

Chapter 2 – Nutrition Tools—Standards and Guidelines

Chapter Learning Objectives

- 2.1 Identify the full names and explain the functions of the RDA, AI, UL, EAR, and AMDR and discuss how the Daily Values differ in nature and use from other sets of nutrient values.
- 2.2 List the four major topic areas of the *Dietary Guidelines for Americans* and explain their importance to the population.
- 2.3 Describe how and why foods are grouped in the USDA Food Patterns, including subgroups.
- 2.4 Plan a day's meals to follow the USDA Food Patterns within a given calorie budget and within the USDA limit for solid fats and added sugars.
- 2.5 Evaluate a food label, delineating the different uses of information found on the Nutrition Facts panel, on the ingredients list, and in any health claims or other claims made for the product.
- 2.6 State specific nutritional advantages of a carefully planned nutrient-dense diet over a diet chosen without regard for nutrition principles.
- 2.7 Discuss the positive and negative findings for dietary phytochemicals with regard to health, and make a case for food sources over supplements to provide them.

True/False Items

1. So far, the DRI Committee has published recommendations for the vitamins and minerals, along with those for carbohydrates, fiber, lipids, proteins, water, and energy.
2. Currently, the DRI values for the minerals sodium and potassium, and other food constituents, are forthcoming.
3. On average, one should try to get 100% of the DRI for every nutrient to ensure an adequate intake over time.
4. The primary difference between recommendations for nutrient intakes and values set for energy intake is that the value for energy intake is not generous.
5. The DRI are international guidelines that are used around the world.
6. The Daily Values are nutrient standards used to compare the nutrient contents of packaged foods.
7. The United States is among many countries that establish and publish guidelines for appropriate nutrient intakes.
8. One of the major disadvantages of the USDA Food Patterns is that they cannot be adapted to other national and cultural cuisines.
9. Users of the exchange list system can make an informed approximation of the energy-yielding nutrients and calories in almost any food they might encounter.
10. The absence of a Tolerable Upper Intake Level for a nutrient implies that it is safe to consume in any amount.
11. The *Dietary Guidelines for Americans 2010* focus on specific nutrients, rather than recommended foods to eat.
12. An important recommendation of the *Dietary Guidelines for Americans 2010* is to make physical activity a habit.
13. By varying food choices among and within food groups in the USDA Food Patterns, you will help to ensure adequate nutrient intakes and protect against large amounts of toxins or contaminants from any one food.
14. The health claim, "Diets low in sodium may reduce the risk of high blood pressure," on a food label is reliable because it has been backed by scientific evidence.

Controversy 2 True/False Items

15. There is strong scientific evidence that individual phytochemical supplements safely provide health benefits.

Comprehension-Level Multiple-Choice Items

1. Which of the following statements is **not** true about the DRI?
 - a. The committee that publishes them is comprised of nutrition experts.
 - b. They are minimum requirements, not recommendations.
 - c. They are based on review of available scientific research.
 - d. They are for individuals who are healthy.
2. If a nutrient does not have a Tolerable Upper Intake Level, this means that:
 - a. it is safe to consume in any amount.
 - b. insufficient data exist to establish a value.
 - c. no caution is required when consuming supplements of that nutrient.
 - d. it is safe when supplemental levels are added to foods.
3. Which of the following establishes population-wide average requirements used by nutrition policymakers?
 - a. Recommended Dietary Allowances
 - b. Daily Values
 - c. Recommended Daily Allowances
 - d. Estimated Average Requirements
4. The DRI Committee recommended a diet that provides _____ % of its calories from carbohydrate.
 - a. 10-35
 - b. 20-35
 - c. 45-65
 - d. 50-70
5. The Dietary Reference Intakes (DRI) are appropriately used for all of the following **except**:
 - a. estimating the nutrient needs of persons with medical problems.
 - b. estimating the adequacy of an individual's nutrient intake.
 - c. planning diets for population groups like military personnel.
 - d. ensuring that minimum nutrient requirements are met.
6. What are the DRI designed for?
 - a. health maintenance
 - b. restoration of health
 - c. disease prevention
 - d. a and b
 - e. a and c
7. The Daily Values reflect the needs of an "average person" consuming between _____ calories a day.
 - a. 1,500 and 2,000
 - b. 2,000 and 2,500
 - c. 2,500 and 3,000
 - d. 3,000 and 3,500
8. The *Dietary Guidelines for Americans* are intended for healthy adults and children ages _____ and older.
 - a. one
 - b. two
 - c. three
 - d. four
9. A major guideline for healthy people is to limit calorie intakes and obtain more and varied selections of _____.
 - a. fruits and vegetables
 - b. whole grains
 - c. nonfat or low-fat milk or milk products
 - d. all of the above
10. According to the *Dietary Guidelines for Americans*, the most healthful diet:
 - a. is low in saturated fat.
 - b. provides needed fats and oils.
 - c. is moderate in cholesterol.
 - d. a and b
 - e. b and c
11. Which of the following is characteristic of Daily Values?
 - a. They provide nutrient values for different categories of people.
 - b. They are ideal for allowing comparisons among foods.
 - c. They are useful as nutrient intake goals for individuals.
 - d. They provide information on all DRI nutrients.
12. The *Dietary Guidelines for Americans* recommend all of the following **except**:
 - a. consuming less than 10% of calories from saturated fatty acids.
 - b. consuming less than 300 mg per day of dietary cholesterol.
 - c. increasing *trans* fat consumption in the diet.
 - d. using oils to replace solid fats when possible.

