

ADVANCED NUTRITION I

BND-107

SELF-HELP QUIZ: LESSON 4

ANSWERS

- | | |
|--------------------------------------|----------------------------------|
| 1. T, P. 77 | 10. T, P. 94 |
| 2. T, P. 78 | 11. T, P. 95 |
| 3. T, P. 80 | 12. T, P. 99 |
| 4. T, P. 81 | 13. T, P. 101 |
| 5. T, P. 83 | 14. T, P. 102 |
| 6. T, P. 86 | 15. T, P. 103, 104 |
| 7. F, Funk, P. 88 | 16. F, Law of Minimum,
P. 105 |
| 8. F, Do not prevent colds,
P. 89 | 17. T, P. 106 |
| 9. T, P. 91, 92 | 18. T, P. 106 |

ADVANCED NUTRITION I

BND-107

PROGRESS TEST 1

TEXT: *The Science and Fine ART of Food and Nutrition*
by Dr. Herbert M. Shelton

This Test will cover Chapters 1 through 6 in this textbook. This Progress Test may contain True or False, Multiple Choice, Fill in the Blanks, or Questions and Answers. At the end of your Progress Test, you will find your Answer Sheets on which to write your answers.

1. _____ is the sum total of all processes and functions by which growth and developments, maintenance repair of the body, and reproduction are accomplished.

A. Metabolism B. Nutrition C. Nature D. Circulation
2. _____ is any substance which, when taken into the body, can be used by it for the replenishment of tissue (growth and repair) and for the performance of organic function.

A. Processed foods B. Cooked foods C. Foods D. Herbs
3. _____ are composed of a simple protein united with some other substance and are named according to the character of the other substance as [A] Chromo-proteins, [B] Nucleo-proteins, [C] Phospho-proteins, [D] Glyco-proteins, [E] Lecitho-proteins.

A. Simple proteins B. Derived proteins
C. Compound proteins D. Albumoids
4. _____ are colloids and amino-acids are crystalloids. Plant and animal material should or must be in the colloidal state. Each plant and animal must build its own colloids in order that the animal body may utilize the substances in plant colloids in building its own colloids, and must first break them down into crystalloids.

5. Blood proteins are made from _____ acids.
6. True or False: By “essential amino-acid,” it is meant that the body cannot produce by oxidation another amino-acid.
7. True or False: Partially complete proteins maintain life, but do not support normal growth.
8. True or False: Hygienists believe that grains form part of man’s diet.
9. _____ (is) are composed of simpler compounds known as “simple sugars,” or monosaccharides, disaccharides, trisaccharides, and polysaccharides.

A. Carbohydrates B. Starches C. Glucose D. Glycogen
10. True or False: Raw starch is soluble, while all sugars are not.
11. True or False: Fruits are ready to be used and assimilated and decompose quickly, while grains are intended for storage.
12. True or False: The body cannot use starch. It must be converted into sugar before it can be utilized by the cells. This is done in the process of digestion, which begins in the mouth. Disaccharides and polysaccharides are converted into monosaccharides in the process of digestion, while carbohydrates can be absorbed and assimilated only as monosaccharides.
13. True or False: Commercial Sugars, syrups and molasses are concentrated saps deprived of their vitamins and minerals, often having preservatives, artificial food coloring and flavors, and are often bleached with sulphur dioxide. They are denatured, unbalanced substances that quickly ferment in the digestive tract and are not fit for consumption.
14. _____ theory is that catarrhal diseases are based on carbohydrate excess, sugar excess, and all starches are converted into sugar in digestion.
15. True or False: In 1904, Dr. Harvey W. Wiley wrote to Otto Carque: “I regret to say that no one in this country has undertaken a complete

analysis of all the mineral constituents of foods.” An analysis usually relates to the nutritive value and general composition, but does not include the composition of the “ash.” His words plainly imply that the “salts” have no nutritive value, in their opinion.

16. True or False: Most nuts are poor in oils and are not one of the best sources of fat.
17. _____ is the principle member of the glucose group and much less sweet than cane sugar. It is known as a grape sugar and is found in fruits, some vegetables, and honey.
18. Three _____ fatty-acids—linoleic, linoleic and arachidonic—cannot be synthesized by the animal organism. Only one of these is considered essential, for, as in the case of certain amino-acids, they can replace one another in animal nutrition.
- A. Saturated B. Unsaturated
C. Fat soluble D. None of the above
19. _____ is a crystalline glucose obtained by treating milk sugar with diluted acids.
- A. Galactose B. Fructose C. Dextrose D. Glucose
20. The bones consist largely of _____ phosphates. They are the chief factors in maintaining the normal alkalinity of the blood, as well as its normal, specific gravity. They are also abundant in all the body's secretions, and a lack of them in the diet produces a lack of secretions.
- A. Tri- B. Potassium C. Magnesium D. Calcium
21. _____ are colloids or non-crystalizable organic substances known as starches.
- A. Polysaccharides B. Disaccharides
C. Monosaccharides D. Trisaccharides
22. True or False: Skin foods do not nourish the skin. Skin is nourished from the inside by the blood. Blood is the only beauty food of the tissues of the body.

23. _____ are sugars containing two simple sugars that can be broken into two monosaccharides. The ordinary cane sugar, or sucrose of commerce, is composed of glucose and galactose. Invert sugar found in honey is a mixture of glucose and fructose. Maltose or malt sugar is composed of galactose and glucose. Maple sugar (sucrose) and milk sugar (lactose) are also_____.
- A. Disaccharides B. Trisaccharides
C. Monosaccharides D. Polysaccharides
24. Dextrose, glucose, and galactose are _____.
25. True or False: Bromine is found in sea plants, liver, thyroid gland, adrenal glands and nails.
26. True or False: Mineral matters in food undergo no change in the process of digestion prior to absorption, as do proteins, fats, and carbohydrates. They are separated from these other elements in the process of digestion, and pass directly into the blood.
27. There are three main groups of polysaccharides, known as _____.
- A. Starches B. Glycogens C. Pentosans D. All of the above
28. True or False: Iodine is found in the thymus gland. The richest source of supply in the ordered, named vegetables and fruits are: green kidney beans, asparagus, cabbage, garlic, tomatoes, lettuce, potatoes, pineapples, strawberry, grapes, and pears.
29. B2, or _____, in conjunction with thiamin and niacin, plays an important role in the oxidation of carbohydrates. Its lack in a diet of rats results in hair loss, atrophy of the oil-secreting glands, skin lesions, especially cheilosis or fissures in the corner of the mouth. Bloodshot eyes, susceptibility to infections, especially pneumonia, are also said to result from this deficiency. It is also said to prevent cataracts and failing vision or blindness.
- A. Thiamin B. Pantothenic Acid C. Pyridoxine D. Riboflavin

