blood vessels in the esophagus.
- c) reflux of the food from the esophagus to the mouth.
- d) reflux of the food from the stomach to the esophagus.

Answer: B

457. The energy requirement for a breastfeeding woman is about:

- a) 100 Kcal/day higher than for a non-pregnant woman
- b) 500 Kcal/day higher than for a non-pregnant woman
- c) 800 Kcal/day higher than for a non-pregnant woman
- d) 1000 Kcal/day higher than for a non-pregnant woman

Answer: B

458. Human milk contains bifidus factor, which stimulates the growth of a non-harmful bacteria called:

- a) salmonella bifidus.
- b) lactobacillus bifidus.
- c) e. coli.
- d) shigella.

Answer: B

459. The RDA for protein in infant age 0-6 months is:

- a) between 0.5g and 1g/kg body weight.
- b) between 1g and 1.5g/kg body weight.
- c) between 2.5g and 3.0g/kg body weight.
- d) between 3g and 3.5g/kg body weight.

Answer: C

460. In older adults, resting energy expenditure decreased because:

- a) lean body mass is increased and adipose tissue is decreased with age.
- b) lean body mass is decreased and adipose tissue is increased with age.
- c) both lean body mass and adipose tissue are increased with age.
- d) both lean body mass and adipose tissue are decreased with age

Answer: B

461. Older adults may voluntarily restrict their fluid intake to cope with:

- a) chewing problems.
- b) swallowing problems.
- c) urinary incontinence.
- d) reduction in appetite.

Answer: C

462. In general, older adults are at risk of having calcium deficiency because:

- a) calcium intake decreased with age.

- b) efficiency of calcium absorption decreased with age.
- c) both calcium intake and absorption decreased with age.
- d) calcium excretion increased with age

Answer: C

463. The RDA for iron during pregnancy increases to:

- a) 5 mg/day.
- b) 30 mg/day
- c) 70mg/day.
- d) 100 mg/day.

Answer: B

464. Which of the following amino acids is considered as a conditionally essential amino acid for a preterm infant, and should be added to preterm infant formula?

- a) Valine
- b) Cysteine
- c) Methionine
- d) Alanine

Answer: B

465. When an individual has not eaten in a while, and blood glucose levels begin to fall, alpha cells in the pancreas release _____ that stimulate the breakdown of glycogen stores to release glucose into the bloodstream.

- a) Insulin
- b) Glucagons
- c) Thyroxin
- d) Aldosterone

Answer: B

466. Proteins from plant sources such as grains and legumes are called:

- a) complete proteins

- b) essential proteins
- c) simple proteins
- d) incomplete proteins

Answer: D

467. Digestion of carbohydrate begins in the:

- a) Mouth
- b) Stomach
- c) Esophagus
- d) Intestine

Answer: A

468. Which of the following foods is considered as a good source of dietary fibers?

- a) white bread.
- b) orange juice.
- c) whole-wheat bread.
- d) milk.

Answer: C

469. Linoleic and linolenic acids are both considered as essential fatty acids because the:

- a) human body cannot produce hydrogen bonds before the ninth carbon from the methyl end.
- b) human body cannot produce the methyl end of these fatty acids.
- c) human body cannot produce carbon-carbon double bonds before the ninth carbon from the methyl end.
- d) human body cannot produce carbon-carbon double bonds before the ninth carbon from the arboxyl end.

Answer: C

470. Dietary recommendations emphasize increase consumption of grains, vegetables, and fruits, because these types of food are:

- a) rich in starches, fibers and fat.
- b) rich in starches and fibers, and poor in fat.
- c) rich in starches, and poor in fibers and fat.
- d) rich in fiber, and poor in starch and fat.

Answer: B

471. Galactosemia is a disease that may be caused by a deficiency of the enzyme:

- a) galactokinase.
- b) lactase.
- c) glycogenase.
- d) galactose reductase.

Answer: A

472. People with the disease phenylketonuria (PKU) has a severe deficiency of the enzyme enylalanine hydroxylase that converts phenylalanine to:

- a) Methionine
- b) Alanine
- c) Tyrosine
- d) Glutamate

Answer: C

473. Eating foods containing vitamin C at the same meal can increase the absorption of which minerals?

- a) Calcium
- b) Magnesium
- c) Folate
- d) Iron

Answer: D

474. Foods high in iron that help prevent or treat anemia include:

- a) dairy foods and fresh fruits.
- b) green peas and cheese.

- c) homemade breads and most fresh vegetables.
- d) meat and dark green, leafy vegetables.

Answer: D

475. An acceptable substitute for breast milk during the first year is:

- a) apple juice.
- b) low-fat cow's milk.
- c) water.
- d) iron-fortified infant formula.

Answer: D

476. A patient needs 1800 ml of formula a day. If the patient is to receive the formula intermittently every 4 hours, he will need _____ of formula at each feeding.

- a) 125 ml
- b) 225 ml
- c) 300 ml
- d) 325 ml

Answer: C

477. When the carbon chain of a fatty acid contains three double bonds, the fatty acid is called:

- a) Monounsaturated
- b) Tri-unsaturated
- c) Polyunsaturated
- d) Non-essential fatty acid.

Answer: C

478. The substances which serves as the major vehicles for fat transport in the bloodstream are the:

- a) Micelles
- b) Lipoproteins
- c) Glycoproteins

d) Polyproteins

Answer: B

479. Which of the following statements about cardiovascular disease is true?

- a) elevation of low-density lipoprotein cholesterol is associated with increase risk of cardiovascular disease.
- b) elevation of high-density lipoprotein cholesterol is associated with increase risk of cardiovascular disease.
- c) low blood level of low-density lipoprotein cholesterol is associated with increase risk of cardiovascular disease.
- d) high plasma level of homocysteine is associated with decrease risk of cardiovascular disease.

Answer: A

480. Which of the following nutrient is needed for a pregnant women to reduce the risk of neural tube defects, such as spinal bifidia?

- a) Iron
- b) Folate
- c) Calcium
- d) Vitamin D

Answer: B

481. The main carbohydrate source in human milk is:

- a) Lactose
- b) Fructose
- c) Glucose
- d) Sucrose

Answer: A

482. Which of the following stages of life in which protein intake/kg body weight is higher than any other stage of life?

- a) Infancy
- b) Childhood

- c) Adolescence
- d) Adulthood

Answer: A

483. Patients with steatorrhea need to limit:

- a) protein intake.
- b) iron intake.
- c) fat intake.
- d) carbohydrate intake.

Answer: C

484. Which of the following oils is a rich source of cholesterol?

- a) maize oil.
- b) sunflower oil.
- c) olive oil.
- d) none of the above.

Answer: D

485. According to the Glucostatic theory, signals are sent to the _____ to tell the brain that the body is satiated after eating.

- a) Adrenal Gland
- b) Lymphatic system
- c) Hypothalamus
- d) Pancreas

Answer: C

486. What is the role of estrogen in bone loss?

- a) Estrogen increases resorption of vitamin D from bone
- b) Estrogen decreases resorption of calcium from the bone
- c) Estrogen increases resorption of calcium from the bone

d) Estrogen decreases resorption of vitamin D from bone

Answer: B

487. The statement "What makes you think you need to change your current dietary patterns?" is an example of the motivational interviewing:

- a) Eliciting change talk
- b) Using close-ended question
- c) Asking permission
- d) Exploring importance

Answer: A

488. The statement, "Do you mind if we talk about your sugar levels from this past week?" is an example of motivational interviewing:

- a) Using close-ended questions
- b) Eliciting change talk
- c) Exploring importance
- d) Asking permission

Answer: D

489. Which statement best describes the source and metabolism of heme iron?

- a) Heme iron is found in plant foods; it requires a reducing agent for absorption
- b) Heme iron is found in plant foods; it does not require a reducing agent for absorption
- c) Heme iron is found in meats and animal tissue; it requires a reducing agent for absorption
- d) Heme iron is found in meats and animal tissue; it does not require a reducing agent for absorption

Answer: D

490. Which 2 nutrients interfere with calcium absorption?

- a) copper and boron
- b) zinc and iron
- c) iron and vitamin D
- d) zinc and boron

Answer: B

491. Red blood cells with a high color index are described as:

- a) Hyperchromic
- b) Hypocytic
- c) Hypochromic
- d) Hypercytic

Answer: A

492. Which of the following nutrients adds or removes carbon dioxide from compounds during energy metabolism?

- a) Thiamin
- b) Biotin
- c) Pantothenic Acid
- d) Niacin

Answer: B

493. The statement, "Do you mind if we talk about your sodium intake?" is an example of the motivational interviewing strategy known as:

- a) Asking permission
- b) Eliciting change talk
- c) Using close-ended questions
- d) Exploring importance

Answer: A

494. Which of the following is found in the husks of cereal grain and may inhibit calcium absorption?

- a) Iron
- b) Phytic acid
- c) Oxalic acid
- d) Zinc

Answer: B

495. Which of the following fibers gives a woody structure to plants and remains as long, tough strings in cooked vegetables?

- a) Cellulose
- b) Hemicellulose
- c) Pectin
- d) Lignin

Answer: D

496. The statement "Do you do any exercise" is an example of an:

- a) Open answer
- b) Closed question
- c) Open question
- d) Definitive answer

Answer: B

497. Which of the following molecules is mainly responsible for atherogenesis?

- a) LDL
- b) HDL
- c) Cholesterol transport protein
- d) Albumin

Answer: A

498. The statement, "Most people report feeling like you do, they want to change their snacking behaviors but find it difficult." This is an example of:

- a) Using open-ended questions
- b) Exploring importance
- c) Normalizing
- d) Reflective listening

Answer: C

499. Anemia is characterized by a reduction in the size of RBC, number of RBC, and quantity of hemoglobin, resulting in decreased ability of:

- a) Oxygen
- b) Carbon dioxide
- c) Iron
- d) Transferrin

Answer: A

500. What is the name of the storage form of iron?

- a) Ferritin
- b) Transferrin
- c) Ferrous iron
- d) Ferric iron

Answer: A

501. Which statement best describes insulin?

- a) Produced by the alpha cells in the islets of langerhans, decreases blood glucose
- b) Produced by the beta cells in the islets of langerhans, increases blood glucose
- c) Produced by the beta cells in the islets of langerhans, decreases blood glucose
- d) Produced by the alpha cells in the islets of langerhans, increases blood glucose

Answer: C

502. What is the inactive form of pepsin?

- a) Pepsinostagnant
- b) Trypsinogen
- c) Pepsinox
- d) Pepsinogen

Answer: D

503. What is a major risk factor of fortifying foods with folic acids?

- a) Masking a vitamin B12 deficiency
- b) Decreased shelf life
- c) Toxicity of folic acid
- d) Taste changes in the food

Answer: A

504. Which of the following learning domains involve emotions and attitudes?

- a) Effective
- b) Psychomotor
- c) Affective
- d) Cognitive

Answer: C

505. A survey administered halfway through the course of a nutrition education program is an example of a:

- a) Final evaluation
- b) Summative evaluation
- c) Formative evaluation
- d) Concrete evaluation

Answer: C

506. The statement, "What are some good things about your current diet? On the flipside, what are some of the less good things about your current diet?"

- a) Normalizing
- b) Reflective listening
- c) Using close-ended questions
- d) Decisional balancing

Answer: D

507. What is another name for non-heme iron?

- a) Ferric iron
- b) Transferrin
- c) Ferritin
- d) Ferrous iron

Answer: A

508. Vitamin B12 and folate are involved in which type of anemia?

- a) Iron deficiency anemia
- b) Pernicious anemia
- c) Sickle cell anemia
- d) Anemia of chronic disease

Answer: B

509. Hypogeusia, hyposmia, poor wound healing, and short stature and development are characteristic of:

- a) Zinc deficiency
- b) Copper overload
- c) Copper deficiency
- d) Zinc overload

Answer: A

510. Which statement best describes glucagon?

- a) Produced by the beta cells in Islets of Langerhans, decreases blood glucose
- b) Produced by the beta cells in Islets of Langerhans, increases blood glucose
- c) Produced by the alpha cells in Islets of Langerhans, decreases blood glucose
- d) Produced by the alpha cells in Islets of Langerhans, increases blood glucose

Answer: D

511. Poultry, meat, milk, eggs, legumes, and nuts are all high in which nutrient?

- a) Calcium

- b) Magnesium
- c) Phosphorus
- d) Potassium

Answer: C

512. Which of the following acts as a constituent of coenzyme A in cellular metabolism?

- a) Thiamin
- b) Biotin
- c) Riboflavin
- d) Pantothenic acid

Answer: D

513. Which of the following describes the process of obtaining, verifying, and interpreting data needed to identify a nutrition-related problem?

- a) Nutrition monitoring
- b) Nutrition intervention
- c) Nutrition surveillance
- d) Nutrition assessment

Answer: D

514. Which learning technique will result in the greatest retention of information?

- a) Self-directed modules
- b) Formal lecture
- c) Application
- d) Verbal recitation

Answer: C

515. What is the inactive form of trypsin?

- a) Trypsinogen
- b) Trypsinostagnant
- c) Pepsinogen

d) Trypsin

Answer: A

516. The statement "How could you see yourself eating more fiber-rich foods this week?" is an example of a(n):

- a) Definitive answer
- b) Open answer
- c) Closed question
- d) Open question

Answer: D

517. What effect do tannins have on absorption of non-heme iron?

- a) No effect on absorption
- b) Depends on the food source
- c) Increased absorption
- d) Decreases absorption

Answer: D

518. Based on data collection by the U.S. Census Bureau, a family is classified as "low food security" if they:

- a) Have marginal difficulty with securing enough food
- b) Do not answer "yes" to any of the food insecurity questions
- c) Have to alter the quality of their food to deal with a limited budget
- d) Have struggled with having enough food and had to cut back or skip meals on a frequent basis.