13. The *Dietary Guidelines* encourage Americans to consume less:
- refined grains.
 - fruits.
 - added sugars.
 - vegetables.
 - a and c
14. Characteristics of food groups plans include all of the following **except**:
- they sort foods into groups based on nutrient content.
 - they specify that people should eat a certain minimum number of servings from each group.
 - the USDA Food Patterns are an example.
 - they organize foods with respect to their nutrient contents and calorie amounts.
15. Food group plans primarily dictate:
- particular foods to choose each day.
 - appropriate portion sizes for foods.
 - estimates of the amounts of carbohydrate, protein, and fat in foods.
 - numbers and sizes of servings to choose each day.
16. Based on the USDA MyPlate, at least $\frac{1}{2}$ of the plate should be occupied by fruits and vegetables at each meal.
- $\frac{1}{3}$
 - $\frac{1}{4}$
 - $\frac{1}{2}$
 - $\frac{2}{3}$
17. Which of the following foods do **not** fit into any of the five major food groups in the USDA Food Patterns?
- yogurt, legumes, and cheese
 - peaches, peanuts, and ready-to-eat cereal
 - margarine, gravy, and jelly
 - eggs, frozen yogurt, and avocados
18. Which of the following foods is de-emphasized in the USDA Food Patterns?
- vegetables
 - fruits
 - meats
 - grains
19. Which of the following foods in the protein foods group of the USDA Food Patterns has the highest nutrient density?
- luncheon meats
 - fried fish
 - duck with skin
 - chicken with no skin
20. In the USDA Food Patterns, one ounce of meat is equal to all of the following **except**:
- 1 oz. cooked fish.
 - 1 egg.
 - 1 tbs. peanut butter.
 - $\frac{1}{2}$ cup cooked legumes.
21. Which vegetable subgroup of the USDA Food Patterns is **not** correctly matched with its target nutrient(s)?
- red and orange vegetables – vitamin D
 - starchy vegetables – carbohydrate
 - dark green vegetables – folate
 - legumes – iron and protein
22. The best way for a person to get all the essential nutrients and keep energy intake low is to:
- use the principle of the discretionary calorie allowance to plan their diet.
 - choose foods with high nutrient density in each food group.
 - follow the principle of moderation in dietary intake.
 - a and b
 - a and c
23. All of the following are true regarding the discretionary calorie allowance **except**:
- it may be spent on nutrient-dense foods.
 - it is the amount of additional calories needed for nutritional adequacy.
 - it is a useful concept for those trying to limit calorie intakes.
 - it may be spent on added sugars.
24. Following the USDA Food Patterns requires:
- eating only foods that are naturally low in fat and have no added fats or sugars.
 - matching calorie intake with needs based on level of physical activity and other factors.
 - that foods from all subgroups be included daily.
 - consuming only nutrient-dense foods.