30. True or False: Magnesium (chiefly in the form of phosphate or magnesium) adds firmness to the bones and hardness to the teeth. Muscles and teeth contain much of this element. It also aids in reducing waste and foreign matter. Magnesium is valuable only in the presence of lime, and in its absence, magnesium is injurious. The richest source are vegetables, tomatoes, dill, spinach, lettuce, romaine lettuce, cabbage, rutabagas, cucumbers, blackberries, black dried figs, bananas, avocados, beechnuts, pinions (pine nuts), almonds, brazil nuts and pecans.
31. _____ is the acquisition of a horn—like character by the skin of the body. The epithelium atrophies. Dry skin, night blindness, and defective enamel formation in the teeth are attributed to vitamin A avitaminosis.
- A. Keratinization B. Gout C. Goiter D. None of the above
32. True or False: Zinc is found in connection with phosphorus in the brain, and exists in very minute quantities.
33. True or False: Dr. Shelton feels that vitamins should be designated physiologically and functionally and not “therapeutically” such as, vitamin A is called an “antikeratinizing” vitamin; its true role is not to prevent Keratosis but to promote normal development of the epithelial tissues. Vitamin B is called the “anti-neuritic” vitamin; the role of B is not to prevent neuritis, but to promote normal nervous structure.
34. True or False: Potassium-phosphate is the mineral base of all muscular tissue. It is a predominant element in the red blood tissue and brain, and is essential in the formation of glycogen from sugar, proteins from peptones and proteoses, and of fats from glycogen. The spleen and liver contains an abundance of this element. Chief sources are vegetables, tomatoes, kale, lettuce, turnips, eggplants, currants, olives, lemons, peaches, apricots, oranges, grapes, bananas, avocados, chestnuts and brazil nuts.
35. True or False: Vitamins do not contribute to the energy and supply of the body, but make it possible for the body to utilize proteins, carbohydrates, fats, and salts, and are essential to growth, regeneration, and maintenance of health.

36. True or False: Choline, a member of the B-complex, is thought to help in the storage and mobilization of fats. It is said that in its absence, the liver becomes loaded with fats.
37. Ascorbic acid is destroyed by _____, _____, _____, and is deteriorated by prolonged storage, due to oxidation.
- A. Heating B. Drying C. Salting D. All of the above
38. Raw cabbage contains about _____ times as much vitamin C as when it is boiled in water.
- A. Thirty B. Twenty C. Ten D. Twenty-five
39. True or False: Vitamin K is essential for the coagulation of blood.
40. True or False: Foods that are richest in minerals are also rich in vitamins. Processes that favor the assimilation and fixation of minerals, the production of fats, starches, sugars, etc., also increase the vitamin content of food. These "refining" processes that remove the salts from foods, or that impair the nutritive value of the salts, also remove and impair the vitamins.
41. Vitamins exist in connection with the processes of life in plants and animals and are more or less completely _____ by whatever damages the life processes.
- A. Rearranged B. Deranged C. Destroyed D. Assimilated
42. True or False: Dr. Shelton states: "Science is better at building bridges and tunnels than at building men." Nature's foods come in "complete *ensembles*", and our efforts to separate the various food elements is foolish and is destruction of nutrition.
43. True or False: Over-emphasis on the use of vitamins neglects to mention all the other factors and elements needed for the complete nutritive process. Any deficiency in factors and other elements renders many vitamins useless during the nutritive process.
44. True or False: Cereals and pastries are high in caloric value, but eating an excess actually makes one tired and lazy.

45. True or False: Chemists can play with the elements and analyze, synthesize, super-size (vitamins) and combine and take them apart again, but they cannot produce living substance. Their syntheses lack many important refinements, which only the metabolic processes of the plant and animal kingdom can accomplish. They say their synthetic vitamins are chemically identical with those produced by plants, but the results of their use prove unmistakably that they are not functionally identical. Synthetic vitamin K is not water-soluble; in nature, it is, therefore, they metabolize differently.
46. True or False: Large amounts of multi-vitamin extracts fail, as not only are these vitamins not real, but they cannot work because they need minerals to “act” synergistically with them. Even when mixed, the minerals and vitamins are only imitation, and not the real thing. All the other “factors” that factor in for proper assimilation are missing.
47. _____ has been the result of taking large amounts of vitamins. These are drugs and drugs can be dangerous when misused. This only further shows their poisonous nature.
- A. Self-poisoning B. Toxicity
C. Hypervitaminosis D. All of the above
48. Let us bear in mind that the caloric value of food is no index to its surplus in _____ or _____ elements, although most foods that rank highest in caloric value are the most acid-forming and break down rapidly in the body.
- A. Carbohydrates, protein B. Cooked, uncooked
C. Acids, alkali D. None of the above
49. True or False: There is no so-called disease that is due to a unitary cause—every disease is the complex effects of a number of correlated antecedents—and no disease is *curable* by a unitary *cure*. On the other hand, practically all of the so-called deficiency states that are said to require vitamins for their *cure*, will and do get well while the patient is fasting and drinking only distilled water.
50. True or False: “In Fire-Box Dietetics,” states Dr. Shelton, “the human body is more than a mere furnace, or fire-box, into which we must

continue to shovel in fuel. The fuel value is the most valuable thing about it. White sugar is very high in fuel value with 1750 calories per pound, as compared to tomatoes which contain 100 calories per pound, yet animals fed white sugar and water soon die.