Answer: C

519. Phenylalanine is a precursor to which of the following?

- a) Tryptophan
- b) Alanine
- c) Tyrosine
- d) Glutamine

Answer: C

520. The statement "What long-term consequences of obesity concern you the most?" is an example of a(n):

- a) Open answer
- b) Open question
- c) Definitive answer
- d) Closed question

Answer: B

521. During weight loss, a patient is likely in a state of:

- a) Catabolism
- b) Positive nitrogen balance
- c) Anabolism
- d) Homeostatis

Answer: A

522. If intake of the amino acid tryptophan increases, the need for which nutrient decreases?

- a) Thiamin
- b) Niacin
- c) Pantothenic acid
- d) Riboflavin

Answer: B

523. Which of the following molecules carries cholesterol from the liver to the tissues?

- a) Albumin
- b) Cholesterol transport protein
- c) LDL
- d) HDL

Answer: C

524. The statement "Can we talk about your 3-day food diary?" is an example of the motivational interviewing strategy known as:

- a) Using close-ended questions
- b) Eliciting change talk
- c) Exploring importance
- d) Asking permission

Answer: D

525. What is the provitamin of vitamin D?

- a) 7-dehydrocholesterol
- b) Leucine
- c) Tryptophan
- d) Beta carotene

Answer: A

526. Which of the following will NOT decrease absorption of iron?

- a) Milk
- b) Tea
- c) Coffee
- d) Citrus

Answer: D

527. What is the final product of lipid metabolism before entering the Krebs cycle?

- a) Citrate
- b) Acetyl Co-A
- c) Isocitrate
- d) Glycerol

Answer: B

528. The statement, "What's happened since we last met?" is an example of which type of motivational interviewing strategy?

- a) Eliciting change talk
- b) Using open-ended questions
- c) Exploring confidence
- d) Exploring importance

Answer: B

529. How many double bonds does a saturated fat contain?

- a) Zero
- b) 3 or more
- c) 1
- d) 2

Answer: A

530. You are caring for a patient with a high protein intake. The need for which nutrient also increases?

- a) Vitamin B12
- b) Calcium
- c) Iron
- d) Vitamin B6

Answer: D

531. Which of the following terms denotes assured access at all times of enough food for an active, healthy life?

- a) Food security
- b) Food insecurity
- c) Nutrition security
- d) Nutrition insecurity

Answer: A

532. The statement "I got the sense that you are wanting to change your diet, and you have concerns about how it will affect your family" is an example of which type of motivational interviewing technique?

- a) Exploring confidence
- b) Exploring importance
- c) Reflective listening
- d) Using open-ended questions

Answer: C

533. Which disease may result from a deficiency of thiamin?

- a) Kwashiorkor
- b) Beriberi
- c) Wilson's disease
- d) Marasmus

Answer: B

534. What effect does saturated fat have on LDL and HDL?

- a) Lowers LDL and lowers HDL
- b) Raises LDL and HDL
- c) Raises LDL and lowers HDL
- d) No effect on LDL or HDL

Answer: B

535. An increase in glucagon may result in which of the following?

- a) Gluconeogenesis
- b) Glycolysis
- c) Glycogenolysis
- d) Glycogenesis

Answer: C

536. Which mineral plays an important role in blood clotting?

- a) Iron
- b) Vitamin K
- c) Calcium
- d) Magnesium

Answer: C

537. Bone resorption occurs via the action of which cells?

- a) Osteocytes
- b) Osteoclasts
- c) Osteoblasts
- d) Lining cells

Answer: B

538. Which of the following includes a food/nutrition history, biochemical data, anthropometric measurements, physical examination, and client history?

- a) Nutrition intervention
- b) Nutrition monitoring
- c) Nutrition assessment
- d) Nutrition surveillance

Answer: C

539. Based on data collected by the U.S. Census Bureau, a family is classified as "high food security" if they:

- a) Do not answer "yes" to any of the food insecurity questions
- b) Have some difficulty with securing enough food
- c) Answers "yes" to one or two of the food insecurity questions
- d) Have to alter the quality of their food to deal with a limited budget

Answer: A

540. What is a major source of linoleic acid?

- a) Flax, mustard, and hemp seeds
- b) Margarine
- c) Safflower, corn, and soybean oil
- d) Animal fat (lard, butter)

Answer: C

541. Which statement best describes soluble fiber?

- a) It has the ability to hold water and speeds transit through the GI tract
- b) It is not able to hold water and speeds transit through the intestinal tract
- c) It is not able to hold water and slows transit through the GI tract
- d) It has the ability to hold water and slows transit through the GI tract

Answer: D

542. The statement "What does your exercise plan for this week look like?" is an example of a(n):

- a) Open answer
- b) Closed question
- c) Open question
- d) Definitive answer

Answer: C

543. In order to be absorbed, what does non-heme iron require?

- a) A reducing agent
- b) An oxidizing agent
- c) Intrinsic factor
- d) An iron transport protein pump

Answer: A

544. How many grams of fiber does the average American consume per day?

- a) 12-15 grams
- b) 25-35 grams
- c) 15-20 grams

d) <10 grams

Answer: A

545. What is the function of VLDL?

- a) Transport triglycerides to the kidneys for excretion
- b) Transport triglycerides from muscle and adipose tissue to the liver
- c) Transport triglycerides from the blood to the liver
- d) Transport triglycerides from the liver to muscles and adipose tissue

Answer: D

546. The counseling skill of clarification is best described as:

- a) An active response from the counselor to redirect the conversation
- b) An active response from the counselor involving pointing out the effect of past experiences
- c) A listening response from the counselor to encourage engaging a deeper emotion
- d) a listening response from the counselor to clarify an ambiguous message from the client

Answer: D

547. Which two amino acids contain sulfur?

- a) Arginine and glutamine
- b) Tryptophan and alanine
- c) Methionine and cysteine
- d) Methionine and glutamine

Answer: C

548. Which of the following nutrients are destroyed by UV light?

- a) Thiamin
- b) Iron
- c) Niacin
- d) Riboflavin

Answer: D

549. During weight gain, a patient is likely in a state of:

- a) Catabolism
- b) Homeostasis
- c) Negative nitrogen balance
- d) Anabolism

Answer: D

550. Broccoli, kale, cabbage, turnip greens, and spinach are all excellent sources of which nutrient?

- a) Vitamin K
- b) Beta carotene
- c) Vitamin D
- d) Essential fatty acids

Answer: A

551. Which of the following is NOT a function of vitamin E?

- a) Prevent peroxidation of polyunsaturated fatty acids
- b) Antioxidant
- c) Enhance activity of Vitamin A
- d) Blood clotting

Answer: D

552. What effect do catecholamines have on metabolic rate?

- a) Increase metabolic rate
- b) No effect on metabolic rate
- c) Depends on the type of catecholamine
- d) Decrease metabolic rate

Answer: A

553. Which of the following describes the formation of new glucose molecules from non-carbohydrate substrates?

- a) Glycolysis

- b) Glycogenolysis
- c) Glycogenesis
- d) Gluconeogenesis

Answer: D

554. The Krebs cycle is a series of chemical reactions used to generate energy from which of the following nutrients?

- a) Carbohydrates, lipids, protein
- b) Cholesterol, saturated fat, and sterols
- c) Vitamins, minerals, and water
- d) Monosaccharides, polysaccharides, and fiber

Answer: A

555. A normocytic cell is:

- a) darker in color
- b) larger than normal
- c) lighter in color
- d) normal sized

Answer: D

556. Which of the following are the highest in Vitamin B6?

- a) Legumes, liver, fish, poultry
- b) Potatoes, sweet potatoes, rutabaga, turnips
- c) Nuts, seeds, beans
- d) Milk, dairy products, and eggs

Answer: A

557. Which of the following causes breakdown of triglycerides?

- a) CCK
- b) Lipoprotein lipase
- c) Insulin

d) Pepsin

Answer: B

558. Which of the following is NOT an example of soluble fiber?

a) Hemicellulose

b) Lignin

c) Pectin

d) Gum

Answer: B

559. Sucrose is a disaccharide composed of which two disaccharides?

a) Glucose and fructose

b) Glucose and galactose

c) Two molecules of galactose

d) Two molecules of glucose

Answer: A

560. Which of the following is NOT a branched chain amino acid?

a) Leucine

b) Phenylalanine

c) Isoleucine

d) Valine

Answer: B

561. Which of the following transports triglycerides from the liver to muscle and adipose tissue?

a) Albumin

b) VLDL

c) Chylomicrons

d) HDL

Answer: B

562. Which of the following is NOT added to enriched bread?

- a) Iron
- b) Vitamin B12
- c) Thiamin
- d) Niacin

Answer: B

563. Which of the following is NOT true of cholesterol?

- a) It is found in plant and animal products
- b) It is a key intermediate to androgens
- c) It is a key intermediate to estrogens
- d) It is a precursor to vitamin D

Answer: A

564. You are caring for a patient experiencing night blindness. What condition do you suspect?

- a) Iron deficiency anemia
- b) Protein-energy malnutrition
- c) Carbohydrate overload
- d) Vitamin A deficiency

Answer: D

565. which of the following minerals act as the main electrolytes to maintain fluid balance?

- a) Potassium and chromium
- b) Calcium and chromium
- c) Phosphorus and potassium
- d) Sodium and potassium

Answer: D

566. What is a major source of linolenic acid?

- a) Safflower and corn oil
- b) Animal fat (lard, butter)

- c) Margarine
- d) Flaxseed, blue green algae, dark green leafy vegetables

Answer: D

567. You are caring for a patient experiencing keratinization of the skin and mucous membranes.

What condition do you suspect?

- a) Vitamin A deficiency
- b) Protein-energy malnutrition
- c) Iron deficiency anemia
- d) Carbohydrate overload

Answer: A

568. Which portion of cereal is highest in fiber?

- a) Endosperm
- b) Germ
- c) Nucleus
- d) Bran

Answer: D

569. A patient taking warfarin requires nutrition education for which nutrient?

- a) Fat
- b) Protein
- c) Vitamin K
- d) Vitamin C

Answer: C

570. Which of the following are conditionally essential amino acids?

- a) Arginine and leucine
- b) Histidine and threonine
- c) Histidine and arginine
- d) Threonine and phenylalanine

Answer: C

571. A saturated fatty acid:

- a) Contains all the hydrogen it can hold
- b) Contains one triple bond
- c) Contains one double bond
- d) Contains 2 or more double bonds

Answer: A

572. All of the following are true about essential fatty acid except:

- a) Good sources of essential FA include fatty fish such as salmon and tuna
- b) They are available mainly through diet but the human body is able to make a limited supply
- c) Essential fatty acid deficiency can affect growth, wound healing and vision and cause scaly skin rash
- d) Alpha-linoleic acid and linoleic acid cannot be synthesized by the human body

Answer: B

573. Which of the following enzymes assist in the digestion of protein?

- a) Lipase and amylase
- b) Ptyalin and maltase
- c) Sucrase and dextrinase
- d) Pepsin and trypsin

Answer: D

574. The primary role of the large intestine is:

- a) Water and sodium resorption
- b) Water and sodium excretion
- c) Fatty acid digestion
- d) Performs the majority of the digestive process

Answer: A

575. If an average adult consumed 20 kcal/kg per day, what so you think the consequence would be?

- a) Weight gain
- b) Weight loss
- c) Weight maintenance
- d) Depends on how much exercise the person gets

Answer: B

576. Beriberi is a deficiency of what vitamin?

- a) Vitamin B1
- b) Vitamin B6
- c) Vitamin B12
- d) Vitamin C

Answer: A

577. Which of the following is NOT a potential consequence of hypercalcemia?

- a) Soft tissue calcification
- b) Interference with the absorption of iron and zinc
- c) Nausea, vomiting, constipation
- d) Vitamin D toxicity

Answer: D

578. What are the estimated daily maintenance fluid requirements for a 30-year-old female weighing 130 lbs?

- a) 1500 mL
- b) 2100 mL
- c) 3000 mL
- d) 3600 mL

Answer: B

579. A client is requesting information on meatless meals. You suggest using tofu, which the client has never heard of. All of the following are benefits of using tofu EXCEPT:

- a) Tofu contains high biological value protein
- b) Tofu is high in soluble fiber and is relatively easy to digest
- c) Tofu can help to lower LDL cholesterol
- d) Tofu is a good source of calcium and B vitamins

Answer: B

580. Which of the following would LEAST LIKELY be considered an example of functional foods?

- a) Orange juice
- b) Garlic
- c) Iodized salt
- d) Tomatoes

Answer: C

581. Which of the following individuals is LEAST LIKELY to require magnesium supplementation?

- a) An individual taking long-term furosemide
- b) A breastfed infant
- c) An individual with chronic alcoholism
- d) An older adult

Answer: B

582. What is the primary purpose of nutrition screening?

- a) To identify patients who need nutrition education
- b) To identify patients with factors that place them at risk for malnutrition or nutritional issues
- c) To identify patients who are obese
- d) To identify patients who need to be considered for government food programs

Answer: B

583. Which of the following parameters would most reliably indicate nutritional risk?

- a) Unintentional weight loss of 12% in 6 months
- b) Low serum albumin
- c) Weight loss of 5% over 3 months

d) Lactose intolerance

Answer: A

584. Which of the following would be considered the most appropriate time frame in which to complete a nutritional screening of an adult patient admitted to an acute care hospital?

- a) 14 days
- b) 48 hours
- c) 12 hours
- d) 24 hours

Answer: D

585. Which of the following is an acronym used by the Nutrition Screening Initiative (NSI) to help measure an older individual's nutrition risk?

- a) DEPENDABLE
- b) COMPETENT
- c) DETERMINE
- d) DEFENST

Answer: C

586. Which of the following would be considered an advantage of using food frequency to obtain dietary information?

- a) Food frequency allows for the recording of actual intake throughout the day
- b) Food frequency provides information on how food is prepared
- c) Food frequency does not require the individual responding to be able to estimate portion sizes
- d) Food frequency can be very useful when it is used in conjunction with other methods of obtaining dietary information

Answer: D

587. The statement that best describes a nutrient intake analysis is:

- a) A tool used to obtain dietary information by recording an individual's actual intake over a 72-hour period

- b) A tool used to obtain dietary information from the previous 72 hours based on an individual's memory recall
- c) A tool that utilizes a questionnaire to determine how often certain foods are consumed
- D. A tool that offers a comprehensive and accurate measurement of an individuals
- d) Dietary intake over 48-72 hours

Answer: A

588. The term kwashiorkor refers to:

- a) Form of protein-calorie malnutrition characterized by severe weight loss and protein depletion
- b) Form of malnutrition where protein deficiency causes edema and depletion of visceral protein
- c) A mild form of malnutrition commonly seen in developing countries
- d) Form of malnutrition rarely seen because of improved food supply and access to food

Answer: B

589. During a nutrition focused physical exam of an infant, the RD notices a yellowish tinge to the infant's skin. What nutrient might this be associated with?