25. When planning a healthful diet, vegetarians should remember that:
- they will have difficulty meeting their needs when using the USDA Food Patterns.
 - the vegetable group contains legumes, which can be counted as protein foods.
 - all soy foods and soy milks contain the same nutrient contents as dairy milk.
 - nuts and seeds are high in fat content and should be limited.
26. The MyPlate educational tool has been designed to:
- help a diet-planning individual create a diet that more closely follows the USDA Food Patterns.
 - create an alternative diet plan for individuals not wanting to use the USDA Food Patterns.
 - help individuals who need to make major changes in their diet for chronic disease control.
 - substitute for the recommendations of the *Dietary Guidelines for Americans* in diet planning.
27. Exchange systems help primarily with:
- balance.
 - calorie control.
 - adequacy.
 - moderation.
28. In exchange lists, foods are categorized by:
- their exact nutrient values in grams.
 - their exact number of calories per serving.
 - the average nutrient values in grams for whole groups of foods.
 - individualized food portions.
29. All of the following are characteristics of exchange systems **except**:
- they pay special attention to calories.
 - they give a sense of which foods are similar to each other.
 - they sort foods by their carbohydrate contents only.
 - they highlight the fact that most foods provide more than just one energy nutrient.
30. When creating and evaluating meals on a daily basis it is best to:
- use the DRI to calculate the most accurate nutrient intake.
 - use only the USDA Food Patterns since they are the easiest to calculate.
 - rely on computerized diet analysis programs.
 - use a combination of analysis tools to determine nutrient adequacy.
31. Which of the following foods is exempt from listing ingredients on the label?
- mayonnaise
 - salad dressing
 - ice cream
 - none of the above
32. Amounts of which types of lipids must be listed on food labels?
- monounsaturated fat
 - trans* fat
 - cholesterol
 - a and b
 - b and c
33. The bottom portion of the Nutrition Facts panel on a food package:
- is identical on every label.
 - lists the Daily Values standards.
 - conveys information specific to the food inside the package.
 - a and b
 - b and c
34. The percentages of the Daily Values on food packages are given in terms of a person requiring _____ calories each day.
- 2,000
 - 2,500
 - 3,000
 - 3,500
35. Any food providing 10%-19% of the Daily Value for a nutrient is considered to be a _____ source of the nutrient.
- poor
 - reliable
 - good
 - excellent

Application-Level Multiple-Choice Items

36. When comparing the two categories of nutrient standards, the Dietary Reference Intakes and the Daily Values, one difference between the two is:
 - a. the Daily Values are used in the United States only.
 - b. the Dietary Reference Intakes are to be used on food labels.
 - c. the Daily Values are a better way of determining nutrient goals of individuals.
 - d. the Dietary Reference Intakes do not account for age or gender.
37. When public health officials were determining the amount of folate to add to grain products in the food supply for fortification, they most likely reviewed which of the following values for that particular vitamin for women of child-bearing age?
 - a. Adequate Intakes (AI)
 - b. Estimated Average Requirements (EAR)
 - c. Acceptable Macronutrient Distribution Ranges (AMDR)
 - d. Daily Values (DV)
38. Concerned about the toxic effects of added nutrients in fortified foods and supplements, when eaten in addition to staple foods, scientists established the _____ category of the Dietary Reference Intakes (DRI).
 - a. Recommended Dietary Allowances (RDA)
 - b. Adequate Intakes (AI)
 - c. Estimated Average Requirements (EAR)
 - d. Tolerable Upper Intake Levels (UL)
39. A person is trying to eat the best diet to reduce the risk of developing chronic disease. She wants to be sure that she will consume adequate nutrients in the best proportions from her foods she selects. Which would be the best DRI recommendation for her to use to ensure she has the best energy nutrient intakes to reduce chronic disease risk?
 - a. Recommended Dietary Allowances (RDA)
 - b. Adequate Intakes (AI)
 - c. Acceptable Macronutrient Distribution Ranges (AMDR)
 - d. Daily Values (DV)
40. George is a 35-year-old athlete using nutrient supplements to give him a competitive advantage. Which of the following nutrient intake recommendations would you suggest that George become familiar with?
 - a. Adequate Intakes
 - b. Estimated Average Requirements
 - c. Tolerable Upper Intake Levels
 - d. Recommended Dietary Allowances
41. Which of the following people would **not** be covered by the DRI, based on assumptions made by the DRI committee?
 - a. Harry, a 35-year-old healthy businessman
 - b. Cindy, a 21-year-old college athlete
 - c. Robert, a 20 year old with cystic fibrosis
 - d. Joann, a 35-year-old female vegetarian
42. When referring to the DRI recommended intakes, it is important to remember that:
 - a. they are designed to help an individual recover from an illness.
 - b. they are the minimum values needed to maintain health.
 - c. they are based on the latest available scientific research.
 - d. they must be consumed daily because they do not account for varied intakes.
43. The implications of the U.S. *Dietary Guidelines* include all of the following **except**:
 - a. foods rather than supplements should provide what you need to consume daily.
 - b. there is no need to give up your favorite foods or eat strange foods you don't like.
 - c. you will need to carefully plan in detail what to eat for the best benefits.
 - d. you should include physical activity in your daily plan along with your food intake.