51. Iron and manganese, which are oxidizing agents of the blood, have no _____ value. Fluorine, which forms a hard protective shell around the teeth, and calcium, which forms a large percentage of the normal composition of bone, are wholly lacking in the production of sodium, magnesium, sulphur, potassium, and other elements that are used in the processes of assimilation and elimination.
52. _____, to be burned in the body for the production of calories is dependent upon the condition of the tissues that do the burning, a fact that is completely overlooked in feeding the sick. If the functions of the body are impaired, this process is also impaired and cannot digest and assimilate. The digestive and assimilation powers of the individual are ignored in fire-box dietetics.
53. True or False: Consuming an abundance of a single mineral or vitamin neglects the needs of the many "synergistic actions." If all the nutritive elements are present in sufficient quantities and due proportions, all the synergisms of all the minerals and vitamins, amino-acids, sugars, and etc., are at work piling up their benefits.
54. The processes of _____, from germination to ripening of their seed, are a master drama of physiological minerals and gases. Without sufficiency of lime and potash in the soil, acids, sugars, and starches cannot be formed; without iron, no chlorophyll or albumen can be formed. Without silica, no fiber or plant skeleton, etc. Each mineral plays a role in the growth of healthy _____.
- A. Humans B. Skin C. Bones D. Plants
55. True or False: It has been found that a diet with an acid-ash residue results in a greater excretion of minerals than one with an alkaline-ash. A good example is oranges, which give an alkaline-ash. Indeed, the addition of oranges changes an acid-ash diet of cereals, sugars, and meats, where the urine is decidedly acid in reaction to a decidedly alkaline one. This means mineral retention and increased nitrogen-assimilation, which is greatly needed to make protein in our bodies.

56. The absence of any of the essential vitamins prevents the rest of them from functioning at all. If any one of them is present in only one-half or one-fourth the required amount, then the others, though abundantly present, will function only up to one-half or one-fourth of their full effectiveness. This is nature's Law of _____.
57. True or False: If more amino-acids are in the blood than the body can utilize, there is an increased excretion of amino-acids in the urine. Their apparent growth can proceed at an ideal rate only as rapidly as all of the essentials of growth become available to the growing organism. [More protein is not better as many athletes believe.]
58. We cannot better sum up the Law of _____ than when McCarrison stated: "It is unwise to consider any of the essential ingredients of food, whether proteins, carbohydrates, fats, salts, water, or vitamins, as independent of the assistance derivable from their associates in the maintenance of digestive and nutritional harmony. No doubt some of these have special relations to others, as for instance that iodine to fats, that of vitamin B to carbohydrates, that of vitamin A to lipoids, calcium and phosphorus holding substances, and that of vitamin C to inorganic salts. But whatever be their special relations to one another they are all links in the chain of essential substances requisite for the harmonious regulation of life's processes; if one link be broken, the harmony ceases or becomes discord."
59. True or False: Scientists concentrate on single issues seeking the secrets of life, and fail to recognize the importance of the "tout ensemble." Schauman, for example, attempted to show that beriberi (polyneuritis) is due to the loss of a phosphorus compound in the milling process of whole grains. Chamberlain checked up on his assumption and found it to be wrong. Several elements are lost in the milling of grains and the troubles, resulting from consuming denatured grains, grow out of the total deficiency.
60. True or False: Berg, McCarrison, McCollum, and others have demonstrated that an optimum ratio exists between vitamins and minerals for their assimilation and development of health, and if not, health will not develop to its utmost potential. Nature knows the exact formula and ratios, and that is why only "Mother Nature knows best."

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SELF-HELP QUIZ: LESSON 8

ANSWERS

1. T, P. 181, 192
2. T, P. 183
3. T, P. 190
4. T, P. 187
5. T, P. 189
6. T, P. 186
7. F, Not compatible, P. 186
8. T, P. 193
9. T, P. 196
10. T, P. 198
11. T, P. 208, 209
12. T, P. 208, 209
13. T, P. 214, 215
14. F, Employ a salt-free diet, P. 212
15. T, P. 210, 211
16. T, P. 213
17. F, P. Tardy process, P. 217, 218

ADVANCED NUTRITION I

BND-107

PROGRESS TEST 2

TEXT: *The Science and Fine Art of Food and Nutrition*
by Dr. Herbert M. Shelton

This Test will cover Chapters 7 through 16 in this textbook. This Progress Test may contain True or False, Multiple Choice, Fill in the Blanks, or Questions and Answers. At the end of your Progress Test, you will find your Answer Sheets on which to write your answers.

1. True or False: Organic food refers to raw, uncooked plant food, while inorganic food refers to crude substances of the earth, and to the synthetic products of the laboratory.
2. Dr. Shelton states: "The normal order of feeding is; plants feed upon soil, and animals feed upon the spare products of plants." The dream of the chemist to be able to reverse this order is an expression of his _____.

A. Humbleness B. Stupidity C. Intelligence D. Egomania
3. Only in _____ combinations are minerals usable. Only plants, vegetables and fruits with the aid of sunshine, are capable of taking the crude mineral elements of the soil and organizing them.

A. Organic B. Inorganic C. Proper D. New
4. True or False: Inappropriate food may actually "drive out" appropriate food. "Large doses of calcium chloride," says Berg, "induce severe losses of calcium, which may culminate in osteoporosis and osteomalacia in experimental animals. The calcium chloride actually induces a hyper-acidity within the body, and so great an impoverishment of the alkali reserves of the body that those of the bones are called upon to neutralize the acids."

