

***This testbank is intended to serve for the students in addition to general information and skills acquired during regular teaching and lessons in the subject of Preventive medicine. Students are advised not to use this material only itself, but as a complement to regular study of recommended literature.***

**Correct answers are indicated by \*.**

- 1 Which is NOT a good source of nutrition information?
  - a) archeological records and studies of hunters/gatherers living today in remote parts of the world.
  - b) history of disease as related to diets of different people.
  - c) clinical records from hospitals of people with disease
  - \*d) advertisements and promotions from health food stores.
  
- 2 A nutritional practice we have copied from Africans is based on a diet:
  - \*a) high in fiber and low in colon cancers
  - b) low in fiber and high in colon cancers
  - c) adequate in all nutrients with a low incidence of cancer and heart disease
  - d) high in protein and fat with a high rate of heart disease
  
- 3 Epidemiological studies yield nutrition information through:
  - a) correlation of diets and income
  - \*b) correlations of diets and incidence of disease.
  - c) study of archeological findings.
  - d) human experimentations in laboratories.
  
- 4 Nutritional changes during the onset and recovery from disease are documented by:
  - a) epidemiological studies
  - \*b) clinical records in hospitals or in the community
  - c) comparative and evolutionary studies from archeological records
  - d) human experiments and trials
  
- 5 Two nutrients destroyed by heat are:
  - \*a) vitamin C and thiamin.
  - b) vitamins A and D
  - c) niacin and vitamin B12
  - d) vitamins K and E.
  
- 6 A condition aggravated by eating too much fat is:
  - a) malnutrition
  - \*b) hypertension
  - c) anemia
  - d) tooth decay
  
- 7 If you like a lot of sugar, you may be susceptible to:
  - a) hypertension
  - b) loss of sense of taste
  - \*c) tooth decay
  - d) acne

8 Deficiencies of zinc and vitamin A cause

- \*a) loss of taste
- b) hypertension
- c) tooth decay
- d) increased appetite

9 Food likes and dislikes are affected by sensory differences. In describing sensory responses to food, which term does NOT fit?

- a) taste
- b) smell
- c) texture
- \*d) nutritional value

10 A nutritional problem more common in elderly women than men is:

- a) hypertension
- b) coronary heart disease
- c) anorexia
- \*d) osteoporosis

11 A disorder highest in men between ages 35 and 55 years of age is:

- a) iron-deficiency anemia
- \*b) coronary heart disease
- c) osteoporosis
- d) bulimia

12 Children with PKU (phenylketonuria) should restrict the use of:

- \*a) aspartame (NutraSweet)
- b) sugar
- c) fat
- d) carbohydrate

13 Essential nutrients :

- a) can all be generated by the human body
- \*b) can all be provided by the foods you eat
- c) can only be supplied by vitamin pills and mineral supplements
- d) are only available in food grown in rich, well fertilized soil

14 Which are NOT essential nutrients?

- a) carbohydrates (sugars and starches)
- b) fats and proteins
- c) vitamins and minerals
- \*d) air and oxygen

15 Macrominerals include:

- a) thiamin, niacin, riboflavin
- \*b) calcium, phosphorus, sodium
- c) protein, fat, lipids
- d) sugar, starch, fiber

- 16 Identify the fat-soluble vitamins.
- a) thiamin, riboflavin, niacin
  - b) vitamins C, B6, B12
  - c) vitamins A, C, and D
  - \*d) vitamins A, D, E and K
- 17 Radioactive particles and high levels of lead, arsenic, and mercury are considered to be:
- \*a) environmental contaminants.
  - b) food additives
  - c) unsafe preservatives
  - d) naturally occurring toxicants
- 18 Which of the following is NOT the result of harmful microorganisms in food?
- a) foodborne disease causing nausea, vomiting, diarrhea, and fever
  - b) Staphylococcal infection
  - c) botulism
  - \*d) phenylketonuria
- 19 Children who do NOT get enough food or eat food low in nutrients:
- \*a) may experience slower growth.
  - b) will probably not suffer ill effects until adulthood
  - c) may develop bulimia
  - d) adjust to lower intakes and grow as well as other children
- 20 Nutrients required for regulation of body processes are:
- a) carbohydrates, vitamins, protein, water
  - b) fats, lipids, vitamins, minerals
  - \*c) proteins, vitamins, minerals, water
  - d) proteins, carbohydrates, lipides
- 21 Too little fluoride in the diet may cause:
- \*a) tooth decay
  - b) death
  - c) weakness
  - d) abnormal nerve function
- 22 Lack of sufficient iron in the diet may lead to:
- a) tooth decay
  - \*b) weakness
  - c) mottled teeth
  - g) gout
- 23 Mottled teeth may be caused from too much dietary:
- a) iron
  - b) magnesium
  - c) protein
  - \*d) fluoride

- 24 Abnormal nerve function may result from dietary deficiency of:
- a) iron
  - b) protein
  - \*c) magnesium
  - d) fluoride
- 25 Which of the following is NOT listed as a “disease of affluence?”
- a) heart disease and obesity
  - b) hypertension
  - \*c) phenylketonuria
  - d) stroke
- 26 Most nutrients are digested and absorbed in the:
- a) mouth
  - b) oesophagus
  - \*c) stomach
  - d) large intestine
- 27 Sources of carbohydrate are:
- a) fats, oils, butter, margarine
  - b) fish, eggs, beef, pork, poultry
  - \*c) cereals, fruits, starchy vegetables, milk
  - d) green leafy vegetables, seafood, drinking water
- 28 Sources of protein in the diet are:
- a) fats, oils, butter, margarine
  - b) green pepper, cantaloupe, citrus fruits, broccoli.
  - c) deep green and orange vegetables, citrus fruits
  - \*d) meats, fish, legumes, nuts, dairy products, eggs
- 29 Vitamin A is found in:
- \*a) dairy products, liver, deep green and orange vegetables
  - b) oils, nuts, seeds
  - c) cereals, fruits, starchy vegetables
  - d) citrus fruits, potatoes, nuts, seeds
- 30 Milk and dairy products are rich sources of:
- \*a) vitamin D and calcium.
  - b) iron and copper
  - c) vitamin C
  - d) vitamins E and K
- 31 Major sources of vitamin E are:
- \*a) oils, nuts, and seeds
  - b) whole milk and sunshine
  - c) enriched breads and cereals
  - d) green, leafy vegetables

32 Vitamin K is found in:

- a) citrus fruits, cantaloupe, seeds, nuts
- b) whole grain cereals, milk, cheese
- c) seafood, iodized salt, dairy products
- \*d) green leafy vegetables, meats

33 Vitamin C is found in:

- a) liver, fish, nuts, meats, potatoes
- b) most foods of plant and animal origin
- \*c) citrus fruits, green pepper, broccoli, cantaloupe
- d) whole grains and cereals, meats, eggs

34 Thiamin is found in:

- a) green leafy vegetables and citrus fruits
- b) salt, salted foods, cheese, and butter
- c) fats and oils, deep green and orange vegetables
- \*d) pork, beef, poultry, whole grains and enriched cereals

35 Sources of riboflavin are:

- a) citrus fruits, green pepper, broccoli, cantaloupe
- \*b) milk, eggs, cheese, meat, whole and enriched grains
- c) drinking water, seafood, tea
- d) seafood, iodized salt, dairy products

36 The best sources of niacin are:

- a) green leafy vegetables, green pepper, broccoli, cantaloupe
- b) fats, oils, nuts, seeds
- \*c) lean meat, fish, cheese, whole grains, peanuts
- d) citrus fruits, green pepper, broccoli, cantaloupe

37 Functions of vitamin B6 are:

- \*a) aids amino-acid protein metabolism and nerve function
- b) to prevent bone and tooth loss and form thyroid hormones
- c) acid-base balance; formation of hydrochloric acid in the stomach
- d) blood clotting and collagen formation

38 Both pantothenic acid and biotin aid in:

- \*a) energy metabolism
- b) blood clotting
- c) acid-base balance
- d) oxygen transport

39 Folacin is found in:

- a) citrus fruits
- b) plant oils, nuts and seeds
- \*c) liver, green leafy vegetables, peanuts
- d) seafood, iodized salt, meats

40 Functions of folacin and vitamin B12 in the body are:

- a) collagen formation and to act as antioxidants
- \*b) synthesis of DNA, RNA; red blood cell formation
- c) to prevent bone and tooth loss and to spare protein
- d) transport of fat-soluble vitamins and for good vision

41 Nutrients which regulate fluid and acid-base balance include:

- a) carbohydrate, fats, vitamin D
- b) iron, copper, vitamin B6
- c) selenium, fluoride, iodine
- \*d) sodium, chlorine, potassium