44. Your grandfather has been advised by a neighbor to select his foods using the *Dietary Guidelines for Americans* to help cure his high blood pressure. What advice would you give him?
- It is a good recommendation because the guidelines are designed to help all people, including those with health problems.
 - Don't use the guidelines because they are not for the elderly.
 - Although the guidelines may help him with his blood pressure, he needs to consult his health care provider for recommendations.
 - The guidelines are too expensive for him because he is on a fixed income.
45. Your sister has evaluated her usual diet by comparing it to the U.S. *Dietary Guidelines* and has found that her intakes of fruits, vegetables, and dairy foods are lower than recommended. How would you interpret her results?
- She needs to eat more of these foods and less of others to keep her calories balanced.
 - She is choosing the right foods because her intake matches the average American diet.
 - Her calorie intake is too low so she needs to increase her food intake.
 - She is choosing too many different kinds of fruits and vegetables.
46. A person has had the following vegetables over the past week: carrots, pinto beans, corn, cauliflower, coleslaw, and mashed potatoes. Which of the following vegetables should he eat to be sure he has had representation of each of the subgroups for the week?
- broccoli
 - sweet potatoes
 - green peas
 - mushrooms
47. You are planning a meal that includes a hamburger on a bun, coleslaw, and French fries. To have a more nutrient-dense meal, you should eat:
- fried chicken, potato salad, a biscuit, and canned peaches.
 - pork tenderloin, green peas, brown rice, and strawberries.
 - spare ribs, scalloped potatoes, cornbread, and chocolate pudding.
 - fried catfish, baked beans, a white dinner roll, and vanilla ice cream.
48. Which of the following includes the recommended daily amounts of food from each group for a sedentary woman of 32 who requires 1,800 kcal/day, based on the USDA Food Patterns?
- 1 cup nonfat milk; 1 slice toast; $\frac{1}{2}$ cup oatmeal; $\frac{3}{4}$ cup orange juice; 3 oz. chicken breast; $\frac{1}{2}$ cup green beans; 1 medium apple
 - $\frac{1}{2}$ cup grape juice; 2 tbs. peanut butter on 2 slices whole-wheat bread; 1 cup nonfat yogurt; 1 medium apple; $\frac{1}{2}$ cup diced cucumbers; 3 oz. baked fish; 1 cup spinach leaves; 1 cup squash; $\frac{1}{2}$ cup carrots; 1 cup cooked rice; 2-oz. whole-wheat dinner roll; $\frac{1}{2}$ cup strawberries; 2 cups nonfat milk
 - 1 cup nonfat milk; 1 cup raisin bran; 1 medium apricot; 1 egg; 3 oz. steak; 1 medium baked potato; $\frac{1}{2}$ cup broccoli; 1 cup nonfat milk; 2-oz. whole-wheat roll
 - 2 slices whole-wheat bread with 1 $\frac{1}{2}$ oz. fat-free natural cheese; $\frac{1}{2}$ cup apple juice; 3 oz. tuna fish salad with 1 cup lettuce leaves; 1 oz. crackers; 1 cup milk; 3 oz. pork chop; $\frac{1}{2}$ cup Brussels sprouts; $\frac{1}{2}$ cup fruit cocktail
49. Which of the following lunches best fits into a meal plan suggesting that a person eat 1 cup vegetables, 2 ounces grains, and 2 ounces protein foods at lunch?
- sandwich of 2 slices whole-wheat bread, 4 tablespoons nut butter, and 1 tablespoon honey with salad of 1 cup raw spinach
 - sandwich of 2 slices whole-wheat bread and 2 ounces ham, 1 boiled egg, and 1 cup vegetable juice
 - stir-fry of $\frac{1}{2}$ cup tofu and 1 cup mixed vegetables on 1 cup cooked rice
 - 2 ounces broiled salmon and 1 cup thick tomato sauce over $\frac{1}{2}$ cup cooked pasta
50. Tea and certain spices are not included in the USDA Food Patterns. This means that you should consider which of the following when deciding whether to include them in your diet?
- They provide no calories so you should not eat them.
 - They contain phytochemicals so you should consider using them.
 - They interfere with nutrients in foods so you should not eat them.
 - They have been excluded from the USDA Food Patterns because they are toxic.