5. True or False: The body possesses the power to manufacture the chemical substances it requires, and continuously does so, as the exercise of this power is dependent upon the supply of acceptable raw materials. Thyroxin, for example, manufactured by the thyroid gland, is tri-iodo-tryptophane. The production of this hormone is dependent, not alone upon the supply of the amino-acid tryptophan, but upon the supply of acceptable iodine. Drug iodine, in whatever form, does not enable the body to synthesize thyroxin, and its use is a frequent cause of the very condition it is given to prevent or cure.
6. Citric acid is found in _____, _____, _____:
- A. Avocados, green vegetables, nuts
 - B. Oranges, avocados, nuts
 - C. Oranges, lemons, limes
 - D. None of the above
7. _____ says: "The combined organic acids or salts consumed in food are generally changed in the body into alkaline carbonates, thereby increasing alkalinity of the blood and secretions. The uncombined acids either form alkaline carbonates or are oxidized into carbon dioxide and water."
- A. Carque
 - B. Shelton
 - C. Berg
 - D. Mc Collum
8. True or False: Most digestive troubles people have with fruits is that they eat too many of them.
9. True or False: Genesis explains that originally, man was a gardener, or a "horticulturist," and lived off the fruits of the trees. Man was pictured living in a state of perpetual bliss with health, strength, and a very long life, so long as he remained on his fruit and nut diet. His short-lived life now is in part due to eating a meat diet in excess, instead of sticking to his original diet, among other factors.
10. Starch must be converted into sugar before the body can use it. Fruit sugars have been converted from starch to while ripening under the influence of the sun. Due to the sun and the life force of the tree having done this part of the work, man may save his _____ to eat the fruit, instead of cereals and potatoes which require these extra steps. (NEXT PAGE FOR ANSWER)

A. Time B. Energy C. Himself D. Health

11. True or False: Starch is a soluble carbohydrate.
12. True or False: The orange is richer in sugar than most other citrus fruits.
13. Grapes are rich in _____ and fruit sugar and vitamins. They are also referred to as "King of Fruits." They contain 15% to 30% sugar and are rich in vitamin C. They are a wonderful nutritive and "cleaning" aid to the body.

A. Oxalic Acid B. Sulfuric C. Iron D. Proteins

14. True or False: Placing the stalks of unripe bananas in water under sunshine ripens them.
15. True or False: Sweet fruits are inferior to starches as a source of carbohydrate. Man is a sub-tropical animal, and his craving for sweets is undoubtedly a survivor of his habit of subsisting largely in the sweet fruit that grow abundantly in the sub-tropics and tropics.
16. True or False: Acetic acid is found only in vinegar. The acid and its salts are converted into alkaline carbonates in the body.
17. _____ contains 3.39% protein which is equal to the protein of milk in its amino-acid content, essential to growth and repair. Its carbohydrates are 2.9% of which 1% is invert sugar. It is rich in tasty, emulsified oil which has a high degree (about 93.8%) of digestibility. The total mineral content is about 1.18% of the total edible portion. It contains considerable iron, while phosphorus is found in generous combination with its protein. Copper, essential to the assimilation of iron, and manganese, are present in smaller quantities. It's a good source of B¹, B², A and C. It is not wise to eat it with other proteins due to its high fat content.

A. The nut B. Kale C. Avocado D. Cabbage

18. True or False: Tomatoes are commonly classed as vegetables, but Dr. Shelton calls them fruits.

19. Sugar on fruit means _____. Two sugars do not combine well. Cane and beet sugar tend to prevent the absorption of fruit sugars until both ferment. Preserved canned fruits are confections. "We do not recommend them," says Dr. Shelton.
20. True or False: Fruits in general, like many nuts, are rich in vitamin A.
21. Most nuts are rich in _____. The fats of nuts are the most easily digested and assimilated of all forms of fat, and are adapted for prompt digestion.
- A. Vitamin C B. Oxalic-acid C. Vitamin F D. Oils
22. The amount of calories in two ounces of shelled pecans contains as much food as _____ pound (s) of lean beef.
- A. Three B. One C. Two D. Six
23. Cucumbers are especially rich in iron, potash, magnesium and calcium. They rank high among the _____ vegetables.
- A. Alkalinizing B. Acidic C. Green D. Cruciferous
24. True or False: Cooked nut-butters are healthy to eat because they contain "free fatty acids."
25. _____ food is the basis of all animal life; all animals derive their food either directly or indirectly from _____ food.
26. True or False: Nuts are difficult to digest because of bad food combinations.
27. _____ nut is greenish in color, and the greener they are the better nuts they are. Although high in protein, they have been found to be non-acid and alkaline forming when digested. Their oil is very easily digested. It contains no indigestible cellulose but is all food. They contain 22.5% protein; fat 54.5%; 16 carbohydrates (largely simple sugar); 3 organic salts.
- A. Pine B. English C. Acorn D. Pistachio

28. True or False: Outer green leaves and stalks of lettuce and cabbage, ect., are superior to their white, inner leaves and stalks.
29. True or False: All foods that grow above ground are weaker than those who grow underground, because the underground vegetables are more exposed to the mineral soil.
30. This is "King of Nuts" and is a native of America. Dr. G.E. Harter, of the *Defensive Diet League Of America*, says, "One can live a full life, amply nourished, upon an exclusive diet of _____ and fruits." Members of the league demonstrated this fact: the fatty elements of this nut are more easily assimilated by the human body than any other obtainable. It's composed of 3.5% organic salts. Many chronically underweight person's pick up weight at once, and the oils and protein are easy to digest, especially those who have a weak digestive tract.
- A. Pecans B. Walnuts C. Pine Nuts D. Almond
31. *Berg* says, "The proteins of most seeds and cereals are especially characterized by _____ due to a lack of cystine and lysine. Not only do they contain an excess of acid, but also exhibits a deficiency in calcium."
- A. Adequacy B. Some adequacy C. Inadequacy D. Excesses
32. True or False: McCollum fed rats on a diet restricted to grains only, one kind of grain being used at a time, and found that they became restless, irritable, and apprehensive. They were "on-edge," rather than "full of pep." He inclines to the belief that the "obstreperousness of the horse that "feels his oats" is due to the fact that he is suffering from an "attack" of nerves; that he is displaying pathological irritability and apprehensiveness, rather than healthy activity.
33. True or False: Dr. Gibson says of the nut and fruit diet: "In the light of the latest notations in the science of human nutrition, there is no activity in the human system, no process of digestion, assimilation, and nutrition, no nervous expenditure or structural strain, that cannot be sustained and maintained to its highest constitutional potency by a judicious, dietetic balance of fruit and nuts. The former gives it sugar for the maintenance of fats and heat of the system; its organic salts to sustain the chemical composition and metabolic balance of the blood;

its acids for breaking up tissue congestions due to accumulation of waste matter; while the nut, with its storage of nitrogen and fat, furnishes material for anatomic repairs and lubrication of the various joint movements. Finally, the carbons contained in both fruits and nuts unite to generate the cerebro-vital explosions which set free the energies of high-tensioned, nervous life.