- a) Excessive intake of Vitamin A
- b) Deficiency of Vitamin A
- c) Deficiency of Vitamin E
- d) Excessive intake of Vitamin E

Answer: A

590. All of the following are leading health indicators for Health People 2020 EXCEPT:

- a) Physical Activity
- b) Obesity
- c) Diabetes Mellitus
- d) Substance abuse

Answer: C

591. Using the HAMWI method, calculate the ideal body weight for a 47-year-old male with a height of 6'2" and a weight of 175 pounds.

- a) 171-190 lbs
- b) 171-209 lbs
- c) 190-209 lbs
- d) 180-200 lbs

Answer: B

592. What is the name of the data source through the CDC and Prevention that obtains information for individuals in the form of interviews and physical examinations in order to assess the overall nutritional and health status of the US?

- a) Dietary Guidelines for Americans
- b) National Health and Nutrition Examination Survey (NHANES)
- c) Nationwide Food Consumption Survey
- d) Nutrition Screening Initiative (NSI)

Answer: B

593. What is the main goal of the Dietary Guidelines for Americans?

- a) To reduce the incidence of diabetes mellitus
- b) To teach parents how to feed their children appropriately
- c) To provide a sample 2,000 calorie meal plan for the majority of Americans to follow in order to lose weight.
- d) To try to reduce the overall risk for developing certain chronic diseases through improvement of diet and physical activity.

Answer: D

594. All of the following are True about Dietary Reference Intake (DRI) except:

- a) The DRI's take into account both gender and age
- b) Recommended Dietary Allowances (RDA's), Adequate Intake (AI), and guidelines for safer upper limits all fall under the umbrella of the DRI
- c) The DRI's are updated every 5 years
- d) The DRI's were originally written as RDA's to help prevent nutrient deficiencies.

Answer: C

595. What 3 components comprise a nutrition diagnosis statement?

- a) PES (Problem-Etiology-Signs/symptoms)
- b) DET (Diagnosis-Etiology-Treatment)
- c) ICS (Issue-Cause-Symptoms)
- d) POS (Problem-Origin-Signs/Symptoms)

Answer: A

596. All of the following are domains within classifications of nutrition diagnosis EXCEPT:

- a) Medical
- b) Intake
- c) Behavioral-Environmental
- d) Clinical

Answer: A

597. How does a nutrition diagnosis differ from a medical diagnosis?

- a) They are essentially the same except the nutrition diagnosis is written by the dietitian
- b) A nutrition diagnosis is a problem or issue that can be addressed through the nutrition intervention of a dietitian or other dietetics professionals
- c) A dietitian cannot diagnose medical conditions. Therefore, a nutrition diagnosis must be substituted
- d) A nutrition diagnosis enables the dietitian to bill for services rendered.

Answer: B

598. A 30-year-old man is admitted to the hospital with a flare up of his Crohn's disease. He is 6' tall and his usual weight is 170 lbs, which he weighed 1 month ago. His weight on admission is 160 lbs. His BMI is 21.7 kg/m². He has not been eating well due to abdominal pain that has been worsening over the past month. Which of the following might be a potential PES statement for this patient?

- a) Increased energy requirements r/t decreased intestinal function due to Crohn's disease a/e/b unintentional weight loss of 10% in the past month

- b) Increased energy requirements r/t decreased intestinal function due to Crohn's disease a/e/b unintentional weight loss of 6% in the past month
- c) Increased energy requirements r/t decreased intestinal function due to Crohn's disease a/e/b loss of muscle mass
- d) Increased energy requirements r/t decreased intestinal function due to Crohn's disease a/e/b a BMI of 21.7 kg/m²

Answer: B

599. You have identified "excessive fat intake" as a problem for one of your clients and "food and nutrition related knowledge deficit" as the etiology. Which of the following would be most appropriate to use as signs/symptoms?

- a) Decreased serum amylase
- b) HDL cholesterol level of 45 mg/dL
- c) Observation of client eating an order of French fries prior to counseling session
- d) Serum cholesterol of 260 mg/dL

Answer: D

600. A client is referred to you after being diagnosed with DM type II. The client is visibly overweight, reeks of cigarette smoke, and is drinking a bottle of regular soda. As you begin to interview the client, he is sitting with his arms crossed and keeps staring out the window. You learn this is the second time he has been referred to a dietitian. The first time was for assistance with weight loss and blood glucose levels borderline for diabetes, but he did not follow up. You assess one problem to be "not ready for diet/lifestyle change." Based on the information, which is the best choice for a PES statement?

- a) Not ready for diet/lifestyle change related to lack of interest as evidenced by negative body language and failure to engage in counseling.
- b) Not ready for diet/lifestyle change related to new diagnosis of diabetes as evidenced by elevated serum blood glucose levels.
- c) Not ready for diet/lifestyle change related to failure to engage in counseling as evidenced by negative body language
- d) Not ready for diet/lifestyle change related to failure to keep appointments as evidenced by new medical diagnosis.

Answer: A

601. What is the form of documentation that was developed with the NCP in mind?

- a) SOAP
- b) PES
- c) ADIME
- d) PIE

Answer: C

602. Which of the following statements does NOT reflect the goals or objectives of nutrition intervention as part of the NCP?

- a) Goals and objectives must be reasonably attainable
- b) The dietitian should set the most appropriate goals and objectives for the client or patient.
- c) Goals and objectives must be able to be quantified
- d) Goals and objectives should be centered on the patient or client.

Answer: B

603. Which of the following would be the MOST IMPORTANT nutrition intervention for a person identified as having pre-diabetes with a BMI of 27 kg/m²?

- a) Reduction of total fat intake
- b) Moderate weight loss
- c) Reduction of sodium intake
- d) Elimination of concentrated sweets

Answer: B

604. Which of the following foods would not be allowed on a gluten-free diet?

- a) Canned pears
- b) Cream of rice cereal
- c) Beer
- d) Cottage cheese

Answer: C

605. What factor has the most significant impact on the course of Short Bowel Syndrome (SBS)?

- a) Resection of the jejunum
- b) Age at time of surgery
- c) Resection of the distal ileum
- d) Resection of the duodenum

Answer: C

606. What is the daily protein requirement for a patient with uncomplicated cirrhosis without encephalopathy?

- a) 0.4-0.6 g/kg
- b) 0.8-1.0 g/kg
- c) 1.3-1.5 g/kg
- d) 1.5-2.0 g/kg

Answer: B

607. What would be an appropriate substitution for a formula-fed infant who has just been diagnosed with a cow's milk protein allergy?

- a) Enfamil
- b) Neosure
- c) Nutramigen
- d) Neocate

Answer: C

608. A 32-year-old female who is 24 weeks pregnant has a random glucose test of 215 mg/dL. She has a pre gravid BMI of 31 kg/m². A fasting blood glucose done the next day is 110 mg/dL. She is referred to your office for management of gestational diabetes. What would be an appropriate first step in your nutrition intervention for this woman?

- a) Initiate counseling to reduce carb intake to 35-40% of total calories.
- b) Initiate counseling to reduce carb intake to 50-60% of total calories.
- c) Recommend additional blood glucose testing in the form of a fasting glucose level or an oral glucose tolerance test.

- d) Recommend the initiation of insulin or oral hypoglycemic agents to optimize blood glucose control.

Answer: A

609. You are beginning to counsel the woman in the previous question on her meal plan. What would be the most appropriate strategy for counseling?

- a) Provide a weeks' worth of pre-planned menus
- b) Teach a No Concentrated Sweets Diet
- c) Provide a meal plan using the diabetic exchange system
- d) Provide a meal plan using carbohydrate counting

Answer: D

610. When evaluating an adolescent female for the possibility of an eating disorder, what clinical signs may indicate a diagnosis of bulimia nervosa instead of anorexia nervosa?

- a) Irregular menstrual periods
- b) Hypokalemia
- c) Erosion of the enamel of the teeth
- d) Weakness and delayed gastric emptying

Answer: C

611. All of the following are ways that schools are working towards implementing the Dietary Guidelines for Americans EXCEPT:

- a) Using à la carte items to supplement calories to meet guidelines
- b) Using standardized recipes to incorporate commodity foods into meal plans
- c) Adjusting portion sizes to meet requirements for various age groups
- d) Voluntary participation in the National School Lunch Program (NSLP)

Answer: A

612. Which of the following is NOT an example of ways that the Dietary Guidelines for Americans are utilized?

- a) Development of educational materials and tools based on the guidelines
- b) Placement of information from the guidelines on food labels and the Nutrition Facts Panel

- c) Programs such as the Elderly Nutrition Program, national child nutrition programs, and SNAP
- d) Development of laws such as the Dietary Supplement Health and Education Act

Answer: D

613. Which of the following are the 4 modifiable risk factors that have been identified as key in the prevention and control of high blood pressure?
- a) Weight, sodium, potassium, and physical activity
 - b) Weight, sodium, physical activity, and alcohol
 - c) Physical activity, alcohol, sodium, and potassium
 - d) Sodium, calcium, weight, and physical activity

Answer: B

614. Which of the following is the best initial nutrition prescription for a patient with gastroparesis?
- a) Liquid or puree meals that are high-calorie, high protein, and low-fat
 - b) Small frequent meals that are high fiber and moderate fat, plus a minimum of 30 minutes of physical activity daily
 - c) Jejunostomy tube placement for enteral nutrition
 - d) Small, frequent meals that are low-fiber and low-fat followed by mild exercises such as a walk

Answer: D

615. Which of the following is TRUE about the nutrition prescription?
- a) It is the nutrition treatment that is deemed correct for a certain nutrition diagnosis
 - b) It is written prior to the PES
 - c) It is equivalent of the physician diet order
 - d) It is based on the nutrition and diet history along with the admitting diagnosis

Answer: A

616. The final step of the NCP is Monitoring/Evaluation. Which of the following domains would NOT be the most appropriate starting point in choosing the nutrition outcome indicators?
- a) Nutrition-Focused Physical Findings
 - b) Comparative Standards

- c) Client History
- d) Knowledge/Beliefs/Attitudes

Answer: C

617. A 54-year old male patient with ESRD started HD 4 months ago. He has reportedly received diet instruction at his previous dialysis clinic but seems to have trouble adjusting his potassium intake. The nutrition diagnosis was identified as "excessive intake of potassium as evidenced by food and nutrition knowledge deficit related to elevated serum potassium of 5.5 and frequent consumption of high-potassium foods such as banana and orange juice." The planned nutrition intervention was comprehensive nutrition education on a potassium-modified diet including appropriate food substitutions that are lower in potassium. Which of the following is the best choice for monitoring/evaluation of this patient?

- a) Urine volume and specific gravity (Biochemical data, medical tests, and procedures domain) and level of food and nutrition knowledge (Food/nutrition-related history domain)
- b) Serum potassium (Biochemical data, medical tests, and procedures domain), food/meal selections, and self-reported adherence (Food/Nutrition-related history domain)
- c) Amount of food, types of food/meals, and variety (Food Nutrition-related history domain)
- d) Comparison to estimated potassium needs (Comparative standards domain) and serum potassium (biochemical data, medical tests, and procedures domain)

Answer: B

618. A client with a nutrition diagnosis of overweight/obesity and a family history of coronary heart disease and diabetes. The client needs help with weight reduction. All of the following may be appropriate monitoring/evaluation plans for this client EXCEPT:

- a) Readiness to change, level of knowledge, physical activity, and total energy intake
- b) Fat and cholesterol intake, total fiber intake, BMI
- c) Lipid profile, fasting blood glucose, triglyceride and cortisol levels
- d) Percentage of usual body weight or ideal body weight, waist circumference, BMI, Percent weight change

Answer: C

619. A patient with ovarian cancer and malnutrition is being started on total parenteral nutrition.

What are the MOST important lab values to monitor upon initiation of TPN?

- a) Serum phosphorus, potassium, glucose
- b) Serum phosphorus, renal function, glucose
- c) Serum potassium, glucose, triglycerides
- d) Serum sodium, potassium, liver function

Answer: A

620. A 80-year old female is admitted to the hospital with a stage 2 pressure ulcer on her coccyx. She weighs 100 lbs on admission with a height of 5`2". She has a BMI of 18.3 and a serum albumin level of 2.2 g/dL. She needs at least 1500 kcal and 68 g protein per day. She is unable to eat and has been prescribed a high protein, high calorie diet with supplements Bid. What is the best way to measure her response to nutritional intervention?

- a) Daily weights
- b) Monitoring for increases in serum albumin and her serum zinc level
- c) Monitoring her protein intake as well as her intake of vitamins and minerals
- d) Consulting with the skin care nurse on progress with healing of the pressure ulcer

Answer: D

621. What is the appropriate action for a patient who does not have a nutrition diagnosis?

- a) If the patient has potential for a nutrition diagnosis or is at risk for developing nutrition diagnosis, this should be documented
- b) No nutrition diagnosis at this time but a plan for reassessment should be documented in the Monitoring/Evaluation step
- c) No documentation is required
- d) All patients will have some sort of nutrition diagnosis. You will need to delve further to determine one

Answer: B

622. Which of the following best describes the labs that would normally be obtained when monitoring liver function?

- a) Bilirubin (direct and indirect), BUN, Creatinine, CHEM-7

- b) Alkaline phosphatase, PT/PTT, ferritin
- c) ALT, AST, bilirubin, LDH, ammonia
- d) Ceruloplasmin, zinc, ALT, AST

Answer: C

623. The best choice for measuring long-term glucose control would be:

- a) Fasting glucose
- b) Pre-prandial capillary plasma glucose
- c) Glucose tolerance test
- d) HbA1c

Answer: D

624. All of the following are TRUE about documentation of step 4 of the NCP (monitoring/evaluation) EXCEPT:

- a) The schedule for the frequency of monitoring is based solely on departmental policy and procedures
- b) It requires a definitive plan of action rather than just "watching" or "following."
- c) Components of this step include monitoring progress, measuring outcomes, and evaluating outcomes.
- d) Progress toward nutrition goals could be more objectively measured on a numerical scale such as 1-5.

Answer: A

625. All of the following are appropriate reasons for discontinuation of care by the dietitian EXCEPT:

- a) The patient has met goals for nutrition intervention
- b) The client is discharged from the hospital
- c) The client is not ready to make the necessary changes to meet intervention goals at this time.
- d) No further change in nutrition diagnosis is expected and reasons for lack of progress are documented.

Answer: B

626. In performing a nutrition-focused physical assessment in the area of the mouth, you notice bleeding, spongy gums. What vitamin or mineral may be deficient?