42 A mineral that acts with vitamin E is:

- a) magnesium
- b) zinc
- c) iodine
- \*d) selenium

43 The nutrient added to drinking water is:

- a) iodine
- b) selenium
- c) manganese
- \*d) fluoride

44 Without \_\_\_\_\_ in the diet, it is difficult to obtain sufficient vitamins B6 and B12, iron, and copper.

- a) milk
- b) citrus fruits
- \*c) red lean meat
- d) dark green and orange fruits and vegetables

45 Iodine is found in:

- a) enriched breads and cereals
- b) fluorided water
- c) meats, legumes, and whole grains
- \*d) iodized salt, seafood, dairy products

46 Manganese acts as:

- \*a) a coenzyme
- b) an antioxidant
- c) a hormone
- d) an antibody

47 A nutrient which aids protein synthesis, wound healing, and taste is:

- a) iron
- \*b) zinc
- c) chlorine
- d) selenium

48 Zinc is found in:

- a) salt
- b) seafood, iodized salt, dairy products
- c) green leafy vegetables
- \*d) meats, fish, whole grains

49 A mineral that becomes part of proteins in tendons and hair is:

- a) sodium
- \*b) sulfur
- c) potassium
- d) fluoride

50 Ingested dietary fiber:

- a) is only about 10% absorbed
- b) is only 30% absorbed
- c) is about 50% absorbed
- \*d) is not absorbed at all

51 Carbohydrates include:

- a) essential and nonessential amino acids
- b) monoglycerides, diglycerides, polyglycerides
- \*c) sugars, starches, fiber
- d) fatty acids and glycerol

52 Three monosaccharides important in nutrition are:

- a) maltose, dextrose, lactose
- b) fructose, glucose, sucrose
- c) galactose, sucrose, lactose
- \*d) fructose, galactose, glucose

53 Three disaccharides important in nutrition are:

- \*a) sucrose, lactose, maltose
- b) fructose, galactose, glucose
- c) dextrose, amylose, hexose
- d) maltose, dextrose, glucose

54 Polysaccharides are made of:

- a) only one molecule of sugar
- b) two sugar molecules linked together
- \*c) many monosaccharides joined together into very large molecules
- d) three monosaccharides joined together with peptide linkages

55 Polysaccharides include:

- a) fructose, galactose, glucose
- \*b) starch, dextrin, glycogen, cellulose
- c) saturated and unsaturated sugars
- d) essential and nonessential amino acids

56 Common food sources of glucose are:

- a) the sugar in milk
- b) table sugar (cane or beet)
- c) wheat bran and starchy plants

\*d) honey, fruits, maple sugar

57 Common food sources of lactose and galactose are:

- a) table sugar
- b) fruits
- \*c) milk
- d) sprouted seeds

58 The source of maltose is:

- a) table sugar
- \*b) sprouted seeds; produced in digestion of starch
- c) fruits; traces in plant foods
- d) starchy plants and grains

59 Cellulose comes from:

- a) milk
- b) liver
- \*c) wheat bran
- d) digestion of starch

60 The chemical structure of lactose is:

- a) glucose and fructose
- \*b) glucose and galactose
- c) glucose and glucose
- d) sucrose and dextrose

61 The component parts of maltose are:

- \*a) glucose and glucose
- b) glucose and galactose
- c) glucose and fructose
- d) fructose and galactose

62 The only "essential" carbohydrate is:

- a) maltose
- b) sucrose
- c) fructose
- \*d) glucose

63 "Essential" means a nutrient which:

- \*a) must be provided in the diet
- b) is needed by the brain
- c) can be digested by the human body
- d) provides kcalories to body cells

64 The main source of energy for your brain and nerves is:

- a) sucrose
- b) glycogen
- c) fructose
- \*d) glucose



65 Although you get most of your glucose from carbohydrate in your diet, some comes from:

- a) amino acids and water
- \*b) amino acids and glycerol
- c) cholesterol and fatty acids
- d) cellulose

66 Carbohydrates come mainly from:

- a) animal foods
- \* b) plant foods
- c) fatty foods
- d) water

67 Sources of carbohydrates include:

- a) plant foods: fruits, plants, seeds, grain
- b) milk and dairy products
- c) liver and some shellfish
- \*d) plant foods: fruits plants, seeds, grain,  
milk and dairy products,  
liver and some shellfish

68 Dental caries are caused by:

- a) sugar in the mouth dissolves tooth enamel
- \*b) acid produced by bacteria that ferment carbohydrates
- c) bacteria digesting tooth enamel
- d) saliva in the mouth

69 Glycogen is made up of thousands of \_\_\_\_\_ molecules joint together:

- a) galactose
- b) maltose
- c) fructose
- \*d) glucose

70 The principal carohydrate found in cereals and potatoes is:

- a) sucrose
- \*b) starch
- c) glucose
- d) glycogen

71 The principal carbohydrate found in milk is:

- \*a) lactose
- b) glucose
- c) sucrose
- d) starch

72 Coronary heart disease:

- a) is caused by a diet high in sugar
- b) is caused by a diet high in total carbohydrate
- \*c) is aggravated by obesity from overeating total calories
- d) has no relationship to carbohydrates

73 Hyperactivity in children:

- \*a) has not been proven by research to be related to sugar intake
- b) is a direct result of eating too much refined sugar
- c) can be controlled by reducing sugar intake
- d) is prevented by a high protein diet

74 The most recommended treatment for lactase deficiency today is

- a) injections of lactase
- b) drinking milk in small amounts at a time
- c) using yoghurt and lactose-reduced milk
- \*d) both b and c

75 Symptoms of lactase deficiency are:

- \*a) abdominal discomfort, bloating, and diarrhea
- b) headaches, dizziness, and fainting
- c) high blood sugar level, weakness, sweating, chronic fatigue
- d) irregular heartbeat, back and shoulder pain, and headache

76 Yogurt is tolerated better than milk by lactase-deficient individuals because:

- a) yoghurt is low in lactose
- b) it has a thicker consistency
- \*c) lactase from bacteria in yoghurt helps digest the lactose
- d) it comes from a plant source with the lactose already digested

77 Components in the diet that help protect the teeth from dental caries are:

- a) sucrose and glucose
- b) calcium, phosphorus, and fluoride
- c) fats, oils, and aged cheese
- \*d) b and c

78 The incidence of dental caries has decreased in Western countries in the past 10-15 years because of:

- a) decreased sugar consumption
- b) widespread fluoridation of water
- c) increased use of high fructose sugars in place of glucose
- \*d) a and b

79 Nutrasweet (aspartame) intake should be carefully monitored by people with:

- \*a) phenylketonuria
- b) diabetes
- c) heart trouble
- d) gout

80 High intakes of saturated fat and cholesterol are associated with:

- a) kidney disease
- b) diabetes
- \*c) heart disease
- d) hypoglycemia

81 Most food fats are:

- a) monoglycerides
- b) diglycerides
- \*c) triglycerides
- d) quatroglycerides

82 The short-chain fatty acid found in butter is:

- a) linoleic acid
- b) oleic acid
- c) stearic acid
- \*d) butyric acid

83 Which contains primarily monounsaturated fat?

- a) peanuts
- \*b) olives
- c) butter
- d) walnuts

84 Two highly saturated plant oils are:

- a) wheat germ oil and corn oil
- b) peanut oil and walnut oil
- \*c) coconut oil and palm oil
- d) safflower oil and sunflower oil

85 The greater the degree of unsaturation, the \_\_\_\_\_ the triglyceride is likely to be at room temperature.

- \*a) softer and more liquid
- b) harder and more solid
- c) darker
- d) lighter

86 The one essential fatty acid needed for growth is:

- a) butyric acid
- b) stearic acid
- \*c) linoleic acid
- d) arachidonic acid

87 The major sources of the one essential fatty acid (EFA) are:

- a) butter, cream, cream cheese, and buttermilk
- b) beef, pork, mutton
- c) chicken, fish, turkey
- \*d) margarine, peanut butter, cooking oil, nuts

88 Which is NOT a function of fat in the diet?

- \*a) synthesis of enzymes
- b) concentrated source of energy
- c) carrier of fat-soluble vitamins
- d) source of essential fatty acid

89 The end products of fat digestion are:

- a) amino acids
- \*b) fatty acids, glycerol, monoglycerides
- c) glucose, fructose, galactose
- d) carbon, hydrogen, nitrogen

90 After digestion and absorption, lipids are transported to the blood by the:

- a) respiratory system
- b) monosaccharides
- \*c) lymphatic system
- d) bile

91 In women, if body fat drops below 5% the reset might be:

- a) dehydration
- b) death
- \*c) cessation of menstruation and bone loss
- d) gout

92 Which is NOT a use of fat in the body?

- a) energy reserves
- b) insulation to keep the body warm
- c) regulate passage of nutrients across cell membranes
- \*d) build lean body tissues