34. Studies of the proteins of nuts by Osborn and Harris, Van Slyke, Johns and Cajori, demonstrated that the proteins of nuts are at least _____ to those of meat.
- A. One-quarter B. One-half C. Three-quarters D. Equal
35. The _____ is known as the "Nigger-Toe" nut. It is one of the most important of the nuts. It is high in fat and rich in calcium and magnesium. Its skin should be removed because it contains astringents.
- A. Brazil nut B. English nut C. Black Walnut D. Chestnut
36. True or False: The only grain products that are permissible in the diet of an intelligent and informed individual are whole grains in the dry state. After that, grains are inferior articles of food and form no part of a Hygienic Diet.
37. True or False: Germinated grains make better food than dry grains. Grains, before they have been matured, are alkaline foods, while the matured grains are acid. Fresh corn on the cob, not off the stalk for twenty-four hours or longer, is an alkaline food.
38. Eating _____ is one of the great curses of modern life. Made of largely denatured cereals, mixed with salt, soda, yeast, lard, and often other ingredients, and subjected to a high heat in cooking and then eaten three and four times a day in considerable quantities, mixed indiscriminately with all classes of foods, and taken in addition to much other starch food, _____ is one of our chief sources of woe.
- A. Wheat B. Oats C. Nuts D. Bread
39. _____ are about the most difficult to digest of any habitual sources of starch, except beans and peas. They are difficult for the

infant and growing child. They ferment easily and cause much gas and intoxication.

A. Nuts B. Cereals C. Cooked foods D. Raw meat

40. True or False: The presence of manite acid in honey renders its combination with other foodstuffs more injurious than ordinary cane sugar. Its combination with starchy or protein foods is sure to produce indigestion. Those with impaired digestion will be sure to produce gas.
41. True or False: Dyspeptics almost invariably find it oppressive to their ego when drinking milk due to a sense of distention and heaviness of the ego.
42. Invalids, inactive people, and those inclined to constipation should especially avoid _____ whites. They are bad food for children. It should never be eaten by one who's liver or kidneys are not in perfect condition.
43. True or False: Agduhr, while working with Dr. N. Stenstrom, proved definitely by animal experimentation that cod-liver oil produces pathological changes in the heart muscle.
44. True or False: Cow's milk is for calves. Goat's milk is for goats. Human milk is for infants. Each contains specific elements for its own respective species, and is not suited for other species. The lactation period for all mammals is for a brief period. Nature has not made provisions to extend this lactation period into adulthood. Milk-drinking was not intended for one's entire life.
45. True or False: Meat contains considerable quantities of the end-products of metabolism, which are held up in the tissues at the time of death. These wastes are poisonous and irritating, and lend to meat a stimulating property that is usually mistaken for added strength.
46. True or False: A thousand acres of wheat will feed ten times as many people as a thousand a acres of cattle. A thousand acres of many other foods such as fruits and nuts will feed more people, and feed them better, than thousand acres of wheat. Minerals are drawn from greater depths by fruit and nut trees than by cereals, as the strong roots

of the trees are capable of reaching the deeper and richer strata of soil, thereby utilizing a more intensive area of land. Fruit and nuts are not only man's best foods, but his most fruitful and least wasteful crop.

47. True or False: Drinking water with _____ and directly after _____ leads to dilation of the stomach, chronic indigestion, gastritis, ulcers, and even cancer.
- A. Aspirin B. Medicines C. Milk D. Meals
48. True or False: Dr. Trall severely condemned the "indiscriminate practice of large water-drinking."
49. True or False: The person whose diet consist chiefly of fresh fruits and vegetables gets large quantities of pure, organic water, and usually does not need to drink water.
50. _____ we define as pure water only. No other fluid except water deserves the name of _____. Other fluids are either classified as poisons or foods. Thirst is a demand for water, not food. Fruit juices, milk, etc. are foods.
- A. Juices B. Soda C. Alcohol D. A "drink"
51. _____ is water that has been vaporized by heat and re-condensed by being cooled. In this process the mineral matters that are suspended or dissolved in the water, and the vegetable and other organic matters that are suspended therein are left behind, so that the water is rendered practically pure.
52. True or False: Boix of Paris showed that pepper will produce hardening of the arteries and "gin liver." He showed pepper to be six times as active as gin in producing cirrhosis of the liver. He also showed that the acetic acid in vinegar is twice as active as gin in producing cirrhosis of the liver.
53. Condiments increase a false _____; condiments lead to _____ of foods; condiments irritate the _____ digestive tract; condiments create _____ when there is no physiological need and they do not aid the process of _____.

- A. Appetite, overeating, stomach, hunger, circulation
 - B. Hunger, appetite, stomach, circulation, digestion
 - C. Appetite, overeating, colon only, appetite, digestion
 - D. Appetite, overeating, stomach's, hunger, digestion
54. True or False: The historian, Prescott tells us that the Indians of northern Mexico still use no salt in their food, and health-wise thrive without salt. This proves that there is plenty of sodium in foods to meet our needs.
55. _____ is a powerful irritant. A small bit put into the eye or a cut will reveal its irritating nature. Put it into a cut or wound and it causes a sharp pain. Taken into the body it has the same effect upon the tissues and nerves.
- A. Oil B. Meat C. Water D. Salt
56. True or False: The body can utilize sodium and chlorine only when received from foods in organic combination.
57. True or False: The use of salt with considerable quantities of water leads to polyuria (frequent urination), while the blood at the same time becomes hydraemic, containing an excess of water. Although urination is frequent under such conditions, only small quantities of water are passed at a time. The frequent, urgent desire to void urine is due to a partial paralysis of the sphincter vesicae, produced by the salt.
58. Salt retards _____ digestion. Three parts of salt added to one thousand parts of gastric juice will, as shown by Linossier in 1900, retard protein digestion to the same extent as does the reduction of the amount of pepsin by 40% to 50%. This is about the amount of salt consumed by the average person in an ordinary meal.
- A. Gastric B. Intestinal C. Stomach D. Sugar
59. Salt disguises the natural taste of food, thereby hindering the precise _____ of the digestive juices to the nature of the food eaten. It interferes with the normal action of the digestive organs, and impairs their powers and sensibilities.
- A. Adaptation B. Enzymes C. Ferments D. Dilution

60. Dr. Haig, of England, proved that the elimination of _____ is impeded by salt. It increases blood pressure and acts as a stimulant. Its anti-vital properties make it an excellent _____, or pickling agent. Along with oils and spices, the ancient Egyptians used a salt solution in their mummy-wrappings to preserve the bodies.