51. An important role of the exchange system of categorizing foods is to:
- provide food lists for people who want an exact match on all nutrients in a food category.
 - provide groupings of foods with similar carbohydrate, fat, protein, and calorie contents.
 - calculate the exact number of calories provided by a person's diet.
 - have foods available from one group to substitute for foods not liked in another group.
52. A woman who has begun a new exercise program to keep herself healthy will need to consider that her discretionary calorie allowance:
- will not change because there is not an adjustment with exercise.
 - will decrease as the exercise activity increases.
 - will increase as the exercise activity increases.
 - will decrease as the nutrient density increases.
53. A 51-year-old sedentary woman still has some discretionary calories available for her evening meal. Her most nutritious choice for that meal would be to:
- order a 3-piece fried chicken meal instead of a 1-piece meal.
 - add ice cream with chocolate sauce to dinner as a dessert.
 - use butter and sour cream on her potato instead of non-*trans* fat margarine.
 - have a serving of cooked carrots with her meal in addition to her salad.
54. When you see that foods have a high nutrient density, you should:
- avoid them because they are too high in calories.
 - choose them if you are trying to lose weight because they have no calories.
 - use them sparingly because they aren't as healthy.
 - choose them because they form the foundation of the diet in the USDA Food Patterns.
55. When determining the amounts of foods from each group to eat using the USDA Food Patterns, you need to remember that:
- the recommended amounts will vary, depending on age, physical activity, and gender.
 - the recommended amounts are the same for all food groups to provide nutritional adequacy.
 - you can eat the same foods every day, as long as you are selecting from all food groups.
 - you should not eat more than the recommended amounts from each food group.
56. For what purpose did the USDA develop the MyPlate as a consumer tool?
- to replace the USDA Food Pattern groups because they were outdated
 - to make sure that people who use computers don't get bored with written materials
 - to help consumers to understand and apply the USDA Food Patterns
 - to replace the DRI nutrient intake standards
57. If you were teaching someone with diabetes how to plan a diet to control carbohydrate intakes, which of the following tools would you use?
- the USDA Food Patterns
 - the exchange list system
 - MyPlate recommendations
 - Dietary Guidelines for Americans*
58. If vitamin C has been added to cranberry juice, the label must include:
- nutrient information.
 - an ingredients list.
 - a health claim.
 - a and b
 - b and c
59. You are speaking to a group of consumers about ways to use food labels to choose healthy foods in the grocery store. During your presentation, what would you emphasize?
- using the grams and numbers on the labels to calculate percentages
 - comparing similar food products based on nutrient components
 - understanding the descriptive terms used on food labels
 - a and b
 - b and c

60. The Nutrition Facts panel on a food label lists the following information for amounts per serving: 111 calories; 23 calories from fat. What percentage of the calories are provided by fat?
- 11%
 - 19%
 - 21%
 - 32%
61. If a food label states that a food contains eight percent of the Daily Value for dietary fiber, the food would contain _____ grams of dietary fiber per serving.
- one
 - two
 - three
 - four
62. A food manufacturer has included the following claim on the container label for a product: "Helps maintain normal iron levels." If you were evaluating the claim, you would:
- be suspicious because this is a structure-function claim requiring no advance approval.
 - know this is an accurate statement because it was reviewed before being put on the label.
 - know that the manufacturer has done extensive research on the claim.
 - be aware that the FDA has done research on the manufacturer's claim.