93 Foods most apt to go rancid are:

- a) fatty fish
- b) fish oil
- c) deep-fried foods
- \*d) all of the above unless an antioxidant is used

94 Omega-3 fatty acids may have beneficial effects in preventing:

- \*a) certain cancers and coronary heart disease
- b) anemia
- c) ulcers and digestive disturbances
- d) diabetes and hyperglycemia

95 Foods to use sparingly on a low cholesterol diet are:

- a) whole wheat, corn, rye, oats, barley, rice, shrimp
- b) nuts, seeds, grains, butter
- c) legumes, dried peas, beans, nuts
- \*d) eggs, fish oils, butter, shellfish, cheese, lard, meat, poultry

96 Omega-3 fatty acids may be increased in the diet by:

- a) taking omega-3 fatty acid supplements
- b) taking 1 tablespoon cod liver oil daily
- \*c) using more salmon, mackerel, and trout in the diet over a long time
- d) eating more cod or flounder for a few days since the omega-3 fatty acids are stored in the body

97 Lecithin is:

- a) a hormone
- b) an enzyme

- c) a digestive juice
- \*d) an emulsifying agent in bile and a food additive

98 Complete metabolism of fat in the body is desirable, and produces

- a) ketone bodies
- \*b) energy, carbon dioxide, and water
- c) lactic acid and urea
- d) all of the above

99 Protein deficiency:

- a) is rare in all parts of the world
- \*b) can be more damaging than carbohydrate or fat deficiency
- c) is common in developed countries
- d) is often experienced by athletes

100 When high amounts of protein are ingested, they may be:

- a) excreted in the feces
- b) excreted in the urine
- \*c) converted to fat
- d) the first nutrient burned for energy

101 In developing countries,

- a) too much protein is consumed
- \*b) many children suffer from protein deficiency
- c) plenty of protein is available, so diets are adequate
- d) lack of education leads to poor choices of protein foods

102 Good sources of protein are:

- a) green and orange fruits and vegetables
- \*b) c and d
- c) meat, poultry, fish, eggs
- d) dairy products, legumes

103 Protein-energy malnutrition:

- a) is a major problem in developing countries
- b) causes about 10 million deaths per year in the world
- c) especially affects young children
- \*d) all of the above

104 The limiting factor in the formation of amino acids in plants is

- \*a) nitrogen
- b) energy
- c) oxygen
- d) carbon dioxide

105 Which of the following does NOT require nitrogen in its makeup?

- a) proteins
- b) B vitamins
- c) RNA, DNA, genetic code in cell nucleus
- \*d) minerals

106 A disorder caused from just one amino acid being in the wrong sequence in a protein molecule is:

- a) pernicious anemia
- b) cretenism (dwarfism)
- c) goiter
- \*d) sickle-cell anemia

107 The life span of a red blood cell is:

- a) 2 to 4 days
- b) 60 days
- \*c) 120 days
- d) 1 year

108 The life span of cells lining the gastrointestinal tract is:

- \*a) 2 to 4 days
- b) 60 days
- c) 120 days
- d) 1 year

109 The breakdown and rebuilding of body cells requires:

- a) prostaglandins
- b) buffers
- c) acids
- \*d) enzymes

110 Catabolism occurs during all but which one of the following situations:

- a) the normal breakdown of cells
- b) in stresses such as starvation
- c) in recovery from illness or trauma
- \*d) the synthesis of protein on the ribosome of the cell

111 In which instance is anabolism NOT taking place?

- a) growth
- b) pregnancy
- c) recovery from illness
- \*d) the normal breakdown of body cells

112 Enzymes are required for:

- a) growth during childhood
- b) digestion of food
- c) the breakdown and rebuilding of body cells
- \*d) all of the above

113 Death rates from infectious disease are high in areas where children do not receive enough protein because:

- a) bacteria cannot find enough nutrients
- b) antibodies cannot be made in sufficient quantities to prevent infections
- \*c) vitamin content of the diet is low
- d) there are excess amino acids for building body tissue

114 The proteins that aid the transport of fat-soluble vitamins in the blood are:

- a) glucoproteins
- b) hormones
- \*c) lipoproteins
- d) enzymes

115 Some minerals, such as iron and copper, are stored in the body by combining with:

- \*a) protein
- b) fatty acid
- c) a glucose molecule
- d) a vitamin

116 One gram of protein supplies approximately \_\_\_\_\_ kcalories (kJ) of energy.

- a) 1 kcal (4,19 kJ)
- \*b) 4 kcal (16,8 kJ)
- c) 9 kcal (37,8 kJ)
- d) 15 kcal (62,9 kJ)

117 Simon ate 12 g of protein. How many calories (kJ) would this provide?

- a) 24 kcal (100 kJ)
- \*b) 48 kcal (201 kJ)
- c) 60 kcal (251 kJ)
- d) 108 kcal (453 kJ)

118 Starving children become just “skin and bone“ as the body cannibalizes its own tissue; however one part of the body is protected:

- a) the abdominal tissue
- b) the gluteus maximus
- c) the leg muscle
- \*d) the brain

119 A major problem that occurs when body protein is broken down for energy is:

- a) ketone bodies
- b) obesity
- \*c) excretion of the nitrogen
- d) build-up of glycogen in the liver

120 Whole dietary proteins cannot be absorbed through the lining of the small intestine because of their:

- a) acidity
- b) alkalinity
- \*c) large molecular size
- d) small molecular size

121 Hydrochloric acid in the stomach changes the shape of protein, or \_\_\_\_\_ it.

- \*a) denatures
- b) hydrolyzes
- c) evaporates
- d) synthesizes

122 The action of pepsin on protein during digestion is called:

- a) evaporation
- b) synthesis
- \*c) hydrolysis
- d) anabolism

123 Which of the following does not denature protein?

- \*a) milk
- b) heat
- c) acid
- d) alcohol

124 Animal proteins are \_\_\_\_\_ digestible than plant proteins.

- \*a) more
- b) less
- c) none of above mentioned answers
- d) both a) and b)

125 Amino acids are absorbed into the:

- \*a) blood
- b) lymph
- c) intracellular fluid
- d) mucus

126 Insulin cannot be taken orally, but must be injected because:

- a) it would be toxic
- \*b) it would be digested into amino acids
- c) it would inhibit digestion of proteins
- d) hydrochloric acid would destroy it

127 Allergies and food sensitivities are caused by:

- \*a) absorption of undigested protein molecules
- b) excess protein in the diet
- c) excess enzymes secreted by the intestinal wall
- d) too much hydrochloric acid escaping from the stomach in the small intestine

128 Infants and children who have food allergies and sensitivities:

- a) will have to avoid the specific foods for the rest of their lives
- b) must take enzymes orally to correct deficiencies in their gastrointestinal tract
- \*c) will probably outgrow the problem as their gastrointestinal tract matures
- d) can be cured by drugs

129 Food allergies:

- a) can be easily diagnosed at home
- b) can be prevented by drinking more water
- \*c) are difficult to diagnose and show a variety of symptoms
- d) begin in infancy and become more severe as a child matures



130 The greatest amount of protein per kg (per pound) of body weight is needed by:

- \*a) infants and young children
- b) athletes
- c) middle-aged adults
- d) elderly

131 The RDAs (recommended daily allowances) for protein are based on:

- \*a) ideal body weight or lean body tissue
- b) total body weight
- c) total bone mass
- d) percent of body fat

132 People with high protein intakes usually have a diet also high in:

- a) starches
- b) sugars
- \*c) fat
- d) vitamins A and C

133 Vegans and vegetarians have \_\_\_\_\_ fat intakes than do nonvegetarians.

- a) higher
- \*b) lower
- c) the same
- d) a) and b)

134 Which is NOT an essential amino acid?

- a) threonine
- b) valine
- c) methionine
- \*d) serine

135 Select the essential amino acid

- a) glycine
- b) cysteine
- c) tyrosine
- \*d) tryptophan

136 The amino acid essential for growth in children, and more recently considered essential also for adults is:

- a) proline
- \*b) histidine
- c) cysteine
- d) aspartic acid

137 If one essential amino acid is missing:

- \*a) body protein cannot be made at optimal rate
- b) the body will synthesize it
- c) the body will take it from its own tissue

d) there are no serious effects

138 The protein need for elderly adults is:

- a) greater than that of young adults
- b) less than that of young adults
- \*c) the same as that of young adults
- d) none is needed by people over 75

139 Some special circumstances require adults to increase intake of essential amino acids. Which does NOT apply?

- a) pregnancy
- b) lactation
- c) surgery, injury, or burns
- \*d) over age 50

140 Complete proteins containing all nine essential amino acids are found in:

- \*a) eggs, milk, meat, fish, poultry
- b) legumes, nuts, seeds
- c) green leafy vegetables
- d) all of the above