- | | |
|-----------------------------|---------------------------|
| A. Lactic acid, embalming | B. Oxalic acid, embalming |
| C. Chloride acid, embalming | D. Uric acid, embalming |

**TURN TO THE NEXT PAGE FOR THE ANSWER SHEET FOR
PROGRESS TEST 2.**

ADVANCED NUTRITION I

BND-107

PROGRESS TEST 3

TEXT: *The Science and Fine Art of Food and Nutrition*
by Dr. Herbert M. Shelton

This Test will cover Chapters 17 through 30 in this textbook. This Progress Test may contain True or False, Multiple Choice, Fill in the Blanks, or Questions and Answers. At the end of your Progress Test, you will find your Answer Sheets on which to write your answers.

1. True or False: Dr. Shelton tells us that the Egyptians subsisted on fruits and vegetables, which they ate raw. Plinius confirms this statement. Harold Whitestone, in *The Private Lives of the Romans*, says: "Of the Romans it may be said that during the early Republic perhaps almost through the second century B.C., they cared little for the pleasures of the table. They lived frugally and ate sparingly. They were almost strict vegetarians, much of their food was eaten cold, and the utmost simplicity characterized the cooking and the service of their meals."
2. True or False: Decomposing flesh in one's stomach, or putrefaction, carries a greater toxicity level than do fruits, and is responsible for the more serious diseases such as cancer.
3. True or False: Dr. Densmore strongly condemned the old vegetarian diet, (cerealists) made up largely, as he said, of "soft, pulpy, starchy food, spoon meat," not alone because of the excess of starch and protein it contained, but because they do "not involve mastication, and the secretion of saliva in the mouth" is "not stimulated." The vegetarians (cerealists) consumed too much "digestible" mush.

4. There are many people upon whom coffee produces a laxative effect, and this indicates that its _____ effects extend to the intestine and colon. Perhaps it also retards intestinal _____.
- A. Irritating, digestion B. Laxative, digestion
C. Stimulating, digestive D. None of the above
5. Starches can only be digested in a (an) _____ medium (saliva), and others like the proteins can only be digested in an _____ medium (gastric juice), and if eaten together, can interfere with the digestion of each other and are considered incompatible foods. Digestion of carbohydrates and proteins are incompatible, as the requirements of each are so different that when taken together, one forestalls the proper gastric digestion of the other.
6. Gastric juice is not poured out in response to the presence of acid in the mouth. Salines, bitters, pepper, mustard, etc., taken into the mouth do not result in the secretion of gastric juice. Mechanical and chemical stimulants applied to the mouth and its glands do not occasion gastric flow. The old adage that salt, pepper, condiments, and bitters aid or stimulate digestion is thus seen to be _____.
7. The acidity of gastric juice is determined by the _____. Pavlov, Rehfus, and Hawk have shown that animal foods call for stronger acid juice than do vegetable foods, and the average acidity of beef is 120, eggs 80, vegetables 70. Milk calls for greater acidity than eggs, bread, and cereals, which are a lower degree.
- A. Protein acid B. Gastric gland
C. Food eaten D. Food analysis
8. _____ are destroyed by heat short of boiling and are prevented from acting in cold temperatures, although as a rule this does not prevent them from resuming their activity upon being warmed. The _____ in the human body are most active at body temperature and begin to break down at a higher temperature. Fever prevents their action.
- A. Non-ferments B. Proteins C. Nutrients D. Enzymes

9. About _____ pints of gastric juice are secreted within twenty-four hours. About one and a half pints are required to digest a hearty dinner. The normal stomach produces about two-thirds of an ounce of hydrochloric acid within twenty-four hours. The amount varies with the food eaten.
- A. Two B. Three C. Four D. Five
10. True or False: Examining the stools to determine how much of a food passes undigested does not determine the digestibility of a food, not at least, until the individual has been fed upon the food under investigation long enough to acquire maximum power to digest it. It is also essential, in determining the digestibility of a food, that it be fed in combinations that do not interfere with enzymic inaction. Starch that may be freely digested will show up in the stools as undigested starch if eaten with acids or with proteins.
11. Digestion is more efficient when only _____ food is eaten. The more foods one takes together, the less efficient is the process of digestion.
12. True or False: There are three digestive juices poured out into the intestine; bile, pancreatic juice and stomach juice; all of these are alkaline in reaction.
13. True or False: Intestinal juice contains an enzyme known as crepsin, which co-operates with trypsin in the final stages of protein digestion; the juice also completes the preparation of carbohydrates for entrance into the blood.
14. The acidity of gastric juice is determined by the food eaten, by the length of _____ that has elapsed since the food was consumed, and by the familiarity or unfamiliarity of the system with the food. Physicians persistently ignore these facts in making gastric tests and in feeding in hyper-acidity and hypo-acidity. They invariably feed foods in hyper-acidity that _____ the acidity, and feed foods in hypo-acidity that _____ acidity. They make the same mistakes with regard to pepsin, for what is true of hydrochloric acid is true also of the secretion of pepsin.