- a) Vitamin A
- b) Vitamin C

- c) Iron
- d) Zinc

Answer: B

627. Which of the following would NOT be appropriate use of nutrition outcome measures in quality improvement?
- a) Evaluation of the healthcare savings associated with a reduced length of stay for certain types of patients
 - b) Evaluation of the effectiveness of nutrition care
 - c) Evaluation of progress towards national obesity goals
 - d) Evaluation of patient-centered outcomes such as quality of life or self-management skills

Answer: C

628. Which of the following most accurately describes the Healthy Diet Goals of the American Heart Association (AHA)?
- a) Consume less than 2300 mg of sodium, less than 300 mg of cholesterol, 4-5 servings of fruits and vegetables per day, and reduce sugar consumption
 - b) Consume less than 1500 mg of sodium, less than 200 mg of cholesterol, 5-10 servings of fruits and vegetables per day, reduce sugar consumption, and limit alcohol to 1 drink per day for both men and women
 - c) Consume less than 2300 mg of sodium per day, increase consumption of soy, eat fish twice per week, and reduce cholesterol intake to less than 300 mg per day.
 - d) Consume less than 1500 mg of sodium, less than 300 mg of cholesterol, 8-10 servings of fruits and vegetables per day, limit alcohol to 1 drink per day for women and 2 per day for men, and reduce consumption of sugar.

Answer: D

629. Which of the following best describes the American Cancer Society's nutrition recommendations for cancer prevention?

- a) Achieve and maintain a healthy weight, increase physical activity to at least 30 minutes per day, increase consumption of fruits and vegetables, choose whole grains, reduce consumption of red meat, limit alcohol intake
- b) Try to reach ideal body weight, limit alcohol intake, eat 3-5 servings of fruit and vegetables per day, increase exercise to 60 minutes per day
- c) Achieve and maintain a healthy weight, increase intake of antioxidants through nutrition supplements or foods, avoid aspartame
- d) Try to reach ideal body weight, reduce fat intake, reduce intake of processed foods, and increase activity to 60 minutes per day, 3 times per week

Answer: A

630. A client enters your office for his initial counseling session for management of hypertension. The physician has asked you to help this man with weight loss, reducing sodium intake, and overall risk reduction. The client sits down, immediately begins to frown, arms are crossed over his chest, and he does not make eye contact when you initiate conversation. What are the non-verbal clues telling you about this client?

- a) The client is relaxing, ready to listen
- b) The client is feeling defensive, cold towards you or the situation
- c) The client is bored or not interested
- d) The client is anxious about his medical condition

Answer: B

631. A client is telling you how difficult it is for her to eat healthy when she travels with close friends who are not following the same diet modifications. Which of the following is an example of reflection on the part of the dietitian?

- a) "You find it difficult to make healthy food choices while traveling so perhaps we need to rethink these vacation plans so you do not lost ground."
- b) "I understand. When I travel, I eat what I want then try twice as hard to get back."
- c) "You feel ashamed that you need to diet while all your friends can eat whatever they want."
- d) "You find it difficult to make healthy food choices while on vacation because all you friends are able to eat whatever they want and you find it frustrating."

Answer: D

632. All of the following would be examples of appropriate behavior modification that may be used for children for weight control EXCEPT:

- a) Limiting TV and computer time to 2 hours max and providing a reward if goal is met
- b) Substituting water for soda or sweetened beverages
- c) Eating at the table with family instead of in front of the TV
- d) Eating a healthy breakfast every morning that is low in sugar, contains fiber and protein, and is low in fat

Answer: A

633. According to the Trans theoretical Model, at which change would an individual be readiest to make nutritional changes?

- a) Precontemplation
- b) Contemplation
- c) Preparation
- d) Action

Answer: D

634. All of the following are important communication skills necessary in the facilitation of changes in behavior by the nutrition professional EXCEPT:

- a) Avoidance of putting the client on the defensive
- b) Helping the client to develop discrepancy
- c) Confrontation
- d) Expression of empathy

Answer: C

635. A 19-year-old female was diagnosed with Type 1 diabetes 4 months ago. She has been doing fairly well trying to implement all the recommendations that have been given to her. She is a late sleeper and often does not have time in the morning to eat breakfast, which leads to issues with

hypoglycemia. What would be the MOST appropriate intervention to help her make time for breakfast so she can avoid hypoglycemia?

- a) Help her come up with healthful breakfast ideas that are easy to eat quickly in the morning
- b) Explain to her the dangers of skipping breakfast and insist that she wake up 1 hour earlier in order to eat a healthy breakfast
- c) Advise her to keep snacks on hand to prevent hypoglycemia
- d) Acknowledge her difficulty waking up and encourage her to pick up breakfast on her way to school or work to ensure she gets her meal in even if it is not the most healthful

Answer: A

636. A financial services company has been experiencing an increasing number of absences by employees. Many of the sick days are related to chronic health conditions. The company decides to implement a voluntary nutrition education program that involves seminars on healthy eating, weight loss, increasing physical activity, and managing chronic health conditions such as diabetes. After a period of 9 months of participation, the company wants to evaluate the effectiveness of the program. Which of the following would be the best advice?

- a) Provide a detailed questionnaire to the employees about participation and sick day use.
- b) Determine a baseline for the average amount of sick time used per employee over a period of time and reassess at predetermined intervals.
- c) Compare use of sick time for each employee before and after attending seminars
- d) Ask employee health services to release information on employees with chronic diseases and determine if use of sick time has declined after participation in the seminars.

Answer: B

637. What was the definition of a cohort study?

- a) Subjects with the same condition or using the same treatment are followed and observed over time, then compared to subjects without the condition or treatment.
- b) Subjects with the same condition or using the same treatment are paired up with controls to track progress

- c) Subjects with the same condition are divided into groups and given different treatments, then followed over time to determine best practice. The subjects are not aware of exactly what treatment they are receiving.
- d) A retrospective review of subjects with the same disease.

Answer: A

638. All of the following are part of the menu evaluation. Which is the most important for a long term care foodservice operation?

- a) Attractiveness of the menu (color, contrast, textures, flavors)
- b) Repetition of food items throughout the cycle
- c) Determining if the workload is manageable with the available staff and equipment
- d) Determining if the menu meets nutritional guidelines

Answer: D

639. Once a menu is established for a long-term care facility, how are therapeutic and modified consistency diets accommodated?

- a) Modified menu extensions are written by the RD based on the master and are used in conjunction with the institutions diet manual.
- b) A separate menu is written as needed based on physician order
- c) Menu cycles are written for modified-consistency diets and the most common therapeutic diets
- d) The menu is served as written and items are substituted as necessary based on the diet order

Answer: A

640. All of the following would be an acceptable inventory method for food service EXCEPT:

- a) Physical inventory
- b) LIFO
- c) Mini-max system
- d) Par-stock system

Answer: B

641. All of the following are important in quantity food production. Which of the following is the MOST important factor?

- a) Quality food is the end result
- b) To promote the maximum retention of nutrients through appropriate preparation
- c) To maximize production schedules for the most efficient use of staff and equipment
- d) The use of standardized recipes to help control costs and provide consistent products

Answer: A

642. All of the following foods are on the FDA's Potentially Hazardous Food list EXCEPT:

- a) Sliced cantaloupe
- b) Peanut butter
- c) Sliced tomatoes
- d) Cooked pinto beans

Answer: B

Reason: Potentially Hazardous Food List includes foods that can possibly cause food-borne illness if temperature control guidelines are not followed. The following guidelines identify foods that make the PHF list: water activity greater than 0.85, containing protein, and/or having a pH between 4.6 and 7.5, making the food neutral to slightly acidic. Foods on this list include: meats, chicken, turkey, fish, shellfish, eggs, dairy products, mushrooms, raw sprouts, baked potatoes, and any cooked plant-based food. Most fruits and veggies are not considered hazardous unless they are cut.

643. Food-borne illness caused by *Staphylococcus aureus* has an incubation period of:

- a) 6-48 hours
- b) 1/2-6 hours
- c) 8-22 hours
- d) 18-36 hours

Answer: B

644. Which of the following has the most dangerous implications of pregnant women?

- a) Staph. Aureus

- b) *Bacillus cereus*
- c) *Listeria monocytogenes*
- d) *Campylobacter jejuni*

Answer: C

645. In order for chlorine to be effectively used as a sanitizer in a food service operation, the pH level must be:

- a) Below 8
- b) Below 5
- c) Above 8
- d) Above 5

Answer: A

Reason: There are 2 ways to sanitize: heat and chemical. Three sanitizers used for chemical sanitizing are chlorine, iodine, and quaternary ammonium. In order for the sanitizer to be effective, the pH level of the water it is mixed with must be at a certain level: 7 for quaternary ammonium; <8 for chlorine; <5 for iodine.

646. Important factors in planning the facilities for a university food service with multiple dormitories and a large commuter population would include all of the following EXCEPT:

- a) A first floor location near the main hallways
- b) A state-of-the-art ventilation system to prevent odors from the kitchen from reaching public spaces such as classrooms
- c) Avoiding duplicate purchases of large pieces of food service equipment to cut down on costs
- d) Planning for a cook/chill or cook/freeze system in order to reduce the amount of cooking equipment needed

Answer: C

647. In a facilities design project, which of the following would best describe the information contained in the prospectus?

- a) Project rationale, physical operations and characteristics, necessary regulatory data such as safety features, noise control, and energy use

- b) Members of the planning committee, architectural features, budget considerations
- c) Feasibility study, determination of the foodservice system to be implemented, spatial considerations
- d) Preliminary design plan, menu analysis, feasibility study

Answer: A

648. Which of the following best describes the characteristics of a bake shop or dessert preparation area within a foodservice department?

- a) It should be located close to the main production or preparation areas
- b) It should be laid out in a counterclockwise configuration to increase efficiency, with the final product finishing closest to where it will be served or transported
- c) It should be laid out in a typical triangle configuration for maximum efficiency
- d) It can be located within the main food prep area

Answer: B

649. A large tertiary care hospital utilizes a cook/chill food service system. Food is prepared in the main preparation area. Trays are prepared on the tray line and then transported to galleys located on the inpatient units, where they are reheated later at meal time to serve to the patients. This type of distribution system is known as:

- a) Centralized
- b) Decentralized
- c) Patient-centered
- d) Cafeteria style

Answer: B

650. All of the following are included on a balance sheet EXCEPT:

- a) Assets such as cash on hand, petty cash, and accounts receivable
- b) Liabilities such as accounts payable, salaries, and sales tax owed
- c) Assets such as money due from state or federal funds and purchased food and supplies
- d) Liabilities such as equipment or furniture

Answer: D

651. In school food service operations, the unit measure most often used to quantify the effectiveness of the program is:

- a) A la carte items
- b) Student reimbursable breakfast
- c) Student reimbursable lunch
- d) All student reimbursable meals

Answer: C

652. A 45-year-old woman has developed red, roughened skin in sun-exposed areas over the past 2 years. She also has a chronic, watery diarrhea. On physical examination she exhibits memory loss with confusion. These findings are most consistent with which of the following vitamin deficiencies?

- a) Vitamin A
- b) Thiamine
- c) Niacin
- d) Pyridoxine

Answer: C

653. Which of the following nutritional factors has been shown to BEST predict long term morbidity and/or mortality?

- a) BMI >30 or <18
- b) >10% weight gain in the previous 6 months
- c) Percent body fat >22% (men) or >35% (women)
- d) Total fat intake >30% of consumed calories

Answer: A

654. There is much evidence in favor of diets high in monounsaturated fat. The potential drawback of this diet compared with diets high in complex carbohydrates is that monounsaturated fat may result in:

- a) Higher energy intake
- b) Higher cholesterol levels

- c) Higher triglyceride levels
- d) Higher insulin resistance

Answer: A

655. Which one of the following options represents historical features of the Subjective Global Assessment?

- a) Weight loss and gastrointestinal symptoms
- b) Malignancy and nausea
- c) Family history of IBD and personal history of weight loss
- d) Family history of Celiac Disease

Answer: A

656. Which of the following is an ABSOLUTE contraindication to parenteral nutrition?

- a) Diarrhea
- b) Liver cirrhosis
- c) Malignancy
- d) Active Infection

Answer: D

657. Which one of the following options represents potential complications of enteral nutrition?

- a) Osteoporosis and refeeding syndrome
- b) Diarrhea and cholestasis
- c) Esophagitis and pancreatitis
- d) Aspiration and refeeding syndrome

Answer: D

658. Enteral nutrition is preferred over parenteral nutrition for all of the following reasons EXCEPT:

- a) Lower risk of electrolyte abnormalities
- b) Lower risk of refeeding
- c) Lower risk of liver disease

d) Improved Glycemic control

Answer: B

659. You are asked to see a 26-year-old man with Crohn's disease. He has been admitted to hospital 3 days ago with a small bowel obstruction secondary to fibrostenotic disease of the terminal ileum. Prior to 3 days ago, his oral intake was normal despite ongoing abdominal pain and diarrhea related to his Crohn's disease. He has lost 2kg since hospitalization, but his weight was stable prior to that. He is scheduled for surgery tomorrow for terminal ileal resection. His surgeon asks for your advice regarding nutrition support.

Would you start TPN today, expecting post-operative benefit?

- a) No; studies of benefit of pre-operative nutrition have shown benefit only in patients who receive TPN for > 7 days prior to surgery.
- b) Yes; he is at risk for poor wound healing and infection based on his recent weight loss
- c) Yes; studies of benefit of pre-operative nutrition have shown benefit in patients who receive TPN in the immediate preoperative setting.
- d) Yes; studies of benefit of pre-operative nutrition have shown benefit in preventing recurrence of Crohn's disease at the anastomotic site

Answer: A

660. Continuing to the case above what would you recommend delaying surgery for TPN to improve outcome?

- a) Yes; he is at risk for poor wound healing and infection based on his underlying disease and recent weight loss
- b) Yes; he may have reduced oral intake post-operatively and lose more weight
- c) No; he is young with no major comorbidity therefore at low risk of nutritional complications
- d) No, however he should maximize enteral nutrition for 24 hours pre-operatively

Answer: A

661. Which of the following statements regarding enteral nutrition formulas is TRUE?

- a) Polymeric formulas are those that contain all macronutrients in whole (ie non-hydrolyzed) form; semi-elemental formulas do not contain all three macronutrients.
- b) For acute pancreatitis within 48 hours of hospital admission, jejunal delivery of semi-elemental formulas is the preferred form of nutrition support.
- c) Enteral formulas are formulated to provide adequate micronutrients if caloric requirements are being met
- d) Specialty formulas for liver and pulmonary disease are superior to regular polymeric formulas in patients with cirrhosis and COPD, respectively

Answer: C

662. Which of the following is an acceptable method for determining caloric needs for nutrition support?

- a) Caloric needs per kilogram of body weight (ie 25-30 kcal/kg body weight)
- b) Underwater weighing
- c) Cockcroft-Gault equation with activity modifier
- d) Anthropometry and Body impedance analysis

Answer: A

663. Which of the following is NOT a clinical consequence of refeeding syndrome?

- a) Hypophosphatemia
- b) Hypomagnesemia
- c) Hypervolemia
- d) Hyperphosphatemia

Answer: D

664. Which one of the following micronutrients is routinely added to TPN?

- a) Vitamin D
- b) Iron
- c) Vitamin E
- d) Manganese

Answer: D

665. A 50-year-old man had a massive small bowel resection secondary to a volvulus 1 year ago, leaving him with 75cm of small bowel. If he did not receive adequate nutrition support, how long would it take to develop biochemical or clinical evidence of essential fatty acid deficiency?