141 The two problem amino acids in the diets of people who do not eat animal foods are:

- a) arginine and histidine
- \*b) lysine and methionine
- c) leucine and isoleucine
- d) phenylalanine and tryptophan

142 Cereals (rice, wheat, corn, barley and rye) are low in:

- a) histidine
- b) methionine
- \*c) lysine
- d) leucine

143 Legumes (soy beans, peanuts, dried beans, dried peas, and lentils) are low in:

- a) arginine
- \*b) methionine
- c) lysine
- d) phenylalanine

144 When a combination of two or more foods has the right proportion of essential amino acids needed by the human body, these foods are called:

- a) incomplete proteins
- b) complete proteins
- \*c) complementary proteins
- d) saturated proteins

145 Which combination of foods would most likely provide the essential amino acids?

- \*a) cereal with milk
- b) waffles with syrup
- c) bread and margarine

d) salad and salad dressing

146 Which is NOT a good combination to provide the essential amino acids?

- a) a peanut butter sandwich
- b) macaroni and cheese
- c) beans and tortillas
- \*d) potatoes and gravy

147 Too much protein in the diet may result in:

- a) high fat intake and resultant obesity
- b) calcium loss in the urine
- c) dehydration and fluid imbalance
- \*d) all of the above are possible

148 High intakes of proteins:

- a) improve athletic performance
- b) increase athletic endurance
- c) are needed to build muscle in athletes
- \*d) may precipitate dehydration in athletes

149 To be called a vitamin, a substance must:

- a) be organic and contain carbon
- b) be required for specific metabolic functions in the body
- c) be needed in only small amounts in the diet
- \*d) a,b, and c

150 Vitamins are classified as:

- a) organic and inorganic
- \*b) fat-soluble and water-soluble
- c) elements and compounds
- d) essential and nonessential

151 Synthetic vitamins:

- \*a) are no different than natural vitamins; the body cannot tell the difference
- b) are more easily absorbed by the body than natural vitamins
- c) are needed to supplement an ordinary diet
- d) do not function as well as natural vitamins in the body's metabolism

152 The fat-soluble vitamins are:

- a) C, B6, B12, and K
- b) thiamin, riboflavin, niacin, and folacin
- \*c) A, D, E, and K
- d) A, C, K, and B6

153 Water-soluble vitamins are:

- \*a) vitamins C, B6, B12, thiamin, riboflavin, niacin
- b) vitamins A, D, C, and B12
- c) vitamins A, E, K, and B6
- d) vitamins C, D, thiamin, riboflavin, niacin

154 The precursor of vitamin A is:

- a) cobalamin
- b) tryptophan
- c) 7-dehydrocholesterol
- \*d) carotene

155 Another name for thiamin is:

- \*a) vitamin B1
- b) nicotinamide
- c) pyridoxine
- d) vitamin B6

156 Vitamins that aid bone and teeth formation are:

- a) thiamin, riboflavin, niacin
- \*b) vitamins A, D, and C
- c) vitamins E and K
- d) folacin, B6, and B12

157 An important metabolic function of vitamins B12, folacin, B6, and vitamin C is:

- a) eye function
- b) release and formation of energy
- c) bone and tooth formation
- \*d) blood formation

158 The vitamins most likely to cause toxicity if taken in very large amounts are:

- a) vitamins C and thiamin
- b) riboflavin and niacin
- \*c) vitamins A and D
- d) vitamins B12 and B6

159 Vitamin D deficiency may cause:

- a) blindness
- b) anemia
- \*c) poor bone formation
- d) scurvy

160 A deficiency of vitamin K may result in:

- \*a) poor blood clotting
- b) beriberi
- c) megaloblastic anemia
- d) blindness

161 Pellagra is caused by a deficiency of:

- a) thiamin
- \*b) niacin
- c) riboflavin
- d) folacin

162 Toxicity from excess vitamins A and D may result in:

- a) skin flushing

- b) rebound scurvy
- c) nerve disorders
- \*d) growth retardation

163 Which of these vitamin deficiencies or toxicities is irreversible (cannot be cured)?

- \*a) blindness (vitamin A deficiency)
- b) bleeding gums (vitamin C deficiency)
- c) poor blood clotting (vitamin K deficiency)
- d) skin rashes (deficiencies of B vitamins and vitamin A)

164 Symptoms of vitamin deficiencies generally:

- a) show up immediately
- b) are seen after just a few days
- c) can be recognized within a month
- \*d) may take a very long time (years) to appear

165 Which is true regarding vitamins?

- a) one specific food, such as milk, will provide all of the vitamins needed by humans
- \*b) eating a wide variety of foods from all four food groups is the best way to get all of the vitamins
- c) most people cannot get all of the vitamins from food in sufficient amounts
- d) eating four servings daily from the fruit-vegetable group will supply all of the vitamins we needed

166 A megadose of a vitamin is defined as an intake of more than:

- a) double the RDA (recommended daily allowance)
- b) 5 times the RDA
- \*c) 10 times the RDA
- d) 100 times the RDA

167 The RDA (recommended daily allowance) for vitamin C is 60 mg. A megadose would be:

- a) 120 mg
- b) 240 mg
- c) 480 mg
- \*d) 600 mg

168 The food group that is the best source of B vitamins is:

- a) milk and cheese
- \*b) meat, poultry, fish, beans
- c) fruits and vegetables
- d) fats and oils

169 The best dietary sources of vitamins A, D and riboflavin are:

- a) meat, poultry, fish, beans
- b) breads and cereals
- \*c) milk and cheese
- d) fruits and vegetables

170 A precursor of vitamin A is:

- a) tryptophan
- \*b) beta carotene

- c) ergosterol
- d) linoleic acid

171 Excellent sources of vitamin A include:

- \*a) carrots, spinach, liver, sweet potatoes
- b) beets, turnips, potatoes
- c) chicken, cherries, whole grains
- d) hamburger, apples, legumes

172 Severe deficiency of vitamin A causes:

- a) beriberi
- b) cheilosis
- \*c) xerophthalmia
- d) scurvy

173 Which is NOT a symptom of vitamin A toxicity?

- a) severe headaches
- b) bone and joint pain
- \*c) rebound scurvy
- d) yellow coloration of the skin, fingernails and whites of the eye

174 Which is NOT a function of vitamin D?

- a) aiding absorption of calcium and phosphorus
- b) building bone and teeth
- \*c) synthesizing of intercellular cement
- d) helping the kidneys conserve minerals

175 The best sources of vitamin D are:

- \*a) fish oils, sunshine, fortified milk
- b) dark green and fruits and vegetables
- c) meat, poultry, legumes, whole grains
- d) citrus fruits, cabbage, tomatoes

176 Vitamin D deficiency in children causes:

- \*a) rickets
- b) scurvy
- c) pellagra
- d) beriberi

177 Vitamin D deficiency in adults causes:

- a) xerophthalmia
- b) megaloblastic anemia
- \*c) osteomalacia
- d) beriberi

178 Vitamin D intake needs to be higher at certain times of life. Which is NOT one of these times?

- a) pregnancy and lactation
- b) infancy and childhood

- c) adolescence
- \*d) early adulthood

179 Which is NOT a reason to emphasize vitamin D for elderly people?

- a) they eat fewer vitamin D-rich foods
- b) they get less exposure to sunlight
- \*c) the need for vitamin D decreases after age 50 years
- d) the skin has half the capacity to create vitamin D as when they were younger

180 The main function of vitamin E in the body is to:

- a) prolong life, slowing the aging process
- \*b) act as an antioxidant
- c) strengthen heart muscles
- d) prevent cancer

181 Good sources of vitamin E are:

- \*a) plant and seed oils, nuts, whole grains
- b) beef, poultry, fish
- c) citrus fruits, tomatoes, cabbage
- d) skim milk and white bread

182 Vitamin E deficiency is:

- a) common among children in developed countries
- b) common in developing countries
- \*c) rare in all parts of the world
- d) found mainly among Afroamericans

183 One deficiency symptom of vitamin E seen in humans is:

- a) muscular paralysis
- b) weak, hollow bones
- c) reproductive failure
- \*d) breakage of red blood cell membranes in premature infants

184 The best sources of vitamin K are:

- \*a) green, leafy vegetables
- b) whole grain cereals
- c) fortified milk and margarine
- d) red lean meat salt

185 A vitamin that can be synthesized by bacteria in the large intestine is:

- a) vitamin A
- b) vitamin D
- c) vitamin E
- \*d) vitamin K

186 Deficiency of vitamin K is rare, but if it occurs it can lead to:

- a) osteomalacia
- b) diarrhea
- \*c) hemorrhaging
- d) breakage of red blood cell membranes

187 Vitamin K deficiency may result from:

- \*a) high doses of antibiotics
- b) bacterial synthesis
- c) large amounts of fat in the diet
- d) diagnostic X-rays