15. _____ juice is poured out in response to hunger, sight, smell, taste, and thought of food. Sight of food is a more powerful stimulus than the other senses. It is more important that food be pleasing to the eyes. During gastritis or any inflammatory disorder of the gastric mucosa, as well as in fevers, the tongue is coated and the taste buds are perverted, the gustatory reflexes are destroyed and the appetite juice is greatly diminished or entirely absent. It is also hindered by pain and strong emotions such as fear and anger. Fasting is indicated. Worry and mental strain cause delay in the secretion of appetite juice and hinder digestion.
- A. Gastric B. Enzyme C. Hydrochloric D. Metabolic
16. The chemical part of digestion is performed by a series of digestive juices, alternating between _____ and _____. The active principles in these juices, or fluids, are ferments known as _____, of which all true digestive juices contain. This substance which possesses the power of instigating chemical reactions without themselves being transformed or destroyed in course of the process.
- A. Alkalis, acids, life
B. Positive, negative ions, life
C. Stomach, intestine, enzymes
D. Alkalis, acids, enzymes
17. The active digestive principle in saliva is an enzyme known as _____ which acts upon starches (polysaccharides), converting these into a form of sugar known as dextrins (disaccharides). If saliva is put into a test tube with starch it will convert this into sugar. At low temperatures this process goes on slowly, the velocity increases as the temperature increases, until it reaches its maximum at about 37°C . Above this temperature the velocity again decreases, the enzymes being destroyed at about 70°C .
- A. Maltose B. Amylase C. Ptyalin D. Dextrose
18. True or False: From clinical observations, we know that in cases of hyper-acidity, a large part of the starch of bread escapes unused from the gastro-intestinal canal, while the flesh is excellently digested.

19. _____ increase(s) the solubility of the fatty acids by emulsification, accelerates the action of the pancreatic lipase, stimulates intestinal activity, counteracts putrefaction, and assists in the union of water and oils.
- A. Hydrochloric acid B. Lipase enzymes
C. Protease enzymes D. Bile
20. True or False: Increased habits of eating nuts equals increased ability to digest them
21. Fermentation produces _____ of various kinds, which when absorbed into the bloodstream and lymph, serve to poison the body. Some of these poisons are ptomaines and leucomaines, phenol, cresol, leucin, tryptone, ammonia, sulphurated hydrogen gases, fatty-acids, oxalic and uric acids, and alcohol. Of these, indol is the most easily absorbed and is most readily recognized in the urine.
- A. Anti-proteins B. Histologs C. Anti-bodies D. Toxins
22. Khazin, Pavlov's co-worker, performed experiments which have shown that feeding a mixed diet of milk, bread and meat, calls forth each time special _____ in the activity of the gastric glands. The secretion response is not "limited to the powers of the juice, but extends to the rate of its _____, and also its total _____." This proves that the character of the food not only determined the digestive power of gastric juice, but also its total acidity. The acidity is greatest with meat and least with bread.
23. If _____ are to digest, they must be eaten dry. _____ put into soup are never digested. When they are not digested, they lie in the stomach and produce much trouble (fermentation and toxins). Soaked _____ are also likely to be swallowed without chewing. Unmasticated _____, even if they were salivated, would not digest. Boiled _____ do not digest.
- A. Carbohydrates B. Proteins C. Starches D. Fats

24. The _____ secretions are to a great extent influenced by the emotions. Emotions and moods profoundly influence these secretions, and thereby exert a tremendous influence upon the whole nutritive process.
- A. Body B. Sex C. Digestive D. Organic
25. True or False: Digestive glands have limits that must be respected. The gastric and other juices cannot be supplied in sufficient quantity and strength when eating three square meals, improperly combined and taxing the digestive secretions. When overeating is habitually practiced, imperfect digestion is the result, with one suffering the ills of indigestion, and if continued, disease becomes a foundation.
26. Shock, as from a wound or surgery, will cause sugar to appear in the urine. Apprehensiveness and nervousness or excitement does likewise. Worry from financial loss is a common cause of functional glycosuria (sugar in the urine). Arguments are responsible for increases in blood pressure, gastro-intestinal disorders, gall-bladder troubles, and acute exacerbations of diabetes. Many other symptoms of disease are outgrowths of the digestive derangements brought on by one's _____ influence in nutrition.
- A. Mental B. Psychological C. Emotional D. All of the above
27. The changes that food undergoes after being absorbed are due to the action of _____.
28. True or False: Dr. Shelton believes in Epicureanism in its true meaning, and in its higher sense. With Mr. MacFadden, Dr. Shelton says that "there is no natural pleasure, natural appetite, or natural desire that was not created for a particular, health-giving purpose."
29. True or False: Dr. Weger stated that two-thirds of his patients were the victims of _____ imbalance that was the cause of nutritional imbalances or deficiencies. He gave examples of patients he was treating using a stomach tube to extract undigested foods in patients who were severely impaired with secretion and motility disturbances. He pointed out that there were cases when a light meal that was given at noon which should have been in the intestine within four or five hours, was still in the stomach eight or ten hours later. In

some cases, he retrieved through the tube the complete noontime meal, fully in tact. The inference here is that in these cases, motility may have been more profoundly impaired than the secretions of gastric juice. In other words the _____ imbalance of patients was paralyzing the functional motility of the stomach from moving the food into the intestines for further digestion, but yet, others may have had good motility but impaired secretions in the intestines, unable to digest and break down the foodstuffs. In both cases _____ imbalance are impairing the processes of nutrition.

30. True or False: Pain impairs the secretion of the gastric juice, stopping entirely the psychic secretion entirely. Not only do all strong “destructive” emotions inhibit the delicately regulated psychic secretion, but even greatness of joy will do likewise.
31. True or False: Absorption is a physical and not a physiological process; one of active, intelligent selection and absorption by the cells lining the walls of what is useful, and ejecting the injurious substance, and not mere osmosis, as in the case of sugar and salt. When a list is made with parchment or any ordinary membrane, the sugar is found to be less diffusible than salt. In the intestine this is reversed. The sugar is readily absorbed, while the salt is excluded almost entirely.
32. True or False: Worry, fear, shock, etc., seldom produce disease in the truly healthy.
33. True or False: Hindhede found that nations that live on low, protein diets suffer less disease. He was made food administrator in Denmark.
34. True or False: Vitamins are not employed as foods, but as aids in assimilating foods. A reserve of these is stored in the liver, glands, fat, etc.
35. True or False: Dr. Felix Oswald said, “During the zenith of the Grecian and Roman civilization, including those inhabiting the coast lands of the Mediterranean, for more than a thousand years, the ‘one-meal-a-day-plan’ was the established rule.
36. True or False: “Gluttons are like worms—all gut,” says Dr. Shelton.