Controversy 2 Multiple-Choice Items

63. Which of the following have the scientists who have been doing research on phytochemicals in foods found to be true?
- Their health benefits in people were recognized before their roles in taste and color of foods.
 - Only a few compounds found in foods can be considered phytochemicals.
 - They are just as effective in a supplement form as in food form.
 - Research has shown the possible health benefits in cell and animal studies.
64. Blueberries have been leading the way in research on the effectiveness of antioxidants against aging effects on the brain. What would be your comments about eating more blueberries in your diet?
- Recent studies have mainly been done on laboratory animals so the benefits of increased intake are not known for humans.
 - Blueberries contain a high level of antioxidants so they should be an excellent food to consume to protect against aging effects on the brain.
 - The antioxidant content of blueberries is much higher than most other foods so they should be selected first to add to the diet.
 - Studies done on laboratory rats showed fewer age-related declines in brain function, so those findings can be translated to benefits for humans.
65. Recent research on the health benefits of flavonoids found in dark chocolate has shown all of the following **except**:
- a flavonoid antioxidant accumulates in the blood of individuals who eat chocolate.
 - chocolate flavonoids may help reduce oxidative damage to organs.
 - chocolate consumption reduces incidence of heart disease.
 - evidence that chocolate improves mood is lacking.
66. Which phytochemical contained in dark chocolate has the potential for positive heart health benefits?
- carotenoids
 - lignans
 - lutein
 - flavonoids
67. Which of the following is the best and safest source of phytochemicals?
- whole foods
 - supplements
 - herbal remedies
 - organic foods
68. Compared to people in the West, Asians suffer less frequently from all of the following **except**:
- osteoporosis.
 - heart disease.
 - stomach cancer.
 - symptoms related to menopause.

69. One of the best sources of lycopene is:
- tomatoes.
 - soy products.
 - garlic.
 - flaxseed.
70. As more research demonstrates the possible benefits of phytochemicals for health, the best approach for consuming them is to:
- avoid eating more foods containing them until more research has shown benefits.
 - include a variety of fruits and vegetables containing phytochemicals in your diet.
 - find supplements that can give you concentrated doses for health benefits.
 - read supplement labels to find out which claims state the best health benefits.
71. Which of the following is a property of manufactured functional foods?
- They are a good regular addition to the diet to make up for inadequate nutrient intakes.
 - They have been proven to be beneficial in improving health.
 - They have not been shown to pose any health risks with regular consumption.
 - They may act more like a drug than a food in promoting health.

Essay Items

- Describe how the DRI Committee establishes DRI values.
- Explain how the methods used in setting the recommended intakes for nutrients are different from those used in setting the recommended energy intake values.
- Describe characteristics of the Daily Values listed on food labels and how they should be used in diet planning.
- What changes to the average American diet are necessary for the population to meet the *Dietary Guidelines*?
- Identify the USDA recommendations for daily physical activity.
- List the major groups and subgroups of the USDA Food Patterns and give an example of a nutrient-dense food from each.
- Explain the concept of the discretionary calorie allowance, and describe ways this allowance may be “spent.”
- Identify the specific advantages of exchange systems.
- Name and briefly describe the three types of claims that may appear on food labels. How reliable is each of these types of claims?
- Defend the following statement: “Foods, not supplements, are the best and safest source of phytochemicals.”