188 Vitamin K is given to prevent hemorrhaging in:

- a) pregnant women
- \*b) newborn infants
- c) cancer patients
- d) elderly people

189 The main practical difference between fat-soluble and water-soluble vitamins is:

- a) water-soluble vitamins are more widespread in foods
- b) fat-soluble vitamins are less expensive
- \*c) water-soluble vitamins are less stable
- d) fat-soluble vitamins are needed in larger amounts

190 Which of the following will NOT meet the RDA (recommended daily allowance) for vitamin C for adults?

- a)  $\frac{3}{4}$  cup grapefruit juice
- \*b) 1 cup grape juice
- c) 1 orange
- d) 1 green pepper

191 Which is NOT a function of vitamin C?

- a) increase absorption of iron
- b) aid the immune system
- c) help leukocyte (white blood cell) function
- \*d) a part of visual rhodopsin in the eye

192 Which symptoms are NOT characteristic of scurvy?

- a) weak blood vessels
- b) muscle tissue breakdown
- \*c) poor appetite, nervous disorders
- d) inability to produce scar tissue

193 If left untreated, scurvy leads to:

- a) dry, scaly skin and blindness
- b) heart disease
- c) mental illness
- \*d) gangrene and death

194 Select the function below that does NOT belong to the B-complex vitamins:

- a) energy release from carbohydrate, fat and protein
- b) energy formation
- c) protein and amino acid metabolism
- \*d) building strong bones and teeth

195 Niacin can be formed from:



- a) beta-carotene
- b) 7-dehydrocholesterol
- \*c) tryptophan
- d) lecithin

196 The amount of thamin, riboflavin, and niacin needed by the body is based on:

- \*a) the dietary intake of carbohydrate, fat, protein, and alcohol
- b) age
- c) climate and temperature in the country of residence
- d) amount of body fat

197 Although all \_\_\_\_\_ are good sources of thiamin, \_\_\_\_\_ is the best source with four times as much as other foods in that category.

- a) vegetables; carrots
- b) grains; oatmeal
- \*c) meats; pork
- d) fruits; oranges

198 Much of the \_\_\_\_\_ in milk is lost if bottles are left in the sun for several hours.

- a) thiamin
- \*b) riboflavin
- c) niacin
- d) vitamin A

199 The niacin in corn is NOT available until:

- a) the corn has ripened on the stalk
- b) the corn is cooked
- \*c) the corn is treated with lime water
- d) the corn is ground into grits or corn meal

200 Alcoholics have the greatest problem with \_\_\_\_\_ deficiency.

- a) riboflavin
- \*b) thiamin
- c) niacin
- d) pantothenic acid

201 Alcohol interferes with \_\_\_\_\_ absorption, and prolonged deficiency produces brain damage.

- a) pantothenic acid
- b) vitamin B12
- c) riboflavin
- \*d) thiamin

202 Identify the condition that is NOT a symptom of beriberi.

- a) heart failure
- b) irritability and exhaustion
- c) edema
- \*d) red, scaly skin rash

203 The four D's: diarrhea, dermatitis, dementia, and death, are the progressive symptoms of:

- \*a) pellagra
- b) beriberi
- c) cheilosis
- d) pernicious anemia

204 Vitamin B6 helps in:

- a) release of energy from minerals
- b) amino acid and protein metabolism
- c) absorption of iron
- \*d) utilization of calcium and phosphorus

205 Identify the disorder NOT associated with vitamin B6 deficiency.

- a) convulsions
- b) depression
- c) lowered resistance to disease
- \*d) dental caries

206 Vitamin B12 is found in:

- \*a) meat and dairy products
- b) fruits, especially citrus
- c) green leafy vegetables
- d) vegetable oils

207 Folacin is found in small amounts in many foods, but the best sources are:

- a) cheese, eggs, and cream
- b) whole grain cereals
- \*c) leafy green vegetables, fruits, and meats
- d) raw sugar, honey, and molasses

208 A mineral important in bone formation and in mitochondrial functions:

- \*a) calcium
- b) sodium
- c) chloride
- d) sulfur

209 Three minerals used in nerve-muscle function are:

- a) iron, copper, iodine
- \*b) sodium, potassium, chloride
- c) fluorine, chlorine, iodine
- d) manganese, magnesium, selenium

210 Magnesium is used in the body for:

- a) building white blood cells
- b) prevention of dental caries
- c) regulation of basal metabolism

\*d) synthesis and breakdown of energy nutrients

211 Sulfur:

- a) gives rigidity to the structure of some proteins
- b) brings oxygen to the cells
- c) works with vitamin E as an antioxidant
- d) is involved in glucose metabolism

212 Zinc:

- a) builds bones and teeth
- b) regulates basal metabolism
- \*c) is essential for protein synthesis and growth
- d) helps release energy from carbohydrates, fats, and protein

213 The mineral involved in regulating metabolism is:

- a) calcium
- b) magnesium
- c) selenium
- \*d) iodine

214 A mineral that works with vitamin E as an antioxidant is:

- \*a) selenium
- b) magnesium
- c) manganese
- d) iodine

215 The mineral found as a part of vitamin B12 is:

- a) zinc
- b) copper
- c) sulphur
- \*d) cobalt

216 Geophagy or pica is:

- a) the science or study of minerals and how they are used in the body
- \*b) the practice of person (often pregnant women) eating clay or dirt
- c) the geographical location of the various minerals in the earth's surface
- d) a synthetic medicine used by the ancient Greeks

217 A substance in the body which transports oxygen and carbon dioxide in the muscles and gives the muscles their red color is:

- a) insulin
- b) chlorophyll
- \*c) myoglobin
- d) glucagon

218 Macrominerals are those for which the daily amount recommended is greater than:

- \*a) 100 mg
- b) 1000 mg

- c) 200 g
- d) 5000 g

219 Microminerals are those recommended in daily amounts of less than:

- \*a) 20 mg
- b) 100 mg
- c) 50 g
- d) 100 g

220 Minerals that are environmental toxicants include:

- a) tin, zinc, and aluminium
- b) sodium, fluorine, and chloride
- \*c) mercury, cadmium, and lead
- d) molybdenum, barium, and vanadium

221 A toxic mineral that may show up in fish and that can damage the brain is:

- \*a) mercury
- b) lead
- c) vanadium
- d) arsenic

222 Toxic amounts of \_\_\_\_\_ can retard mental development in children.

- a) molybdenum
- b) barium
- c) mercury
- \*d) lead

223 The measure of the amount of a mineral that can be absorbed into the body and used is called:

- \*a) bioavailability
- b) coefficient of digestibility
- c) physiological fuel value
- d) utilization coefficient

224 Brittle bones that break easily may result from a deficiency of:

- a) phosphorus
- \*b) calcium
- c) fluoride
- d) sulphur

225 Neurological or nervous system disturbances may be the result of a deficiency of:

- a) phosphorus
- b) potassium
- c) molybdenum
- \*d) magnesium

226 The two most abundant minerals found in humans are:

- a) iron and copper
- \*b) calcium and phosphorus

- c) sodium and chlorine
- d) potassium and magnesium

227 Which is NOT a function of phosphorus in the body?

- a) part of DNA, RNA
- b) part of adenosine triphosphate (ATP) necessary for energy release
- c) phospholipids in cell membranes
- \*d) formation of red blood cells

228 Excess calcium in the blood could be disastrous because:

- \*a) it deposits in soft tissues such as the kidney, interfering with its function
- b) it causes hypertension leading to heart attacks
- c) it causes anemia by decreasing iron absorption
- d) it results in spontaneous fractures of bones and increased tooth decay

229 The most important source of calcium in the diet is:

- a) legumes, nuts, and seeds
- b) red, lean meat
- \*c) milk and milk products
- d) whole grain breads and cereals

230 Calcium absorption is aided by:

- \*a) vitamin D and lactose
- b) oxalate and phytate
- c) phosphorus and fiber
- d) all of the above

231 Foods high in phosphorus but low in calcium are:

- a) milk and milk products
- b) green leafy vegetables
- \*c) meat, eggs
- d) butter, cream, and margarine

232 The major electrolytes in the body are:

- a) calcium, phosphorus, fluorine
- b) iron, copper, zinc
- \*c) sodium, chloride, potassium
- d) magnesium, sulfur, selenium

233 The mineral found in highest concentration in intracellular fluid (inside the cell) is:

- a) chloride
- \*b) potassium
- c) phosphorus
- d) sodium

234 Which is NOT a function of potassium?

- a) functioning of nerves and muscles
- b) formation of glycogen from glucose
- c) protein synthesis
- \*d) formation of hydrochloric acid in the stomach

235 A deficiency of magnesium causes:

- a) osteoporosis and misshapen bones
- b) anemia and excessive bleeding
- c) cretinism and delayed growth
- \*d) uncontrollable muscle twitching and convulsions