- a) 4 days
- b) 4 weeks
- c) 4 months
- d) 4 years

Answer: B

666. Which one of the following medications can be added to TPN in the appropriate clinical circumstance?

- a) H2 Receptor Antagonists
- b) Proton pump inhibitors
- c) Fluroquinolones
- d) Narcotics

Answer: B

667. Which one of the following statements is TRUE regarding central venous catheter infections in patients receiving long term home total parenteral nutrition?

- a) The most common organism causing catheter infection is Staphylococcus Aureus.
- b) Double lumen catheters reduce the risk of catheter infection compared with single lumen catheters.
- c) Femoral catheters reduce the risk of catheter infection compared with subclavian catheters
- d) In an uncomplicated catheter infection, the accepted standard of care is to start antibiotic therapy without removing the catheter

Answer: D

668. In which of the following clinical situations should >1.0g protein per kg body weight be provided in nutrition support?

- a) Patients with renal failure on hemodialysis
- b) Hospitalized patients
- c) Obese patients
- d) Cirrhosis with hepatic encephalopathy

Answer: A

669. Which one of the following gut hormones is responsible for promoting appetite?

- a) Leptin
- b) Ghrelin
- c) Peptide YY
- d) CCK

Answer: B

670. Which one of the following hormones plays an important role in inhibiting appetite?

- a) Ghrelin
- b) Resistin
- c) TNF α
- d) Peptide YY

Answer: D

671. Which of the following statements is TRUE regarding weight reducing agents and mechanism of weight loss?

- a) Orlistat exerts its action by selectively blocking cannabinoid-1 receptors
- b) Sibutramine exerts its action by inhibiting pancreatic lipase
- c) Sibutramine exerts its action by selectively blocking cannabinoid-2 receptors
- d) Rimonabant exerts its action by selectively blocking cannabinoid-1 receptors

Answer: D

672. Which of the following statements regarding the side effects of weight reducing agents is TRUE:

- a) Orlistat can predispose to cardiac arrhythmias
- b) Rimonabant can predispose to cardiac arrhythmias
- c) Sibutramine can predispose toward abdominal diarrhea and steatorrhea
- d) Sibutramine can predispose toward cardiac arrhythmias

Answer: D

673. Which of the following is NOT an adipocytokine:

- a) Leptin
- b) Resistin
- c) Adiponectin
- d) Ghrelin

Answer: D

674. Which of the following is an acceptable indication for pharmacotherapy to induce weight loss in overweight/obese adults?

- a) BMI > 27 and unsuccessful attempt at lifestyle modification for preceding 6 months
- b) BMI > 30 and unsuccessful lifestyle modification for preceding 6 months
- c) Waist circumference > 102 cm in males
- d) Waist circumference > 88cm in females

Answer: B

675. Which of the following statements is TRUE regarding probiotics?

- a) Probiotics are organisms that contribute toward intestinal microbial balance
- b) Probiotics are non-digestible food products that selectively stimulates the growth of one or a limited number of bacteria in the colon to confer health benefit for the host
- c) There is good evidence to suggest that probiotics have a beneficial role in preventing post-operative recurrence of Crohn's Disease
- d) Milk is an example of a food source containing probiotics.

Answer: A

676. Which of the following is an example of a prebiotic?

- a) Yogurt
- b) Insulin
- c) Creatinine
- d) Fish Oil

Answer: A

677. All of the following are manifestations of zinc deficiency EXCEPT:

- a) Diarrhea
- b) Dysgeusia
- c) Alopecia
- d) Rash

Answer: D

678. A 50 years old male with short bowel syndrome. This patient had a small bowel resection secondary to mesenteric ischemia 2 months ago, leaving him with 150 cm of residual small bowel and an end jejunostomy. He is now dependent on TPN 5 days per week. He is having 3 L of stool output per day. There is no evidence of enteric infection. Which of the following pharmacological options is the most reasonable next therapeutic option?

- a) Flagyl 500mg po bid
- b) Cipro 500mg po bid
- c) Cipro 500mg IV q12h
- d) Codeine 30mg po qid

Answer: D

679. The patient above develops gradual onset of shortness of breath, 3-pillow orthopnea, and paroxysmal nocturnal dyspnea with mild ankle edema over a period of eight months. These symptoms may be a result of which of the following:

- a) Zinc deficiency
- b) Chromium deficiency
- c) Selenium deficiency

d) Manganese deficiency

Answer: C

680. When does MAXIMAL small bowel adaptation occur post small bowel resection?

- a) 2 months
- b) 6 months
- c) 8 months
- d) 18 months

Answer: A

681. Which of the following foods does not contain gluten and is acceptable for patients with celiac disease to consume?

- a) Bran
- b) Spelt
- c) Rice
- d) Graham

Answer: C

682. A 85 years old male patient has decreased his intake of animal protein and increased his intake of whole grain toast, cereal and salads over the past 12 months. Which of the following micronutrient deficiencies is he at risk for?

- a) Chromium
- b) Selenium
- c) Folate
- d) Zinc

Answer: D

683. A 35-year-old morbidly obese female underwent vertical band gastroplasty (VBG) 6 months ago. She has lost 50 lbs of weight over 6 months. She is now complaining of 6-8 loose watery bowel

movements per day ongoing for the past 2 months. Prior to 2 months ago she was having 1 formed bowel movement per day for years. Which of the following statements regarding this scenario is TRUE?

- a) The diarrhea is likely related to malabsorption from the VBG and is the primary mechanism of weight loss
- b) The diarrhea is likely a consequence of small bowel bacterial overgrowth which may be a consequence of the VBG
- c) She is immunosuppressed secondary to the weight loss and the diarrhea may be related to C. Difficile colitis
- d) The diarrhea is not related to the VBG and requires a full work-up

Answer: D

684. Which of the following statements regarding protein intake in patients with chronic liver disease is TRUE:

- a) Protein restriction should NOT be considered routinely in patients with chronic liver disease including in those with hepatic encephalopathy
- b) Patients with chronic liver disease and encephalopathy should receive protein in quantities between 0.25-0.5g/kg/d
- c) Animal sources of protein should be consumed more frequently in patients with chronic liver disease
- d) Patients with chronic liver disease should receive protein in quantities between 2-2.5g/kg/day
- e) Patients with chronic liver disease should receive protein in quantities between 0.5-0.75g/kg/d

Answer: A

685. Which of the following statements regarding macronutrient energy value is TRUE:

- a) Carbohydrates provide 9kcal/gram consumed
- b) Protein provides 2 kcal/gram consumed
- c) Fat provides 7kcal/gram consumed
- d) Protein provides 4 kcal/gram consumed

Answer: D

686. Which of the following statements regarding Fiber is TRUE?

- a) Insoluble fiber has been shown to reduce total cholesterol

- b) Insoluble fiber has been shown to improve blood sugar control in diabetics
- c) Soluble fiber enhances gastric emptying
- d) Soluble fiber has been shown to reduce total cholesterol

Answer: D

687. Which of the following values represent the recommended daily intake of fiber per day?

- a) 35-40g
- b) 25-30g
- c) 15-20g
- d) 10-15g

Answer: B

688. Which of the following patients with short bowel syndrome is likely to require long term Home Total Parenteral Nutrition?

- a) Small bowel length of 200cm with end jejunostomy
- b) Small bowel length 200cm with jejunocolic anastomosis
- c) Small bowel length 100cm with jejunocolic anastomosis
- d) Small bowel length 75 cm with end jejunostomy

Answer: D

689. A product lists the following nutrition information:

Serving size 9oz

Servings per package 1

Calories 240

Protein 19g

Carbohydrate 19g

Fat 10g

What is the percentage of calories provided by fat in this product?

- a) 30%
- b) 34%
- c) 38%
- d) 42%

Answer: C

690. Which of the following components of energy expenditure generally accounts for the largest proportion of the 24h energy expenditure total?
- a) Thermic Effect of Food
 - b) Resting Energy Expenditure
 - c) Activity related energy expenditure
 - d) Energy of Catabolism

Answer: B

691. A 50-year-old male is admitted to the ICU with respiratory distress secondary to pneumonia. He is now ventilator dependent. He is started on polymeric enteral feeds at 20cc/hour. After 2 days of feeds, his nurse notices that the gastric residual is 100cc and she is concerned about the risk of aspiration. The best recommendation in this situation is:
- a) Stop enteral feeds and start parenteral nutrition
 - b) Reduce the rate of the enteral feed to 10cc/hour
 - c) Change the polymeric formula to semi-elemental formula
 - d) Make no change to the current rate or type of feed as the risk of aspiration is low

Answer: D

692. At its core what does HACCP stipulate?
- a) That companies should use the right ingredients in the preparation of food.
 - b) That all organizations involved in the food business should implement and maintain hygiene procedures based on HACCP principles.
 - c) That people should wash their hands before handling food.
 - d) That food processing organizations should keep their administrative records in good order.

Answer: B

693. What does HACCP stand for?
- a) Hazard Analysis and Critical Control Point

- b) Hazard and Critical Control Point
- c) Health Analysis and Critical Control Point
- d) Hazard and Critical Cooking Point

Answer: A

694. What are the benefits of implementing HACCP?

- a) It assists businesses that work within the food preparation and supply industry to identify and manage key controls over processes and thereby ensure safe food.
- b) It helps organizations to keep accurate administrative records relating to food production.
- c) It keeps workers involved in food production on their toes.
- d) It helps to increase the profits of a company involved in food preparation.

Answer: A

695. How many principles are there in a HACCP system?

- a) Four
- b) Seven
- c) Eighteen
- d) Ten

Answer: B

696. Why should waist circumferences be measured only in patients with a BMI measurement less than 35kg/m^2 ?

- a) WC measurement is not accurate in obese patients
- b) Because it confers little additional information about risk
- c) WC cutoff thresholds do not apply in obese patients
- d) Tape measures are difficult to find at that length

Answer: B

697. Which of the following tissues are most sensitive to vitamin and mineral deficiencies and likely to appear abnormal on physical examination?

- a) Skin
- b) Mouth
- c) Nails
- d) All of the above

Answer: D

698. When interpreting serum albumin in hospitalized patients, levels may decrease irrespective of nutritional status in which of the following conditions?

- a) Dehydration
- b) Liver disease
- c) Diabetes
- d) Stroke

Answer: B

699. A 55-years-old woman has been overweight most of her life. She comes for annual physical and laboratory examination and the results were as follows:

Blood pressure: 133/86 mm Hg

HDL: 60 mg/dL

Triglycerides: 230 mg/dL

Glucose: 98mg/dL

Waist circumference: 36inch

Her doctor suspects she has metabolic syndrome. How many of the metabolic syndrome criteria does she meet based on the above results:

- a) 1
- b) 2

c) 3

d) 4

Answer: C

700. Which of the following bariatric surgery procedures has been shown to have the least amount of postoperative side effects?

- a) Gastric banding
- b) Gastric bypass
- c) Roux-en-Y procedure
- d) Whipples procedure

Answer: A

701. Which of the following GI side effect occurs in approximately 70% of patient following a Roux-en-Y bariatric surgery?

- a) Inflammatory bowel disease
- b) Irritable bowel syndrome
- c) Dumping syndrome
- d) Lactose intolerance

Answer: C

702. A 39-years-old female patient who recently underwent gastric bypass surgery. She presents to the clinic 6 months postoperatively complaining of headaches, fatigues, and being cold all the time. Which of the following deficiencies is most likely associated with these symptoms?

- a) Vitamin C
- b) Riboflavin
- c) Zinc
- d) Iron

Answer: D

703. A 56-year-old male, known case of Crohn's disease with a resection of his terminal ileum. He has not taken any vitamin supplement following this procedure. He presents to his primary care physicians complaining of numbness and tingling in his hands and feet. Which of the following vitamin deficiency should be suspected?

- a) Vitamin C
- b) Vitamin D
- c) Vitamin B12
- d) Vitamin K

Answer: C

704. A 16-year-old boy, has been taking the antibiotic Minocycline for acne for the past 5 years. What vitamin deficiency is at risk of developing?

- a) Vitamin B12
- b) Vitamin C
- c) Vitamin K
- d) Vitamin A

Answer: C

705. A 65-year-old female, presented to your clinic complain of weakness and shortness of breath. She has been taking large doses of magnesium and aluminum contain antacids at each meal for dyspepsia. For the past two years, she has also been following a bland diet. Which of the following mineral deficiencies should be suspected in this patient?

- a) Chromium
- b) Phosphorus
- c) Calcium
- d) Selenium

Answer: B

706. Which of the following laboratory measured is the best determinant of iron status in a normal 18-year-old female with regular menses and no chronic health problems?

- a) Ferritin
- b) Transferrin
- c) Hemoglobin
- d) Total iron-binding capacity

Answer: A

707. What is the current recommendation for caffeine intake during pregnancy?

- a) Less than 200mg/day
- b) Less than 300mg/day
- c) Less than 400mg/day
- d) Less than 500mg/day

Answer: A

708. In which trimester does pregnant woman are more likely to experience anemia?

- a) 1st trimester
- b) 2nd trimester
- c) 3rd trimester
- d) There is no difference in the prevalence of anemia during pregnancy.

Answer: C

709. Breast fed infants may feed more often than formula-fed infants because breast milk empties from an infant's stomach slightly more rapidly than formula-fed infants. On average, what is the approximate time for emptying?