Answer Key

(ANS = answer, REF = page reference, DIF = difficulty, OBJ = learning objective)

True/False Items

- | | | | |
|------------|------------|--------------------------|----------|
| 1. ANS: T | REF: 32 | DIF: Comprehension-level | OBJ: 2.1 |
| 2. ANS: F | REF: 32 | DIF: Comprehension-level | OBJ: 2.1 |
| 3. ANS: T | REF: 35 | DIF: Comprehension-level | OBJ: 2.1 |
| 4. ANS: T | REF: 36 | DIF: Comprehension-level | OBJ: 2.1 |
| 5. ANS: F | REF: 32 | DIF: Comprehension-level | OBJ: 2.1 |
| 6. ANS: T | REF: 33 | DIF: Comprehension-level | OBJ: 2.1 |
| 7. ANS: T | REF: 37 | DIF: Comprehension-level | OBJ: 2.2 |
| 8. ANS: F | REF: 48 | DIF: Comprehension-level | OBJ: 2.4 |
| 9. ANS: T | REF: 49 | DIF: Comprehension-level | OBJ: 2.4 |
| 10. ANS: F | REF: 33 | DIF: Comprehension-level | OBJ: 2.1 |
| 11. ANS: F | REF: 37-38 | DIF: Comprehension-level | OBJ: 2.2 |
| 12. ANS: T | REF: 37 | DIF: Comprehension-level | OBJ: 2.2 |

13. ANS: T	REF: 41	DIF: Comprehension-level	OBJ: 2.3
14. ANS: T	REF: 56	DIF: Comprehension-level	OBJ: 2.5
15. ANS: F	REF: 68	DIF: Comprehension-level	OBJ: 2.7

Multiple-Choice Items

1. ANS: b	REF: 32-34	DIF: Comprehension-level	OBJ: 2.1
2. ANS: b	REF: 33	DIF: Comprehension-level	OBJ: 2.1
3. ANS: d	REF: 33	DIF: Comprehension-level	OBJ: 2.1
4. ANS: c	REF: 34	DIF: Comprehension-level	OBJ: 2.1
5. ANS: a	REF: 35	DIF: Comprehension-level	OBJ: 2.1
6. ANS: e	REF: 35	DIF: Comprehension-level	OBJ: 2.1
7. ANS: b	REF: 37	DIF: Comprehension-level	OBJ: 2.1
8. ANS: b	REF: 37	DIF: Comprehension-level	OBJ: 2.2
9. ANS: d	REF: 38	DIF: Comprehension-level	OBJ: 2.2
10. ANS: d	REF: 38	DIF: Comprehension-level	OBJ: 2.2
11. ANS: b	REF: 37 54	DIF: Comprehension-level	OBJ: 2.1 2.5
12. ANS: c	REF: 38	DIF: Comprehension-level	OBJ: 2.2
13. ANS: e	REF: 38	DIF: Comprehension-level	OBJ: 2.2
14. ANS: d	REF: 39	DIF: Comprehension-level	OBJ: 2.3
15. ANS: d	REF: 39	DIF: Comprehension-level	OBJ: 2.3
16. ANS: c	REF: 47	DIF: Comprehension-level	OBJ: 2.4
17. ANS: c	REF: 42-43	DIF: Comprehension-level	OBJ: 2.3
18. ANS: c	REF: 40	DIF: Comprehension-level	OBJ: 2.3
19. ANS: d	REF: 41 43	DIF: Comprehension-level	OBJ: 2.3
20. ANS: d	REF: 43	DIF: Comprehension-level	OBJ: 2.3
21. ANS: a	REF: 40	DIF: Comprehension-level	OBJ: 2.3
22. ANS: d	REF: 41 44	DIF: Comprehension-level	OBJ: 2.3
23. ANS: b	REF: 41 44	DIF: Comprehension-level	OBJ: 2.3
24. ANS: b	REF: 45	DIF: Comprehension-level	OBJ: 2.4
25. ANS: b	REF: 49	DIF: Comprehension-level	OBJ: 2.4
26. ANS: a	REF: 47	DIF: Comprehension-level	OBJ: 2.4
27. ANS: b	REF: 49	DIF: Comprehension-level	OBJ: 2.4
28. ANS: c	REF: 49	DIF: Comprehension-level	OBJ: 2.4
29. ANS: c	REF: 49	DIF: Comprehension-level	OBJ: 2.4
30. ANS: d	REF: 58	DIF: Comprehension-level	OBJ: 2.6
31. ANS: d	REF: 51-52	DIF: Comprehension-level	OBJ: 2.5
32. ANS: e	REF: 53	DIF: Comprehension-level	OBJ: 2.5
33. ANS: d	REF: 52	DIF: Comprehension-level	OBJ: 2.5
34. ANS: a	REF: 52 53	DIF: Comprehension-level	OBJ: 2.5
35. ANS: c	REF: 55	DIF: Comprehension-level	OBJ: 2.5
36. ANS: a	REF: 32-33	DIF: Application-level	OBJ: 2.1
37. ANS: b	REF: 33	DIF: Application-level	OBJ: 2.1
38. ANS: d	REF: 33	DIF: Application-level	OBJ: 2.1
39. ANS: c	REF: 34	DIF: Application-level	OBJ: 2.1
40. ANS: c	REF: 33	DIF: Application-level	OBJ: 2.1
41. ANS: c	REF: 35	DIF: Application-level	OBJ: 2.1
42. ANS: c	REF: 35	DIF: Application-level	OBJ: 2.1
43. ANS: c	REF: 37-38	DIF: Application-level	OBJ: 2.2
44. ANS: c	REF: 37-38	DIF: Application-level	OBJ: 2.2
45. ANS: a	REF: 38-39	DIF: Application-level	OBJ: 2.2
46. ANS: a	REF: 42	DIF: Application-level	OBJ: 2.3
47. ANS: b	REF: 41 44	DIF: Application-level	OBJ: 2.3
48. ANS: b	REF: 42-43 45	DIF: Application-level	OBJ: 2.3 2.4
49. ANS: c	REF: 42-43 46	DIF: Application-level	OBJ: 2.3 2.4
50. ANS: b	REF: 41	DIF: Application-level	OBJ: 2.3
51. ANS: b	REF: 49	DIF: Application-level	OBJ: 2.4