236 Most of the sulfur in the body is found in:

- a) red blood cells
- b) white blood cells
- \*c) three amino acids: methionine, cystine, and cysteine
- d) the intracellular fluid

237 Trace elements are:

- \*a) minerals found in the body in very small amounts
- b) macrominerals
- c) vitamins that have a mineral component
- d) elements used to trace the transport of minerals through the body

238 A mineral needed in larger amounts by women than men is:

- a) calcium
- b) phosphorus
- \*c) iron
- d) iodine

239 The group most apt to be low in iron is:

- a) infants
- b) adolescent boys
- c) teen-age girls, pregnant and lactating women
- \*e) both a and c

240 The two major causes of low body iron stores are:

- a) lack of vitamins A and D
- b) diets low in carbohydrates and lack of exercise
- \*c) menstrual bleeding; diets low in iron
- d) diets low in fat; hypertension

241 Excellent sources of iron are:

- a) milk, cheese, yogurt, butter
- b) whole grain oils, margarine, shortening
- c) citrus fruits, cabbage, cantaloupe

\*d) liver, lean meat, peanut butter, dried beans, egg yolk

242 Foods high in iron are also excellent sources of:

- a) iodine
- b) sodium
- \*c) zinc
- d) calcium

243 Only about \_\_\_\_\_ percent of the ingested iron is absorbed.

- \*a) 10
- b) 25
- c) 50
- d) 80

244 Iron absorption is aided by:

- a) phytic acid
- b) lactose
- \*c) vitamin C
- d) vitamin D

245 Iron absorption is inhibited by:

- a) vitamin C
- \*b) tea and coffee
- c) simple carbohydrates
- d) high protein diet

246 Iron is best absorbed when it comes from:

- a) milk
- b) bread and whole grain cereals
- c) green vegetables
- \*d) meat

247 Results of zinc deficiency include all but which one of the following:

- a) dwarfism
- b) delayed growth
- \*c) anemia
- d) delayed sexual development

248 Most of the zinc in the body is provided by:

- \*a) meat
- b) fruits
- c) vegetables
- d) grains

249 Zinc absorption is decreased by:

- a) vitamin A
- b) phytate and excess fiber
- c) iron, calcium and copper
- \*d) b and c

250 Natural foods richest in iodine are:

- a) freshwater fish
- \*b) seafood and vegetables grown near the sea
- c) whole grains
- d) dairy products

251 Goiter is characterized by:

- a) joint pains, crooked bones
- \*b) swelling of the thyroid gland
- c) dark red, scaly dermatitis
- d) night blindness

252 Excess dietary iodine may increase basal metabolism rate, a disorder called:

- \*a) hyperthyroidism
- b) hyperactivity
- c) hypothyroidism
- d) goiter

253 Goiter is common in some parts of Africa, probably naturally occurring substances in millet called:

- a) antigens
- b) carcinogens
- \*c) goitrogens
- d) anthocyanins

254 The major function of selenium in the diet is as:

- a) an enzyme
- \*b) an antioxidant
- c) a coenzyme for release of energy from carbohydrates, fat, and protein
- d) a catalyst in red blood cell formation

255 Selenium interacts with:

- a) vitamin A
- b) niacin
- c) ascorbic acid
- \*d) vitamin E

256 The best sources of selenium are:



- a) fruits, fats, and oils
- b) vegetables and fruits
- \*c) meats and grains
- d) dairy products

257 The best way to ensure sufficient fluoride in the diet is:

- a) weekly consumption of freshwater fish
- \*b) fluoridation of the water supply
- c) use iodized salt
- d) enrichment of flour and cereals

258 Copper:

- a) is a part of many enzymes
- b) is involved in protein of iron metabolism
- c) heals wounds, helps make elastin
- \*d) all of the above

259 Chromium is used for:

- a) enzyme activation
- \*b) glucose metabolism
- c) good eyesight
- d) healthy red blood cells

260 Manganese can:

- a) prevent dental caries
- b) prevent goiter
- c) aid formation of red blood cells
- \*d) help enzymes metabolize lipids and carbohydrates

261 Molybdenum is essential for:

- a) formation of thyroxin
- \*b) activity of various enzymes
- c) production of hydrochloric acid
- d) glucose metabolism

262 Newborn infants have a body water content of about:

- a) 40 %
- b) 60 %
- \*c) 75 %
- d) 90 %

263 Who has the greatest percentage of body water?

- a) elderly female
- b) teen-age female
- c) adult male
- \*d) newborn infant

264 The end product of fat hydrolysis is:

- a) glucose
- b) amino acids
- \*c) fatty acids and glycerol
- d) disaccharides

265 The major site of absorption of water and most nutrients is in the:

- a) mouth
- b) stomach
- \*c) small intestine
- d) large intestine

266 Absorbed nutrients are transported in the:

- a) lymph
- b) interstitial fluid
- c) intracellular fluid
- \*d) blood

267 The body makes fatty substances water-soluble by forming:

- \*a) lipoproteins
- b) hormones
- c) antibodies
- d) white blood cells

268 Excess water is eliminated from the body through:

- a) urine
- b) perspiration
- c) exhaled air
- \*d) all of the above

269 In regulating body temperature, 85% of the body's excess heat is lost through:

- \*a) the skin, as the flow of blood increases to that area
- b) the lungs, in breathing
- c) the urine, as its excretion increases
- d) the feces

270 The strongest acid in the human body is:

- a) citric acid
- b) oxalic acid
- c) ascorbic acid
- \*d) hydrochloric acid

271 Two substances that increase loss of body water through increasing urine output are:

- \*a) caffeine and alcohol
- b) caffeine and alcohol
- c) fats and sugars
- d) phytic acid and oxalic acid

272 Which do NOT contain caffeine?

- a) caffeine and alcohol
- \*b) cocoa and weight control pills
- c) fats and sugars
- d) phytic acid and oxalic acid

273 Alcohol can be metabolized by the human body producing \_\_\_\_\_ kcalories (kJ) per gram consumed.

- a) 4 kcal (17 kJ)
- b) 5 kcal (21 kJ)
- \*c) 7 kcal (29 kJ)
- d) 9 kcal (38 kJ)

274 Alcohol has many harmful effects on the human body. Select the one least likely to be caused by alcohol.

- a) fatty infiltration of the liver leading to cirrhosis
- b) increased hypertension and damage to the heart
- \*c) decreased activity of digestive enzymes and damage to the structure of the intestine
- d) anemia as a result of impaired utilization of iron, copper, and protein

275 The bioavailability of dietary iron is increased by:

- a) using ferrous rather than ferric iron
- b) including meat that contains heme iron in the diet
- c) vitamin C, lactose and some amino acids
- \*d) a,b, and c

276 Iron is made less bioavailable by:

- a) fiber, phytic acid, oxalic acid, and tannins
- b) diets low in protein or high in phosphorus
- c) poor fat absorption
- \*d) a,b, and c

277 A major problem in alcoholics caused by too high a level of lactic acid in the blood is.

- a) hypolipidemia
- \*b) gout
- c) sleepiness
- d) anemia

278 Which of the following does NOT require energy (kcalories)?

- a) basal energy needs

- \*b) absorption of ingested water
- c) digestion and absorption of food
- d) physical activity

279 Identify the condition that does NOT require increased dietary energy from food and drink.

- a) pregnancy and lactation
- b) recovery from illness or starvation
- \*c) weight loss to recover from obesity
- d) strenuous physical activity such as athletics

280 John consumed 300 kcalories (kcal) in his breakfast. This would be \_\_\_\_\_ kJoules (kJ).

- a) 622
- b) 966
- \*c) 1257
- d) 1593

281 Vitamins and minerals provide \_\_\_\_\_ kcalories (kcal) per gram [kJ/g].

- \*a) 0 kcal [0 kJ]
- b) 4 kcal [16.8 kJ]
- c) 7 kcal [29.3 kJ]
- d) 9 kcal [37.7 kJ]

282 Susan's dinner contained 100 g of carbohydrate, 25 g of protein, 5 g of fat, 3 g alcohol, 10 mg of vitamins, and 5 mg of minerals. How many kcalories did this meal provide?

- a) 394 kcal (1651 kJ)
- \*b) 566 kcal (2372 kJ)
- c) 986 kcal (4131 kJ)
- d) 1258 kcal (5271 kJ)

283 William ate a total of 2000 kcalories on Wednesday. He received 1000 of them from carbohydrate, 600 from fat, and 400 from protein. What percentage of his calories came from carbohydrates, fats, and proteins, respectively?