- a) 1 hour
- b) 1.5 hour
- c) 2 hours
- d) 3 hours

Answer: B

710. According to the CDC, to reduce the risk of bearing a child with a neural tube defect, what is the minimum amount of folic acid a woman of childbearing age should consume on a daily basis prior to becoming pregnant?

- a) 400 µg/day
- b) 600 µg/day
- c) 800 µg/day
- d) 1000 µg/day

Answer: A

711. A 30-year-old female presented to your clinic asking how quickly after delivery she can return to her pre-pregnancy weight while she is breastfeeding. Which of the following would be considered a safe weight loss while breastfeeding?

- a) 1-2 pound/week
- b) 1-2 pound/month
- c) 6-8 pound/month
- d) Women should not lose weight during breastfeeding

Answer: B

712. Head circumference measure brain growth in infants and children. Assessing head circumference is recommended for infants and children up to what age?

- a) 6months

- b) 12 months
- c) 2 years
- d) 3 years

Answer: C

713. At which age a child can start to drink cow's milk?

- a) 6 months
- b) 9 months
- c) 12 months
- d) 18 months

Answer: C

714. Children under the age of two should not follow a low fat diet because normal fat intake is required to maintain the development of which of the following systems?

- a) Central nervous system
- b) Respiratory system
- c) Musculoskeletal system
- d) Digestive system

Answer: A

715. Which of the following vitamin D₃ doses should be recommended for fracture prevention in older adults?

- a) 200 IU/day
- b) 300 IU/day
- c) 500 IU/day
- d) 800 IU/day

Answer: D

716. Malnutrition in the elderly is associated with which of the following factors?

- a) Poor appetite
- b) Problems with chewing and swallowing
- c) Medical illness
- d) All of the above

Answer: D

717. Recent evidence suggests that trans fatty acids raise LDL cholesterol levels when compared to unsaturated fatty acids. Which statements is true concerning trans fatty acids?

- a) Trans fats are found partially hydrogenated margarines and shortenings
- b) Trans fats and shelf life and flavor to foods
- c) Trans fat may reduce HDL cholesterol levels
- d) All of the above

Answer: D

718. Which of the following vitamins are used to treat hypercholesterolemia when used in pharmacological doses?

- a) Vitamin C
- b) Folate
- c) Vitamin B6
- d) Niacin

Answer: D

719. A 24-year-old female presented to your clinic with unintentional weight loss of 14kg over the past 4 months despite a normal intake. She is also complaining of foul-smelling stools and after several

days of work-up, she is diagnosed with Crohn's disease, which of the following is the most likely to cause of her weight loss?

- a) Bowel obstruction
- b) Perforated colon
- c) Vitamin deficiency
- d) Malabsorption

Answer: D

720. Individuals who are lactose intolerant and choose to avoid products containing lactose may not meet daily calcium requirements. Which of the following is the best- non-dairy source of calcium to recommend to patients who are lactose intolerant?

- a) Enriched soy milk
- b) Spinach
- c) Fortified whole-wheat bread
- d) Ice creams

Answer: A

721. Which nutritional measure is frequently abnormal in the presence of advanced HIV?

- a) Low albumin
- b) Low cholesterol
- c) Anemia
- d) All of the above

Answer: D

722. A 30-year-old female with severe Crohn's disease. She recently required an intestinal resection of her ileum. Which of the following is the most likely cause of fat malabsorption in patients with Crohn's disease?

- a) Decreased hepatic synthesis of bile salts
- b) Poor liver function
- c) Inability to reabsorb bile salts
- d) Decreased fat intake

Answer: C

723. Which of the following statement is correct regarding carbohydrate intake in patient with type 2 diabetes?

- a) The total amount of carbohydrate ingested is more important than the source or the type
- b) Any increase in dietary fiber will improve glycemia
- c) Implementing a low glycemic index diet will improve glucose and lipid levels
- d) Bolus insulin doses are based on the total amount of carbohydrate and protein in the planned meal.

Answer: A

724. Which of the following is a correct statement about carbohydrate counting?

- a) Bolus insulin doses are based on the total amount of carbohydrate and protein in the planned meal
- b) One carbohydrate serving is based on a portion of food that contains 15 gm of carbohydrate
- c) Compared to carbohydrate, protein and fat have half the expected glucose response
- d) Basal insulin doses are adjusted to cover the carbohydrate content of meals.

Answer: B

725. Most normal weight adult patients with type 1 diabetes require 1 unit of insulin for what range of carbohydrate intake?

- a) 1 – 10 gm CHO
- b) 5 – 10 gm CHO
- c) 8 – 16 gm CHO
- d) 10 – 20 gm CHO

Answer: C

726. What is considered an optimal HgbA1C for patient with diabetes mellitus?

- a) Less than 7%
- b) Less than 8%
- c) Less than 9%
- d) None of the above

Answer: A

727. Instant oatmeal contains 30gm of carbohydrate, which would be the equivalent⁸⁰ of how many carbohydrate serving?

- a) 1 serving
- b) 2 servings
- c) 3 servings
- d) 4 servings

Answer: B

728. During blood clotting, vitamin K triggers which organ to secrete prothrombin?

- a) Gut
- b) Pancreas
- c) Kidneys
- d) Liver

Answer: D

729. Which phytochemicals is found in green tea, grapes, and wine?

- a) Lignans
- b) Lycopenes

- c) Isoflavones
- d) Polyphenols

Answer: D

730. Which of the following become the primary energy source during starvation?

- a) Glucose
- b) Lactate
- c) Ketones
- d) Acetate

Answer: C

731. For men and women 50 years and younger, fiber intake should be?

- a) 38 g for men, 25 g for women / day
- b) 30 g for men, 21 g for women / day
- c) 20 g for men, 10 g for women / day
- d) 10 g for men, 20 g for women / day

Answer: A

732. Which of the following lipoproteins carries exogenous triglycerides from the intestine to the peripheral tissue?

- a) HDL
- b) LDL
- c) VLDL
- d) Chylomicrons

Answer: D

733. Which of the following is not a branched chain amino acids?

- a) Phenylalanine
- b) Leucine
- c) Isoleucine
- d) Valine

Answer: A

734. Wilson's disease is characterized by accumulation of which nutrient?

- a) Copper
- b) Zinc
- c) Biotin
- d) Boron

Answer: A

735. In chronological order, what are the four steps of the Nutrition Care Process?

- a) Assessment, diagnosis, intervention, monitoring and evaluation
- b) Prevention, assessment, treatment, monitoring and evaluation
- c) Assessment, diagnosis, treatment, monitoring and evaluation
- d) Assessment, treatment, monitoring and evaluation

Answer: A

736. The main function of gastric inhibitory peptide (GIP) is:

- a) To stimulate pancreatic enzyme secretion
- b) To stimulate gastric acid secretion
- c) To decrease gastric motility and stimulate insulin secretion
- d) To increase gastric motility and stimulate insulin secretion

Answer: C

737. What is the provitamin of vitamin D?

- a) Beta carotene
- b) Tryptophan
- c) Leucine
- d) 7-dehydrocholesterol

Answer: D

738. What is another name for heme-iron?

- a) Ferric iron
- b) Ferrous iron
- c) Ferritin
- d) Transferrin

Answer: B

739. A patient with which of the following conditions would be suited for the commercial enzyme Lactaid?

- a) Disaccharides deficiency
- b) Zollinger-ellison syndrome
- c) Glucose intolerance
- d) Peptic ulcer disease

Answer: A

740. Cholesterol is a precursor to which nutrient?

- a) Calcium

- b) Magnesium
- c) Omega-3 and omega-6 fatty acids
- d) Vitamin D

Answer: D

741. Brunner glands secrete alkaline mucus that aids in neutralizing acidic chyme and are located in which part of the GI tract?

- a) Jejunum
- b) Duodenum
- c) Ileum
- d) Ascending colon

Answer: B

742. Iron is transported across the mucosa via which mechanism?

- a) Passive diffusion
- b) Active transport
- c) Facilitated diffusion
- d) Pinocytosis

Answer: B

743. Which of the following is the most accurate method of assessing food intake?

- a) Body fat calipers
- b) Food frequency questionnaire
- c) 24-hour recall
- d) Body mass index

Answer: C

744. A guaiac test is used to determine?

- a) The presence of fistula
- b) The presence of blood in the stool
- c) Carbohydrate metabolism
- d) The degree of acidity in the stomach contents

Answer: B

745. Mean corpuscular hemoglobin MCH is a measure of the:

- a) Average amount of oxygen-carrying hemoglobin inside a red blood cells
- b) Percentage of red blood cells in a given volume of blood
- c) Color of red blood cells
- d) None of the above

Answer: A

746. The first step in a HACCP plan is:

- a) Establish critical limits
- b) Verify that the system works
- c) Conduct a hazard analysis
- d) Determine critical control points

Answer: D

747. Medications for gastrointestinal motility include all of the following except:

- a) Erythromycin
- b) Reglan
- c) Phenytoin
- d) Cisapride

Answer: C

748. What advice would you give to an HIV⁺ mother who is considering breast feeding her newborn?

- a) It is not recommended that she breast feed
- b) It is recommended that she breastfeed on demand
- c) It is recommended that she wait to breast feed for 6 months while the infants' immune system develops
- d) It is recommended that she alternate between breast milk and formula

Answer: A

749. Which of the following best describes anorexia nervosa?

- a) A condition in which a person restricts food intake in order to lose weight
- b) A condition in which a person consumes excessive amounts of food several times per day
- c) A condition in which a person consumes large amount of food then exercise for several hours
- d) A condition in which a person consume large amount of food and purges

Answer: A

750. A patient with celiac disease should not eat the following foods:

- a) wheat, rye and rice.
- b) wheat, rye and barely.
- c) wheat, rye and potato.
- d) rye, barely and rice.

Answer: B

751. When a patient with congestive heart failure is using enteral feeding formula, the formula should be:

- a) Calorie-diluted formula.
- b) Calcium-restricted formula.
- c) Calorie-dense formula.

d) Iron-restricted formula.

Answer: C

752. which of the following is not a common complication of the Whipple procedure?

- a) Increased digestive function
- b) Peptic ulcer disease
- c) Dumping syndrome
- d) Diarrhea

Answer: A

753. Which of the following complications of chemotherapy involves pain during swallowing?

- a) Odynophagia
- b) Dysphagia
- c) Dysphoria
- d) Dysgeusia

Answer: A

754. Which of the following symptoms of cancer is characterized by having a decreased sense of taste?

- a) Dysomia
- b) Cachexia
- c) Hypogeusia
- d) Dysgeusia

Answer: C

755. All of the following are considered risks of parenteral nutrition except:

- a) Visceral protein loss
- b) Infections
- c) Fatty liver
- d) Blood clots

Answer: A

756. How many calories are supplied by 800mL of 70% dextrose solution?

- a) 1770 kcal
- b) 1800 kcal
- c) 1900 kcal
- d) 2200 kcal

Answer: C

757. How many calories are supplied by 850% of 20% lipid solution?

- a) 1600 kcal
- b) 1700 kcal
- c) 1800 kcal
- d) 1900 kcal

Answer: B

758. Dietary sources of branch chain amino acid include all the following except:

- a) Dairy products
- b) Eggs
- c) Fruits and vegetables
- d) Meat

Answer: D

759. Which of the following is not a common complication seen with celiac disease patients?

- a) Folate deficiency
- b) Lactose intolerance
- c) Glucose intolerance
- d) Vitamin B12 deficiency

Answer: C

760. Which of the following diseases is characterized by herniation of the mucosa and submucosa due to increased pressure within the colon?
- a) Irritable bowel syndrome
 - b) Crohn's disease
 - c) Diverticulosis
 - d) Blind loop syndrome

Answer: C

761. Chronic kidney disease can be divided into five stages based on:
- a) Serum sodium levels
 - b) Body mass index
 - c) Glomerular filtration rate
 - d) Prevalence of calcium-phosphorus deposits

Answer: C

762. Respiratory quotient (RQ) is the ratio of CO₂ produced to oxygen consumed. Excess CO₂ production and increased RQ can lead to which of the following adverse effects?
- a) Heart failure
 - b) Defecicult weaning of ventilator
 - c) Increased appetite
 - d) Hyponatremia

Answer: B

763. A 71 years old male with COPD who has been seen a pulmonologist for several years. He recently experienced a ten-pound weight loss since his last visit few months. Which of the following would most likely contribute to weight loss in patents with COPD?
- a) Increased energy expenditure due to work for breathing
 - b) Decreased lung capacity
 - c) Increase FEV₁
 - d) Impaired cellular resistance

Answer: A

764. Which of the following is a potential side effect medication that used to treat COPD that may limit a dietary intake:

- a) Diarrhea
- b) Gastric irritation
- c) Dry mouth and dysgeusia
- d) All of the above

Answer: D

765. A 35 years old male with obstructive sleep apnea syndrome (OSAS). Medical nutrition therapy for patient with OSAS should focus on which of the following?

- a) Weight reduction
- b) Vitamin and minerals deficiencies
- c) Protein depletion
- d) fluid retention

Answer: A

766. A 59 years old female who successfully undergoes a lung transplant. She is prescribed long-term prednisone treatment. Which of the following is a common complication of prednisone therapy that may require nutritional intervention?

- a) Hypokalemia
- b) Hyperglycemia
- c) Hypoglycemia
- d) Hyponatremia

Answer: B

767. A 10 years old girl with cystic fibrosis who is brought to her pediatrician complaining of weakness and lethargy. She presents with a recent weight loss of 8 pounds. In addition to adjusting her oral enzyme supplements, which of the following dietary recommendation will be appropriate to improve the patient nutritional status?

- a) Extra salt
- b) Addition of vitamins and minerals supplement
- c) High calorie intake
- d) All of the above

Answer: D

768. A 71 years old female who has had COPD for 10 years. She has recently lost weight most likely due to her decreased intake and increased energy expenditure due to the work of breathing. How much of an increase in energy expenditure has been reported in patients with COPD?

- a) Up to a two-fold increase
- b) Up to a five-fold increase
- c) Up to a ten-fold increase
- d) Up to a twenty-fold increase

Answer: C

769. A 35 years old female is hospitalized for pneumonia and requires mechanical ventilation for more than 14 days. Assuming her GI tract is functioning normally, how should she receive nutritional support to sustain her caloric requirement?