52. ANS: c	REF: 41 44 45	DIF: Application-level	OBJ: 2.3 2.4
53. ANS: d	REF: 44 46	DIF: Application-level	OBJ: 2.3 2.4
54. ANS: d	REF: 41	DIF: Application-level	OBJ: 2.3
55. ANS: a	REF: 45	DIF: Application-level	OBJ: 2.4
56. ANS: c	REF: 47	DIF: Application-level	OBJ: 2.4
57. ANS: b	REF: 49	DIF: Application-level	OBJ: 2.4
58. ANS: d	REF: 53	DIF: Application-level	OBJ: 2.5
59. ANS: e	REF: 53-54	DIF: Application-level	OBJ: 2.5
60. ANS: c	REF: 52	DIF: Application-level	OBJ: 2.5
61. ANS: b	REF: 52 53	DIF: Application-level	OBJ: 2.5
62. ANS: a	REF: 56	DIF: Application-level	OBJ: 2.5
63. ANS: d	REF: 64-68	DIF: Comprehension-level	OBJ: 2.7
64. ANS: a	REF: 64	DIF: Comprehension-level	OBJ: 2.7
65. ANS: c	REF: 64	DIF: Comprehension-level	OBJ: 2.7
66. ANS: d	REF: 64	DIF: Comprehension-level	OBJ: 2.7
67. ANS: a	REF: 68	DIF: Comprehension-level	OBJ: 2.7
68. ANS: c	REF: 66-67	DIF: Comprehension-level	OBJ: 2.7
69. ANS: a	REF: 67	DIF: Comprehension-level	OBJ: 2.7
70. ANS: b	REF: 69	DIF: Application-level	OBJ: 2.7
71. ANS: d	REF: 69	DIF: Application-level	OBJ: 2.7

Essay Items

1. REF: 35-36	DIF: Comprehension-level	OBJ: 2.1
2. REF: 36-37	DIF: Comprehension-level	OBJ: 2.1
3. REF: 37 54	DIF: Application-level	OBJ: 2.1 2.5
4. REF: 38	DIF: Comprehension-level	OBJ: 2.2
5. REF: 40	DIF: Comprehension-level	OBJ: 2.2
6. REF: 40-43	DIF: Application-level	OBJ: 2.3
7. REF: 41 44	DIF: Application-level	OBJ: 2.3
8. REF: 49	DIF: Comprehension-level	OBJ: 2.4
9. REF: 54-57	DIF: Comprehension-level	OBJ: 2.5
10. REF: 68-69	DIF: Application-level	OBJ: 2.7