- a) 80% from carbohydrate, 10% from fat, 10% from protein
- b) 70% from carbohydrate, 5% from fat, 25% from protein
- \*c) 50% from carbohydrate, 30% from fat, 20% from protein
- d) this cannot be calculated without knowing the amount from vitamins and minerals

284 "Empty calorie" foods are:

- a) high in fiber such as whole grain cereals
- b) low in calories such as celery, lettuce, and cucumbers
- c) completely devoid of calories such as water and fiber
- \*d) high in calories, but low in vitamins and minerals such as sugary, honey, and alcohol

285 The body heat produced in the metabolism of food is called:

- a) basal metabolism

- b) bomb calorimetry
- c) kinetic energy
- \*d) dietary thermogenesis or specific dynamic effect of food

286 The most significant factor in determining basal energy (BMR) is:

- a) amount of body fat
- \*b) lean body mass
- c) gender
- d) weight

287 Jane is a young adult woman of average build weighing 120 pounds (54,5 kg). The approximately number of kcalories (kJ) she needs daily for basal metabolism is:

- a) 840 kcal (3520 kJ)
- \*b) 1178 kcal (4936 kJ)
- c) 1550 kcal (6495 kJ)
- d) 2100 kcal (8799 kJ)

288 John is an adult male of average build weighing 176 pounds (80 kg). Calculate the number of kcalories (kJ) he needs daily for basal metabolism:

- a) 950 kcal (3980 kJ)
- b) 1420 kcal (5950 kJ)
- \*c) 1920 kcal (8049 kJ)
- d) 3050 kcal (12780 kJ)

289 Which activity would require the most energy (kcalories) per hour?

- \*a) jogging rapidly
- b) walking
- c) swimming
- d) playing golf

290 What percent of a day's total energy (caloric) need is used for digesting, absorbing, transporting, and storing food?

- a) 1% to 3%
- \*b) 5% to 10%
- c) 15% to 20%
- d) 25% to 30%

291 Which requires the most kcalories (kJ) for nonactive people?

- \*a) basal metabolism
- b) physical activity
- c) thermogenesis
- d) all require about the same in a 24 hour period

292 Most of the adenosine triphosphate in the body comes from:

- a) protein

- \*b) carbohydrates and fat
- c) vitamins
- d) minerals

293 The need for energy (kcalories) after age 50:

- a) increases to counteract the adverse effects of aging
- b) remains the same as in early adulthood
- c) increases because digestion and absorption of food becomes more difficult
- \*d) goes down because of decreased physical activity and decreased basal energy requirements

294 If you consume more energy in the diet than you expend, the extra kcalories will be:

- a) burned off since basal metabolism would increase
- b) used for protein synthesis
- \*c) stored as fat in adipose tissue
- d) stored as glucose in the liver

295 Reducing diets with energy intakes of less than 600 to 800 kcalories (2515 – 3350 kJ) per day can be dangerous because:

- a) no glucose is provided for the brain
- b) body tissue is broken down to supply glucose for the brain
- c) ketones are produced from fat catabolism during the advanced stages of the diet
- \*d) both b and c

296 Even though body weights are similar, the female athlete has a higher resting metabolic rate (RMR) than a female nonathlete because:

- a) she has more body fat and less lean muscle
- b) her body produces more thyroxin
- \*c) she has less body fat and more muscle
- d) her body produces more glycogen

297 Menstruation in women:

- \*a) causes about a 9% increase in 24 hour energy expenditure
- b) decreases energy expenditure from loss of blood
- c) has no effect on energy expenditure
- d) causes about a 20% decrease in 24 hour energy expenditure

298 Identify the condition that is NOT a symptom of eating disorder (anorexia nervosa).

- \*a) bingeing and purging
- b) nervous loss of appetite
- c) skin and bones appearance
- d) weakness, apathy, disorientation

299 Which of the following is NOT connected with bulimia?

- a) eating enormous amounts of food
- \*b) self-induced starvation and refusal of any food at all

- c) vomiting
- d) laxatives and enemas

300 The best determinant of whether a person is overweight or obese is:

- a) appearance
- \*b) percentage of body fat
- c) total body weight
- d) bone mass

301 Which of the following would be the most accurate method of determining a person's body fat?

- a) calculating proportion of weight to height
- b) bone density
- \*c) underwater weighing
- d) skinfold thickness

302 Which of the following is NOT considered to be a cause of obesity?

- a) an excess intake of food
- b) low basal metabolism
- c) decreased physical activity
- \*d) eating too wide a variety of food

303 Which of the following is NOT a factor that influences weight?

- \*a) social status
- b) body fat increases with age
- c) gender: men have less body fat than women
- d) changes in BMR, physical activity, food intake, and dietary thermogenesis

304 The feeling of being "full" or satisfied after a meal is termed:

- a) dietary satisfaction
- \*b) satiety
- c) fat threshold
- d) dietary set-point

305 Satiety is produced in a meal primarily by:

- a) liquids
- b) foods high in sugar
- c) including raw fruits and vegetables
- \*d) foods high in fat

306 If a new mother breastfeeds the baby:

- a) the infant has a greater risk of becoming obese
- \*b) she will lose much of her own body fat gained during pregnancy
- c) she will continue to put on weight on body fat at the same rate as during pregnancy
- d) she will need to diet at the same time to lose her excess body fat

307 Foods in a weight-los diet must be:

- a) palatable
- b) familiar
- c) easily available
- \*d) all of the above

308 A deficiency disease mainly in children caused by a diet deficient in protein but sometimes almost adequate in energy is

- a) anorexia
- b) bulimia
- c) marasmus
- \*d) kwashiorkor

309 When a new baby arrives in impoverished nations, malnutrition often develops in the next oldest child because:

- \*a) it is fed a watery solution of flour (cassava) juice
- b) the mother gives all her attention to the newborn
- c) sibling rivalry causes the child to lose its appetite
- d) the child is weaned too soon to adult food

310 Which of the following are NOT symptoms of kwashiorkor?

- a) edema and extreme apathy
- \*b) skin and bone appearance; wrinkled, old look
- c) poor skin, swollen abdomen
- d) discolored hair, liver malfunction

311 Kwashiorkor and marasmus are extreme forms of:

- a) vitamin A deficiency
- b) thiamin deficiency
- \*c) protein-energy deficiency
- d) iron and zinc deficiency

312 The product requiring the most water for production of a pound (kg) of edible food is:

- a) wheat
- b) potatoes
- c) vegetables
- \*d) meat

313 An argument against use of pesticides in food production is that they:

- a) decrease the quantity of food produced
- b) cause excessive food production and disrupt the economy
- \*c) may adversely affect the health of the people
- d) are too expensive to be practical

314 The most positive argument for continuing the use of pesticides is:



- \*a) the increased amount of food produced
- b) the nutrients provided by the pesticide itself
- c) the food is safer to eat
- d) it takes less time for the food to ripen and mature

315 The terms “health food“, “natural,“ and “organic“ were created to refer to:

- \*a) food raised without agricultural chemicals (pesticides, fertilizers)
- b) food enriched with vitamins and minerals
- c) food higher in nutrients than processed food
- d) food picked and eaten raw from trees and plants native to a particular environment

316 Our choice of food at the supermarket is determined by:

- a) appearance, color, aroma, texture, flavor, and sound of the food
- b) familiarity of the food, advertising claims, nutritive value
- c) our cultural and religious background and family lifestyle
- \*d) all of the above

317 Salting of foods to preserve them is NOT common today because:

- a) it is an expensive process
- b) it destroys vitamins and minerals
- \*c) the excessive salt may cause hypertension
- d) food preserved in this method causes dental caries

318 The process used to make yogurt, cheese, tofu, miso, pickles and sauerkraut is:

- a) pasteurization
- b) irradiation
- c) stabilization
- \*d) fermentation

319 The nutritional value of a food is improved by:

- a) freeze-drying
- b) refrigeration and freezing
- c) pasteurization
- \*d) fermentation

320 Two nutrients that become more available in a food after fermentation are:

- a) vitamins A and D
- \*b) vitamin B12 and protein
- c) iron and iodine
- d) thiamin and niacin

321 A vitamin used as a food additive to enhance the yellow color of popcorn, pasta, margarine, cake mixes, and processed cheese is:

- \*a) beta-carotene, a vitamin A precursor

- b) thiamin
- c) vitamin C
- d) vitamin E

322 A vitamin that is also used as a food additive to prevent foods from darkening is:

- a) vitamin A
- b) riboflavin
- \*c) vitamin C
- d) vitamin D

323 The most common allergenic foods are:

- a) beef, pork, string beans, apples
- b) corn, poultry, oranges, tomatoes, strawberries
- c) rice, oats, lamb, lettuce, peas, peaches
- \*d) milk, eggs, nuts, shellfish, legumes, wheat, fish

324 The newborn infant will triple its birth weight in about:

- a) 3 months
- b) 6 months
- c) 9 months
- \*d) 1 year

325 To bear a healthy infant, the mother must have an adequate diet:

- a) during the last trimester when the baby grows so rapidly
- b) during the second and third trimesters of pregnancy
- c) only during the nine months she carries the infant
- \*d) beginning long before conception occurs and continuing through the period of lactation