37. True or False: If brain and muscles are to work they require an increased blood supply. In order to supply them, there is a dilation of the blood vessels in the brain and muscles and a contraction of the blood vessels in the viscera. Every part of the body cannot be supplied with extra blood at the same time. If one part gets an extra supply, some other part must get less. Large meals require less blood in the stomach and do not affect the brain and muscles relative to blood supply.
38. True or False: Dr. Oswald says: "For more than a thousand years the two-meal system was the rule in two countries that could raise armies of men, every one of whom would have made his fortune as a modern athlete. These men who marched for days under a load of iron (40 to 60lbs.), besides clothes and provisions that would stagger a modern porter." He also says, "Romans broke their fast with a biscuit and a fig or two, and took their principle meal in the cool of the evening."
39. True or False: It is true that we have more energy after the night's rest than after the day's work. However, the digestive organs have not rested during the night. Real hunger is not produced by a night of restful repose, and to eat a heavy meal in the absence of hunger would be contrary to the first law of trophology. The digestion of a morning meal would need to wait upon the blood from the stomach, which does not force the other organs to cease their activities to permit the blood and nerve force to be sent to it. Blood will not efficiently feed the brain, muscles and stomach. Digestive processes will be impaired.
40. True or False: Proteins give rise to fermentation, which gives rise to carbon-dioxides, alcohol, acetic acid, and water, and results in auto-intoxication, which resembles in every way the symptoms of chronic alcoholism. The alcohols produces chronic irritation in the system and results in the formation of scar tissue. It also causes capillary congestion which results, in turn, in atrophy of the brain and muscles. The irritation of the mucous surface results in the overproduction of mucus, giving rise to catarrh.
41. True or False: The morning meal is best omitted. At most, it should consist of an orange or unsweetened grapefruit. The noon meal should be light. The evening meal should be the heaviest meal and should be taken only after one has rested a little from the day's toil.

42. True or False: "From cradle to grave we are a country of surfeited gluttons."
43. True or False: "People dig their graves with their teeth."
44. True or False: Dr. Shelton says that the habit of eating denatured foods is the chief cause of overeating, and the great variety at a meal over-stimulates the sense of taste which also leads to overeating. Spices and condiments also over-stimulate the sense of taste and smell and lead to overeating.
45. True or False: In modern times, professor Gilman Low demonstrated the ability of the body to build and maintain Herculean strength on little food, when he established the phenomenal record of lifting one million and six thousand pounds in thirty five minutes and four seconds, after a period of training on one meal a day and less. This lift was accomplished by lifting 1,000 pounds, 1,006 times in the time specified. This feat was accomplished after one month of training on a diet which the "average stenographer would "starve to death."
46. _____ is the "voice of nature," telling us that food is required. There is no other true guide as to when to eat. The time of day, the habitual meal time, etc., are not true guides.
- A. Appetite B. A Growling Stomach C. Hunger D. Eating
47. "_____ secretions" are absent or nearly so in states of mental depression. Our physiological basis for our rule not to eat when in mental distress.
- A. Psychic B. Circulatory C. Muscle D. Physical
48. True or False: Anorexia is a loss of appetite, and while there is hysteria and certain mental states giving rise to loss of appetite, no food should be taken for as long as there is no desire for food.
49. True or False: Appetite is often accompanied by a gnawing or "all gone" sensation in the stomach, or a general sense of weakness; there may even be mental depression. Such symptoms usually accompany the diseased stomach of a glutton, and will pass if the stomach is

deprived of food for a few days. These sensations and feelings usually accompany true hunger.

50. True or False: After a hearty meal animals retire to a quiet hiding place and the “after-dinner laziness” which follows is nature’s admonition to us to follow their example of rest. The practice of exercise after dinner, or that after-dinner speeches promote digestion is a blatant fallacy.
51. True or False: “Keep your mind out of your stomach.” Don’t become a “diet bug.” “Eat and forget.”
52. True or False: No unkind word should ever be uttered at the dining table. A harsh look brings fear or anxiety and is out of place at meal time. Gastric secretions are at the mercy of emotions. “Joy exhilarates digestion; gloom depresses or vitiates it,” says Dr. Gibson. “Mince pie with cheer will be better digested than an apple with pessimism” says Dr. Shelton.
53. True or False: Food should not be eaten immediately before or after bathing, nor until one is fully rested from fatigue or exercise whether mental or physical. Nor should one eat during or immediately preceding work, vigorous exercise or study.
54. True or False: When starches and sugars are eaten in a hurry, fermentation follows, even though there is no fault with the combination. This occurs because the food is not insalivated and there is no provision in the stomach for the digestion of these two foods. Proteins do not require as much chewing as do starches.
55. True or False: Extremes of heat and cold interfere with the secretion of the digestive juices. The functional powers of the secretory glands are at their highest when working in a temperature conforming to that of the normal body temperature, or at least when the temperature does not exceed 11 degrees.
56. Drinking at meals leads to the bolting habit of eating food. Instead of insalivating his food, the one who drinks with his meal soon learns to wash it down half chewed. This practice should be avoided at all costs.

57. True or False: Hunger and the sense of taste are the only guides to the quality and character of food required. The unperverted instinct craves the food most needed by the body.
58. True or False: Appetite expresses our wants and not our needs.
59. True or False: There is no doubt to the truth of Dr. Weger's thought that "appetite contractions in the stomach are often excited by psychic states, as influenced by the senses." Appetite contractions thusly aroused are of distinct advantage in digesting a meal if they are super added to pre-existing hunger contractions.
60. True or False: Dr. Claunch says, "The difference between true hunger and false cravings may be determined as follows: When hungry and comfortable it is true hunger. When hungry and uncomfortable it is false craving."

**TURN TO THE NEXT PAGE FOR THE ANSWER SHEET FOR
PROGRESS TEST 3.**