- a) Enteral nutrition support via nasogastric tube
- b) Parenteral nutrition via central line
- c) Peripheral parenteral nutrition support
- d) It is not necessary to feed patient who are on ventilator

Answer: A

770. A 12 years old girl who has been diagnosed with cystic fibrosis for the past 3 years. She has had multiple infections and is taking antibiotics. Which of the following vitamin deficiency may result in patients taking long-term antibiotics?

- a) Vitamin B12
- b) Vitamin K
- c) Vitamin A
- d) Thiamine

Answer: B

771. Osteopenia is common in patient with cystic fibrosis. In addition to malabsorption, which of the following factors contribute to osteopenia seen in patient with cystic fibrosis?

- a) Malabsorption
- b) Vitamin D deficiency
- c) Delayed puberty
- d) All of the above

Answer: D

772. A 39 years old obese male, was recently diagnosed with obstructive apnea syndrome (OSAS) and pre-diabetes. which of the following is considered first line for treatment for patient with OSAS?

- a) Prescription sleep medication
- b) Continuous positive airway pressure machine
- c) Sleep study in a weekly basis
- d) Taking a day time nap

Answer: B

773. A 9 years old girl with cystic fibrosis, is brought to her pediatrician reporting weakness and lethargy. Her mother reports increased, foul-smelling stool output, and a recent loss of 7 pounds. What is the most likely cause of the patient with weight loss?

- a) Heart failure
- b) Malabsorption
- c) Liver disease
- d) Anemia

Answer: B

774. Which of the following increases resting energy requirement and promotes loss of weight and lean body mass in patient with COPD?

- a) Increase in cytokines
- b) Decrease in levels of cell derived protein

- c) Frequent, recurrent respiratory infection
- d) All of the above

Answer: D

775. A 71 years old male with COPD. Lab data reveal an elevated hemoglobin and hematocrit. What is the most likely etiology of these laboratory abnormalities?

- a) Chronic hypoxia
- b) Low mean corpuscular volume
- c) Arterial hypoxemia
- d) Dietary changes

Answer: A

776. A 24 years old female with acute renal injury who is admitted to the hospital. A nutrition support service consultation is requested to determine the patient calorie requirement. Which of the following calorie requirements should be used for individuals with acute renal injury?

- a) 10 – 20 kcal / kg per day
- b) 20 - 35 kcal / kg per day
- c) 30 – 50 kcal / kg per day
- d) 50 – 60 kcal / kg per day

Answer: B

777. A 65 years old male with stage 4 kidney disease. He is scheduled to go on dialysis in a few months. Medical nutrition therapy for patient's prior to initiating dialysis restricts protein for which of the following reasons?

- a) To slow the progression of renal disease
- b) To compensate for an increase in excretion of nitrogenous waste products
- c) To better control hypertension
- d) All of the above

Answer: A

778. A 45 years old male recently passed a kidney stone. Which of the following foods contain the highest amount of oxalate and should be limited in patients with calcium oxalate kidney stones?

- a) Apple
- b) Yogurt
- c) Tomatoes
- d) Dark green leafy vegetables

Answer: D

779. A 45 years old female, has recently undergone renal transplantation due to kidney failure. Side effects related to someone immunosuppressive agents that would require dietary recommendation include which of the following:

- a) Hyperlipidemia
- b) Hypermagnesemia
- c) Hypoglycemia
- d) Hypokalemia

Answer: A

780. Restricting dietary phosphate intake for individuals with chronic kidney disease to maintain proper calcium/phosphorus balance may decrease severity of which of the following medical problems?

- a) Primary hyperparathyroidism
- b) Vascular soft tissue calcification
- c) Rheumatoid arthritis
- d) All of the above

Answer: B

781. Patient in early stage with Chronic kidney disease who are taking which of the following therapies to control blood pressure may be at risk of developing hyperkalemia?

- a) Dietary salt substitutes
- b) Angiotensin converting enzymes inhibitors
- c) Potassium sparing diuretics

d) All of the above

Answer: D

782. A 56 years old female receiving hemodialysis. She is 160cm and weighs 50kg. Her lab data: BUN: 65 mg/dL; Albumin: 3.7g/dL; Creatinine: 9.2mg/dL. Considering that she is receiving HD 3 times per week, how much protein should she be consuming daily?

- a) < 50 g per day
- b) 60 - 65 g per day
- c) 75 – 90 g per day
- d) > 90 g per day

Answer: B

783. The kidney plays an essential role in the metabolism of which of the following metabolic conversation?

- a) Beta carotene to vitamin A
- b) Oxalic acid to ascorbic acid
- c) Ferrous sulfate to ferric sulfate
- d) 25(OH) D₃ to 125 (OH₂)D₃

Answer: D

784. A 56 years old male with nephrotic syndrome. In addition to reducing dietary fat intake, protein intake should also be limited to 0.8 – 1.0 g/kg/day. Which of the following mechanism explain why moderate protein intake is advised for patients with nephrotic syndrome?

- a) To reduce the amino acid load in the glomerulus
- b) To increase albumin secretion
- c) To reduce nitrogen balance
- d) To increase hepatic protein synthesis

Answer: A

785. A 56 years old male with chronic kidney disease and normocytic, normochromic anemia. Which of the following mechanisms most likely explains the associated anemia in a patient with chronic kidney disease?

- a) Blood loss due to dialysis procedure
- b) Vitamin B12 deficiency
- c) Decreased erythropoietin production
- d) Folate deficiency

Answer: C

786. When assessing the nutritional status of a patient with chronic kidney disease it is important to use the patient dry weight for all calculations. Which of the following is best definition of dry weight?

- a) The weight when the patient is dehydrated
- b) The weight when the patient has not drunk any fluids in 12 hours
- c) The weight when the patient has taken diuretics for several days
- d) The weight of the patient minus the estimated amount of fluid retention

Answer: D

787. A 46 years old male with stage 4 chronic kidney disease. He weighs 90.7 kg, an ideal body weight for him, and is not retaining fluid. A 24-hour urine collection indicted a protein loss of 2.1 gm of protein lost due to proteinuria. what are his daily protein requirement?

- a) 50.3 g/day
- b) 56.5 g/day
- c) 72 g/day
- d) 121 g/day

Answer: B

788. A 64 years old male with type 2 diabetes who visit his internist for his yearly checkup. His creatine and BUN levels are significantly elevated and the physician suspect renal disease. Which of the following are likely to be tested when he returns his 24-hours urine collection?

- a) % of RBC
- b) Protein excretion

- c) Creatine excretion
- d) All of the above

Answer: D

789. According to research on the link between obesity and cancer risk, which of the following women have the highest risk of developing breast cancer?

- a) Pre-menopausal woman with BMI of 30 kg/m²
- b) Pre-menopausal woman with BMI of 22 kg/m²
- c) Post-menopausal woman with BMI of 30 kg/m²
- d) Post-menopausal woman with BMI of 40 kg/m²

Answer: D

790. According to the National Cancer Institute, what is the strongest and most consistent predictor of breast cancer risk?

- a) Amount of physical activity
- b) Weight gain during adulthood
- c) High intake of saturated fat
- d) Irregular menstruation

Answer: B

791. Weight gain in which area of body poses the highest risk of colon cancer?

- a) Hips
- b) Buttocks
- c) Abdomen
- d) Thighs

Answer: C

792. According to the American Institute for Cancer Research, dietary recommendation to reduce the risk of colorectal cancer include which of the following statements about red meat intake?

- a) A maximum of 15 ounces of cooked red meat per week with limited processed meat consumption
- b) A maximum of 18 ounces of cooked red meat per week with no processed meat consumption

- c) Avoidance of all processed meat
- d) Avoid both cooked red meat and processed meat as much as possible

Answer: B

793. Flavonoids is a class of phytochemicals that act as an antioxidant and absorb free radicals, thus potentially protecting against certain types of cancer. Flavonoids are found in high concentration in which of the following foods?

- a) Grapes and wines
- b) Berries
- c) Green tea
- d) All of above

Answer: D

794. A 51 years old female who questions her gynecologist about the pros and cons of eating more foods with soy. Consumption of foods made with soy may be effective against which type of cancer?

- a) Breast
- b) Colon
- c) Stomach
- d) All of the above

Answer: A

795. Selenium is an antioxidant that has shown promising anti-cancer properties, yet most people do not meet their requirements established by the RDA (55 µg/day). Which of the following food is a good source of selenium?

- a) Yogurt
- b) Brazil nuts
- c) Blueberries
- d) All of the above

Answer: B

796. A 84 years old male who was admitted to the hospital with dehydration and pneumonia. At what point should cancer cachexia be suspected?

- a) Immediately upon diagnosis
- b) If he had experienced an unintentional weight loss greater than 5% of his weight over the previous month
- c) If he had experienced an unintentional weight loss greater than 10% of his weight over the previous year
- d) Only if nausea and fatigue are present

Answer: B

797. A 86 years old male who is receiving daily radiation treatment for colon cancer. Which of the following side effects of radiation treatment is most likely to affect patient nutritional status?

- a) Alopecia
- b) Radiation pneumonitis
- c) Nausea and vomiting
- d) Oral mucositis

Answer: C

798. Excessive alcohol consumption has been linked as the primary cause of liver cancer. Alcohol users also experience which of the following types of cancer 6 times more often than non-alcohol users?

- a) Brain cancer
- b) Colon cancer
- c) Pancreatic cancer
- d) Oral cancer

Answer: D

799. A 45 years old male with a family history of cancer. He recently quit smoking and is eating healthier foods. he asks his doctor what additional preventive steps he can take to reduce his risk of cancer. Which of the following lifestyle changes should be recommended to him to reduce the risk of developing cancer?

- a) Eat only organic foods

- b) Begin regular physical activity for 30 min/day
- c) Eliminate all the dairy foods
- d) Take 1000 mg vitamin C

Answer: B

800. Which part of each chemical structure differentiates one amino acid from another:

- a) Its side group
- b) Its acid group
- c) Its amino group
- d) Its double bonds

Answer: A

801. Isoleucine and leucine and glycine are:

- a) Protease
- b) Polypeptides
- c) Essential amino acids
- d) Complementary protein

Answer: C

802. In the stomach hydrochloric acid:

- a) Denatures protein and activates pepsin
- b) Hydrolyzes protein and denature pepsin
- c) Emulsifies protein and releases peptidase
- d) Condense protein and facilitates digestion

Answer: A

803. With weight loss, fat cells:

- a) Decrease in size only
- b) Decrease in number only
- c) Decrease in both number and size

d) Decrease in number but increase in size

Answer: A

804. Obesity is caused by:

- a) Overeating
- b) In activity
- c) Defect genes
- d) Multiple factors

Answer: D

805. The protein produced by the fat cells under the direction of the ob gene is called:

- a) Leptin
- b) Serotonin
- c) Sibutramine
- d) Phentermine

Answer: A

806. A realistic goal for weight loss is to reduce body weight:

- a) Down to the weight a person was at age 25
- b) Down to the ideal weight in the weight-for-height tables
- c) By 10% over six months
- d) By 15% over three months

Answer: C

807. A person who consistently consumes 1700kcal/day and spends 2200kcal/day for a month would be expected to:

- a) Lose 0.5 -1 pounds
- b) Gain 0.5 – 1 pounds

- c) Lose 4 -5 pounds
- d) Gain 4 -5 pounds

Answer: C

808. A bomb calorimeter measures:

- a) Physiological fuel
- b) Energy available from foods
- c) Calories a person derives from foods
- d) Heat a person releases in basal metabolism

Answer: B

809. The physiological desire to eat that accompanies the sight, smell, or thought of food is known as:

- a) Hunger
- b) Satiety
- c) Appetite
- d) Palatability

Answer: C

810. A person watching television after dinner reaches for a snack during a commercial in response to:

- a) External cues
- b) Hunger signals
- c) Stress arousal
- d) Satiety factors

Answer: A

811. The largest component of energy expenditure:

- a) Basal metabolism
- b) Physical activity
- c) Indirect calorimetry
- d) Thermic effect of food

Answer: A

812. A major factor influencing BMR is:

- a) Hunger
- b) Food intake
- c) Body composition
- d) Physical activity

Answer: C

813. Which of the following is not a function of the kidney?

- a) Activation of vitamin K
- b) Maintenance of acid-base balance
- c) Elimination of metabolic waste products
- d) Maintenance of fluid and electrolytes balance

Answer: A

814. The nephrotic syndrome frequently results in:

- a) Uremic syndrome
- b) Oliguria
- c) Edema
- d) Renal colic

Answer: C

815. Dietary recommendation for patients with nephrotic syndrome include:

- a) High protein intake
- b) Sodium restriction
- c) Potassium and phosphorus restriction
- d) fluid restriction

Answer: B

816. hyperkalemia is often treated by:

- a) eliminating potassium from the diet
- b) using diuretics to increase potassium losses
- c) increasing fluid consumption
- d) using potassium-exchange resins, which bind potassium in the GI tract

Answer: D

817. fluid requirement for oliguric patient is estimated by adding about _____ ml to the volume for urine output?