326 Optimum weight gain during pregnancy is:

- a) 10 – 12 lbs (4,5 – 5,5 kg)
- b) 15 – 20 lbs (6,5 – 9,0 kg)
- \*c) 22 - 28 lbs (10,0 – 12,5 kg)
- d) 30 – 35 lbs (14,0 – 16,0 kg)

327 The weight gain recommended for underweight adult women during the course of a pregnancy is about

- a) 20 lbs (9 kg)
- \*b) 30 lbs (14 kg)
- c) 40 lbs (18 kg)
- d) over 45 lbs (over 20 kg)

328 During pregnancy an obese woman should:

- a) lose 10-20 lbs during her pregnancy (4,5 – 9 kg)
- b) make sure she gains no weight
- \*c) gain only 10-20 lbs (4,5 – 9 kg)
- d) gain 24 – 28 lbs (10,5 – 12,5 kg)

329 Additional vitamin A is recommended during pregnancy for:

- a) blood coagulation
- b) energy metabolism
- c) collagen formation
- \*d) healthy epithelial cells

330 The cause of morning sickness is

- a) low blood glucose level
- b) deficiency of vitamin B6
- c) changes in hormone levels in the blood
- \*d) undetermined by scientists at the present time

331 To prevent heartburn, a pregnant woman should:

- a) eat smaller, more frequent meals
- b) avoid foods that cause indigestion
- c) remain upright after eating
- \*d) all of the above

332 Food cravings and aversions:

- \*a) may occur during pregnancy
- b) indicate lack of an essential nutrient in the diet
- c) result in inadequate nutrition during pregnancy
- d) are caused by an immediate need by the fetus

333 Body fat in the developing infant is laid down:

- a) during the first trimester of pregnancy
- b) during the second trimester of pregnancy
- \*c) during the last three months of pregnancy
- d) equally during each of the three trimesters

334 When a pregnant woman smokes excessively, there is a greater danger of:

- a) anemia at birth
- b) miscarriage
- \*c) vaginal bleeding and a low birth weight infant
- d) birth defects

335 Babies fed skim cow milk:

- \*a) have lower growth rates and lower fat stores and may be low in essential fatty acids
- b) are healthier and maintain a more desirable weight gain than those on whole cow milk
- c) develop more allergies and infections than other infants
- d) develop eczema

336 A major disadvantage of formulas is that:

- a) they do not provide the antibodies contained in breast milk

- b) they may cause allergies
- c) they seem to cause greater deposits of subcutaneous fat
- \*d) all of the above

337 The best choice for the infant during the first six months of life is:

- a) powdered formula
- b) liquid concentrate formula
- \*c) breast milk
- d) evaporated milk formula

338 The preferred food for the premature infant is:

- \*a) the mother's breast milk
- b) especially designed formulas for preterm infants
- c) milk from the milk bank
- d) regular liquid formula

339 An infant is regarded as a low birth weight baby if it weighs less than:

- a) 7 lbs (3 kg)
- b) 6 lbs (2,7 kg)
- \*c) 5.5 lbs (2,5 kg)
- d) 4,5 lbs (2 kg)

340 The baby should be fed semisolid and table food by about age:

- a) 2 months
- b) 3 months
- \*c) 6-8 months
- d) 1 year

341 It is recommended that honey be omitted from infant diets because it:

- \*a) may be linked to infant botulism
- b) causes constipation
- c) has low bioavailability of glucose
- d) is too high in energy

342 Infants and preschoolers on vegan diets have been found to be deficient in energy, protein, calcium, iron, zinc, riboflavin and vitamin D because:

- a) their stomachs cannot carry the large volume of food required by the vegan diet
- b) vegan diets offer limited food choices
- c) vegan children usually eat fewer meals and snacks than nonvegan children
- \*d) all of the above

343 Children who watch more television that includes food commercials

- a) select a more nutritious diet
- b) make more requests for candy and sugared cereal
- c) eat more high-energy snacks

\*d) b and c

344 The best way to ensure that young people eat well is to:

- \*a) only have available good, nutritious palatable food
- b) not let them eat except at mealtime
- c) provide access to foods high in fat and sugar for energy
- d) monitor and control their consumption of food

345 Children should get multivitamin preparations:

- a) if the child is underweight
- \*b) only if prescribed by a doctor
- c) because all children need them to prevent borderline deficiencies
- d) if the children are picky eaters, eat an unbalanced diet, or suffer frequent infections

346 Nutrient needs in adulthood are lowered because of decreased needs for:

- a) energy and heat
- \*b) growth
- c) maintenance
- d) processes

347 Nutrient needs increase in adulthood only during:

- a) pregnancy
- b) lactation
- c) burns
- \*d) all of the above

348 The principal nutrition problem(s) among the elderly is (are):

- a) difficulties in obtaining and preparing food
- b) difficulty eating because of poor teeth
- c) problems with foods that cause constipation and indigestion
- \*d) all of the above

349 The best way to ensure a healthy and happy old age is:

- \*a) reasonable eating habits, moderate physical activity, and positive interactions with other people
- b) decreased energy intake, increased protein intake, and use of vitamin-mineral supplements
- c) a 10% increase in most vitamins and minerals; megadoses of vitamin E, decreased fat, increased fiber, and decreased total energy by 10% per decade
- d) increased intake of vitamins A, C, and D; use of a stress vitamin (usually B-complex); decreased total energy by 500 kcal (2100 kJ) per day; use of zinc and calcium supplements

350 The cells in the intestinal tract are replaced every \_\_\_\_\_ days.

- \*a) 3-4
- b) 8-10
- c) 30-40

d) 100-120

351 Red blood cells are replaced every \_\_\_\_\_ days, regardless of how old you are.

- a) 2-3
- b) 10-15
- c) 50-60
- \*d) 120

352 In aging, tissue function decreases in many parts of the body because:

- \*a) some of the cells that die normally are not replaced
- b) tissue shrinks in size as one ages
- c) hormones regulating tissues are produced in decreased amounts
- d) the nerves regulating tissues die rapidly in aging

353 A common cause of nutritional problems in old age is:

- a) inadequate intake of nutrients
- b) degenerative diseases
- c) lack of exercise
- \*d) all of the above

354 Compared to infants and children, death rates for adults from undernutrition are:

- a) about the same
- b) considerably higher
- c) somewhat higher
- \*d) a great deal lower

355 Among middle-aged adults, women have lower intakes than men of:

- \*a) calcium, iron, magnesium and vitamin B6
- b) vitamins A, C, D, and potassium
- c) phosphorus, iodine, vitamin E
- d) thiamin, riboflavin, B12, and copper

356 Visible signs of low iron intake among middle-aged women are:

- \*a) lack of energy and pale appearance
- b) poor eyesight at night, dry skin, dull hair
- c) lifeless look; red, glossy tongue
- d) skin rash, enlarged neck glands

357 Obesity is closely related to:

- a) hypertension and high blood cholesterol
- b) diabetes
- c) cancer
- \*d) all of the above

358 To reduce the risk of osteoporosis:

- a) consume adequate calcium from early life to old age
- b) drink fluoridated water and avoid high protein diets
- c) avoid smoking, alcohol, coffee, soft drinks; avoid preterm amenorrhea caused by excessive exercise and anorexia
- \*d) a,b, and c

359 Two minerals that strengthen bones and help prevent osteoporosis in later life are:

- a) phosphorus and zinc
- \*b) calcium and fluoride
- c) sodium and iron
- d) magnesium and sulfur

360 The best way to extend the life span is:

- a) take antioxidants such as vitamins E, A, C, the amino acid cysteine, and selenium
- b) increase exercise
- c) restrict energy intake throughout life
- \*d) choose foods of high nutrient density; avoid alcohol, excess sugar, and fat; get moderate exercise

361 Nutrients most lacking in the diets of the elderly are:

- a) carbohydrate, thiamin, and niacin
- \*b) calcium, magnesium, and vitamin B6
- c) iron, zinc, and vitamin B12
- d) protein, iron, and iodine

362 A nutrient that patients with AIDS and patients HIV+ do NOT absorb well and one that plays a major role in immune functions is:

- a) iron
- \*b) zinc
- c) copper
- d) magnesium

363 Malnutrition refers to:

- a) starvation
- b) undernutrition
- c) having a nutritional deficiency disease
- \*d) both undernutrition and overnutrition

*Information for mid-term test*

*Test questions (50 in total) are automatically generated by the following principle:*

<b>Test items No.</b>	<b>Generated questions</b>
1 - 50	3
51 - 79	3
80 - 98	3
99 - 148	9
149 - 207	10
208 - 261	9
262 - 277	2
278 - 286	1
287 - 288	1
289 - 297	2
298 - 311	2
312 - 323	1
324 - 341	2
342 - 363	2