- a) 100ml
- b) 300ml
- c) 500ml
- d) 750ml

Answer: C

818. The most common cause of chronic kidney disease is:

- a) Diabetes mellitus

- b) Hypertension
- c) Autoimmune disease
- d) Exposure to toxins

Answer: A

819. A person with chronic kidney disease, who has been following a renal diet for several years begins hemodialysis treatment. An appropriate dietary adjustment would be to:

- a) Reduce protein intake
- b) Consume protein more liberally
- c) Increase intake of sodium and water
- d) Consume potassium and phosphorus more liberally

Answer: B

820. Which of the following nutrients maybe unintentionally restricted when a patient restricts phosphorus intake?

- a) Fluid
- b) Calcium
- c) Potassium
- d) Sodium

Answer: B

821. Most kidney stones are made primarily from:

- a) Struvite
- b) Uric acid
- c) Calcium oxalate
- d) Cysteine

Answer: C

822. Treatment for all kidney stones include:

- a) Dietary oxalate restriction
- b) Dietary protein restriction
- c) Vitamin C supplementation
- d) Fluid intake that maintain a urine volume of at least 2.5 liters /day

Answer: D

823. Ischemia in the coronary arteries is a frequent cause of:

- a) Angina pectoris
- b) Hemorrhagic stroke
- c) Aneurysm
- d) Hypertension

Answer: A

824. Risk factors for atherosclerosis include all of the following except:

- a) Smoking
- b) Hypertension
- c) Diabetes mellitus
- d) Elevated HDL cholesterol

Answer: D

825. The dietary lipids with the strongest LDL cholesterol-raising effects are:

- a) Monounsaturated fat
- b) Polyunsaturated fat

- c) Saturated fat
- d) Plant sterols

Answer: C

826. The omega-3 fatty acids DHA and EPA, which may improve some risk factors for heart disease are obtained by consuming:

- a) Fatty fish
- b) Soy products
- c) Egg yolk and organ meats
- d) Nuts and seeds

Answer: A

827. Moderate alcohol consumption can improve heart disease risk, in part, because it:

- a) Lowers blood pressure
- b) Improves nutrition status
- c) Offsets the damage from smoking
- d) Increases HDL cholesterol level

Answer: D

828. Patients with mild hypertriglyceridemia may improve their triglycerides levels by:

- a) Reducing sodium intake
- b) Consuming moderate amount of alcohol
- c) Avoiding high carbohydrate intake
- d) Reducing cholesterol intake

Answer: C

829. In most cases of hypertension, the cause is:

- a) Excessive alcohol use
- b) Atherosclerosis
- c) Hormonal imbalances
- d) Unknown

Answer: D

830. Hypertension patient can benefit from all the following diet and lifestyle modifications except:

- a) Including fat free or low fat milk products in the diet
- b) Reducing total fat intake
- c) Consuming generous amount of fruits, vegetables, legumes and nuts
- d) Reducing sodium intake

Answer: B

831. Nutrition therapy for a patient with a heart failure usually include:

- a) Weight loss
- b) Reducing total fat intake
- c) Sodium restriction
- d) Cholesterol restriction

Answer: C

832. Hemorrhagic stroke:

- a) Is the most common type for stroke
- b) Result from obstructed blood flow within brain tissue
- c) Comes and suddenly from 10 -20 min
- d) Results from bleeding in the brain which damages brain tissue

Answer: D

833. The thermic effect of an 800 kcal meal is about:

- a) 8 kcal
- b) 80 kcal
- c) 160 kcal
- d) 200 kcal

Answer: B

834. Which of the following reflects height and weight?

- a) Body mass index
- b) Central obesity
- c) Waist circumference
- d) Body composition

Answer: A

835. Which of the following increases disease risk?

- a) BMI 19 -21
- b) BMI 22-25
- c) Lower body fat
- d) Central obesity

Answer: D

836. When a patient transition from parenteral nutrition to oral feeding, at what point should the parenteral nutrition be discontinued?

- a) As soon as the patient is able to tolerate any oral feeding

- b) When the patient tolerates 50 percent of daily nutrition requirements through the oral diet
- c) When the patient tolerates 75 percent of daily nutrition requirement through the oral diet
- d) When the patient tolerates 100 percent of daily nutrition requirement through oral diet

Answer: C

837. Which of the following explains why low serum calcium levels need to be adjusted in patients who also exhibit hypoalbuminemia?

- a) Calcium absorption decrease
- b) Calcium is chelated to phosphorus
- c) Calcium interferes with protein absorption
- d) Calcium is bound to serum albumin

Answer: D

838. What is a proposed benefit of a prebiotics in enteral feeding?

- a) Assists in treating sepsis
- b) Improves wound healing
- c) Improves nutrient absorption
- d) Normalizes intestinal flora

Answer: D

839. Which of the following does not increase fluid requirement in patients receiving tube feeding?

- a) Fiber-enriched formula
- b) Fistula output
- c) Nausea
- d) Diarrhea

Answer: C

840. What is the maximum time for human milk to be left outside in room temperature?

- a) 1-2 hours
- b) 3-4 hours
- c) 5-6 hours
- d) 7-8 hours

Answer: B

841. What is the normal defecation frequency in a healthy person?

- a) Once daily to once weekly
- b) Twice daily to twice weekly
- c) Three times a day to three times a week
- d) Once weekly

Answer: C

842. A patient using intensive insulin therapy is likely to follow a regimen that involves:

- a) Twice-daily injections that combine short, intermediate, and long acting insulin in each injection
- b) A mixture of intermediate and long acting insulin injected between meals
- c) Multiple daily injections that supply basal insulin and precise insulin doses at each meal
- d) The use of both insulin and oral antidiabetic agent

Answer: C

843. Although many cancer patients lose weight which type of cancer is often associated with weight gain?

- a) Kidney cancer
- b) Breast cancer
- c) Colon cancer
- d) Lung cancer

Answer: B

844. Which of the following is characteristic of type 1 diabetes?

- a) the pancreas makes little or no insulin.
- b) It frequently goes undiagnosed.
- c) It is the predominant form of diabetes.
- d) Insulin secretion is ineffective in preventing hyperglycemia.

Answer: A

845. Which of the following describes type 2 diabetes?

- a) immune factors play a role.
- b) the pancreas makes little or no insulin.
- c) hyperglycemia with ketoacidosis is a common complication.
- d) chronic complications may have begun to develop before it is diagnosed.

Answer: D

846. Sudden hyperglycemia in a person who has consistently maintained good blood glucose control can be precipitated by:

- a) infections or illnesses.
- b) chronic alcohol ingestion.
- c) under treatment of glycemic.
- d) conditions that lower levels of counter regulatory hormones.

Answer: A

847. The chronic complications associated with diabetes result from

- a) alterations in kidney function.
- b) weight gain and hypertension.
- c) damage to blood vessels and nerves.
- d) infections that deplete nutrient reserves

Answer: C

848. The health care professional working with a client with diabetes emphasizes that the diet should provide:

- b) a very low intake of fat.
- c) more protein than regular diets.
- d) a restricted intake of simple sugars and concentrated sweets
- e) a consistent carbohydrate intake from day to day and at each meal and snack.

Answer: D

849. Which of the following is true regarding the use of alcohol in a diet for diabetes?

- a) a serving of alcohol is considered part of the carbohydrate allowance.
- b) alcohol can cause hypoglycemia in all people including those with diabetes.
- c) People with well-controlled blood glucose levels should refrain from alcohol use.
- d) In combination with alcohol, some types of insulin can cause a disulfiram-like reaction in people with type 2 diabetes.

Answer: B

850. The meal-planning strategy that is most effective for the person with diabetes is

- a) carbohydrate counting.
- b) the exchange list system.
- c) food guides and sample menus.
- d) the one that best helps the client control blood glucose levels.

Answer: D

851. Which of the following best describes insulin therapy in a person receiving both NPH insulin and insulin analog?

- a) Since NPH insulin is of long duration, there is no need for the insulin analog.
- b) NPH insulin covers basal insulin needs while the insulin analog covers the carbohydrate from meals.
- c) NPH insulin covers the carbohydrate from meals while the insulin analog cover basal insulin needs.
- d) Since glucose is not available from food between meals, the insulin analog alone would cover the person's insulin needs

Answer: B

852. Which of the following describes the treatment plans for a person with type 1 diabetes who practices intensive therapy?

- a) The person cannot use a pump to deliver insulin.
- b) The person uses one type of insulin one or two times daily.
- c) The person must monitor blood glucose several times a day.
- d) After learning to control blood glucose levels, the person can quit monitoring blood glucose levels.

Answer: C

853. Women with pregnancies complicated by diabetes

- a) often need less carbohydrate at breakfast.
- b) Generally, benefit from larger meals and a snack at bedtime.
- c) Need more calories to support the pregnancy than women without diabetes.

Answer: A

854. The form of blood cholesterol associated with an increased risk of atherosclerosis

- a) triglycerides
- b) chylomicrons.
- c) LDL cholesterol.
- d) HDL cholesterol.

Answer: C

855. Which of the following statements about hypertension is true?

- a) Low blood pressure reduces life expectancy.
- b) The narrower the diameter of the arteries, the greater the blood pressure.
- c) People can tell when their blood pressure rises.
- d) Hypertension aggravates atherosclerosis, but atherosclerosis does not aggravate hypertension.

Answer: B

856. Modifiable risk factors for CHD include

- a) age and heredity.

- b) heredity, smoking, and salt intake.
- c) obesity, diabetes, and LDL cholesterol.
- d) physical activity, hypertension, gender, and heredity.

Answer: C

857. Which of the following diet modifications would be recommended by a health care professional suggesting diet strategies to help a client lower the risk of CHD?

- a) high complex carbohydrate, low total fat, low saturated fat, and low cholesterol
- b) high complex carbohydrate, low total fat, low saturated fat, and high cholesterol
- c) low carbohydrate, low fiber, low total fat, low saturated fat, and low cholesterol
- d) low carbohydrate, low fiber, low total fat, low monounsaturated fat, and low cholesterol.

Answer: A

858. Compared to the heart-healthy diet recommended for healthy people, diet recommended for people with elevated LDL cholesterol, preexisting CHD, and diabetes is:

- a) lower in calories.
- b) higher in complex carbohydrates.
- c) lower in total fat and cholesterol.
- d) lower in saturated fat and cholesterol.

Answer: D

859. Which of the following statements about alcohol and cardiovascular diseases might a health care professional relay to a client who wishes to start using alcohol to lower the risks of CHD?

- a) alcohol lowers blood pressure.
- b) alcohol intake should not exceed more than 4 drinks a day.
- c) a reduced risk of CHD is observed at all levels of alcohol intake.
- d) risks associated with alcohol use may outweigh its benefits in protecting against CHD.

Answer: D

860. For people receiving drug therapy for either hyperlipidemia or hypertension

- a) Physical activity must be restricted.
- b) the risk of diet-drug interactions is high.
- c) diet restrictions and physical activity programs are no longer effective.
- d) the risk of potassium imbalances is great for People taking anticoagulants.

Answer: B

861. Diet strategies to help a person recover from a myocardial infarction include

- a) low-fiber foods to prevent constipation.
- b) foods of moderate temperatures to avoid slowing the heart rate.
- c) three larger meals to allow the heart more time to rest between meals.
- d) high-calorie, high-protein, low-sodium liquids at first to speed repair of the heart fluid retention.

Answer: B

862. Medical nutrition therapy for a person in acute respiratory failure includes

- a) careful attention to providing enough, but not too much, energy
- b) high volumes of fluids and electrolytes to clear the lungs of mucus
- c) foods of moderate temperature to allow the lungs to ventilate fully
- d) high-carbohydrate, high-fiber foods to prevent constipation and limit carbon dioxide production.

Answer: A

863. Factors that frequently contribute to wasting in people with either congestive heart failure or COPD include:

- a) anorexia, medications, and respiratory infections
- b) dehydration, fat malabsorption, and lactose intolerance.
- c) essential fatty acid deficiencies and potassium imbalances.
- d) vitamin K deficiencies, dysphagia, and low-fiber low-potassium diets.

Answer: A

864. Energy and protein needs for people with wasting due to cancer or HIV infections are often about ----- of the basal energy expenditure (BEE) and grams or more of protein per kilogram of body

weight per day.

- a) 100 percent; 1.5
- b) 120 percent; 1.0
- c) 150 percent; 1.5
- d) 200 percent; 1.0

Answer: C

865. Which of the following statements describes wasting associated with cancer and HIV infections?

- a) anorexia is a major factor in the development of wasting.
- b) wasting always accompanies cancer and HIV infection.
- c) altered metabolism plays no role in the development of wasting.
- d) unlike wasting associated with acute stresses, cytokines do not contribute to wasting in cancer and HIV

Answer: A

866. Practical advice for a person with cancer or HIV infection who has trouble preparing and eating foods due to fatigue might include:

- a) prepare dinner for friends.
- b) prepare fresh vegetables every day.
- c) make homemade ice cream for snacks.
- d) keep premixed breakfast drinks or formula supplements in the refrigerator for snacks.

Answer: D

867. The solutions infused through peripherally inserted central catheters are the same as those infused for:

- a) PPN.
- b) simple IVs.
- c) central TPN.
- d) enteral feedings.

Answer: C

868. Which type of IV insertion procedure is associated with the highest risk of sepsis?

- a) central TPN catheter.
- b) peripheral catheter for PPN.
- c) peripheral catheter for simple IVs.
- d) peripherally inserted central catheter.

Answer: A

869. A gradual transition from an IV feeding to an oral diet is primarily designed to:

- a) improve the appetite.
- b) prevent hypoglycemia.
- c) prevent apprehension about eating.
- d) ensure that nutrient needs will continue to be met.

Answer: D

870. which of the following bariatric surgeries is a description of the statement: [a surgery where the majority of the greater curvature of the stomach is removed and a tubular stomach is created].

- a) Adjustable gastric Band
- b) Vertical sleeve gastrectomy
- c) Roux-en-Y Gastric bypass
- d) Biliopancreatic Diversion

Answer: B

871. You are in charge of a patient with galactosemia, which of the following should be avoided from the patient diet?

- a) Fructose
- b) Lactose
- c) Valine
- d) Sodium

Answer: B

872. Which of the following is best to increase appetite in cancer patients?

- a) Increasing carbohydrate in the diet
- b) Controlling nausea and vomiting with antiemetic drugs
- c) Provide pain killers
- d) Provide high protein diet

Answer: B

873. Biotin is classified as what type of vitamin?

- a) Vitamin A
- b) Vitamin B
- c) Vitamin C
- d) Vitamin K

Answer: B

874. Which is best often seen in patients with bulimia?

- a) Underweight
- b) Abnormal electrolytes
- c) Osteoporosis
- d) Dysrhythmia

Answer: B

875. Which of the following is a direct result of assessment?

- a) Action plan
- b) Diagnosis
- c) Evaluation of care
- d) Interviews

Answer: B

876. A patient with Meniere disease should follow which diet?

- a) High sodium
- b) Low sodium

- c) High fat
- d) Low fat

Answer: B

877. Which of the following is incorrect about medium chain triglycerides?

- a) They are present in cow's milk
- b) They are present in human milk
- c) They are useful if the patient has malabsorption syndrome
- d) They do not require micelle formation for absorption

Answer: A

878. The digestive hormone gastrin exerts all of the following effects except:

- a) Increased esophageal sphincter pressure
- b) Decreased pepsinogen production by the stomach
- c) Increased gallbladder contraction
- d) Increased HDL production by the parietal cells

Answer: B

879. Which of the following are the most common measure of skeletal muscle mass?

- a) Body mass index
- b) Triceps skinfold thickness
- c) Mid-arm muscle circumference
- d) None of the above

Answer: C

880. Infants born to women suffering from gestational diabetes will most likely show:

- a) Macrosomia
- b) Ketoacidosis
- c) Hyperglycemia
- d) Erythroblastosis fetalis

Answer: A

End