

**Online Instructor's Manual**  
*to accompany*

**Food for Fifty**

**Thirteenth Edition**

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## Table of Contents

Preface .....	iii
About the Author .....	iii
Assignment Suggestions	
Part I --- Introduction to Quantity Foodservice and Serving Food in Quantity.....	1
Parts I, II, and III --- Food Production Tables .....	4
Part III --- Foods and Food Production .....	7
Part IV --- Recipes .....	8
Appendix.....	9
Test Bank Questions	
Multiple Choice Questions	
Food Production .....	10
Food Safety .....	14
Menu Planning .....	15
Recipes .....	17
Problem Solving Questions.....	18
Short Answer Questions	
General .....	30
Food Safety .....	33
Food Production .....	39
Menu Planning .....	47
Service and Special Event Planning .....	51
Key to Test Bank Questions	
Multiple Choice Questions .....	53
Problem Solving Questions .....	54
Short Answer Questions .....	63
Key to Workbook .....	68

## **Preface**

*Food for Fifty* is written for faculty and students to use as a resource in food production and food management courses. The resource nature of *Food for Fifty* implies the text can be adapted for a wide range of applications. This Instructor's Guide includes learning activities and classroom assignments that will highlight *Food for Fifty's* usefulness as a valuable foodservice resource.

The Instructor's Guide suggests assignments that will challenge students to apply information from Part I (Serving Food in Quantity), Parts II and III (Food Production Tables; Foods and Food Production), Part IV (Recipes), and Appendix. Instructors will find the assignment suggestions appropriate for designing multi-step projects suitable for homework and for in-class discussion and problem solving activities.

Multiple choice, short answer, and problem-based questions have been written to aid instructors with test preparation. A key is included. We hope this Instructor's Guide will provide information useful for designing meaningful classroom assignments and for developing test questions linked specifically to the information in *Food for Fifty*.

## **About the Author**

The Instructor's Guide for *Food for Fifty* was prepared by Mary K. Molt, PhD, RD, LD. Mary is the Assistant Director of Housing and Dining Services and an Assistant Professor in Hospitality Management and Dietetics at Kansas State University. Over thirty-five years of experience working in a joint food management and teaching position has provided Mary with a unique talent for making classroom learning experiences relevant to the challenges students will experience in their careers. Her intention for this Instructor's Guide is to convey some of her ideas for teaching food production management concepts.

## Assignment Suggestions

### Part I – Introduction to Quantity Foodservice and Serving Food in Quantity

Part I of *Food for Fifty* includes an introduction to the foodservice industry and general information for *Food for Fifty's* usefulness as a recipe development and foodservice planning resource.

Guidelines are included for menu planning and for planning special meals, receptions, and events.

Student assignment suggestions for Part I:

#### **Foodservice Industry**

▶ Interview a foodservice administrator to identify a.) foodservice challenges they have faced in the past 12 months, b.) their response to the challenges they have faced, and c.) the impact on the food production system that has resulted from any changes that were made.

[Resource: *Food for Fifty*, Table 1.1, p. 3]

▶ Select (or have assigned) one challenge from Table 1.1, p. 3. Based on information from a literature review and/or interviews with foodservice administrators, write a short paper (5-7 pages) that discusses the impact the challenge has made on the foodservice industry. Present information in a five minute oral class report.

[Resource: *Food for Fifty*, Table 1.1, p. 3; Appendix C, p. 832]

▶ Review menus that represent both the on-site and commercial segments of the foodservice industry. Write a short (3-5 page) paper that compares and contrasts a.) menus, and b.) equipment requirements needed to produce the menu.

[Resource: *Food for Fifty*, Table 1.2, p. 4; p. 28; p. 187).

#### **Recipe Development, Construction, and Adjustment**

▶ Select a home-sized recipe from a popular magazine or cookbook and identify a similar recipe [or recipes] in *Food for Fifty*. Write a new recipe following a standardized format by adapting the *Food for Fifty* recipe(s) to incorporate changes that will make the new recipe similar to the home-size recipe.

[Resource: *Food for Fifty*, Table 1.3, p. 5; Chapter 2, p. 8; Appendix C, p. 832]

▶ Peruse a trade magazine (*FoodService Director*, *Food Management*, *Restaurants and Institutions*, etc.) or a popular magazine (*Bon Appétit*, *Cooks Illustrated*, *Cooking Light*, *Fine Cooking*, *Food and Wine*, etc.). Identify recipes in *Food for Fifty* that could be adapted to make recipes similar to those in the trade or popular magazines. Suggest the adaptations that would be necessary to produce a product similar to the recipe in the trade or popular magazines. Following recipe writing guidelines, write a recipe that makes the adaptations to the *Food for Fifty* recipe.

[Resource: *Food for Fifty*, Table 1.3, p. 5; Chapter 2, p. 8; Appendix C, p. 832]

- ▶ For two different recipes in each *Food for Fifty* recipe chapter, suggest adaptations that would change each recipe's ethnic profile.

[Resource: *Food for Fifty*, Tables 5.21, 5.22, pp. 134 – 138; Appendix C, p. 832]

- ▶ Select a home-sized recipe from a popular magazine or cookbook. Format the home-sized recipe to be similar to a *Food for Fifty* recipe. Display liquid ingredients as volume and other ingredients in pounds and ounces.

[Resource: *Food for Fifty*, Chapter 2, p. 8; Table 4.2, pp. 71-81]

- ▶ Choose a recipe from a non-standardized source (popular magazine, internet, or home-sized cookbook). Re-write the recipe following a standardized format for recipes. Use a similar *Food for Fifty* recipe as your guide.

Resource: *Food for Fifty*, Chapter 2]

- a. Use weights and/or measures for all ingredients. Identify AP and EP weights when appropriate. List ingredients in order of use.
  - b. Describe the ingredients appropriately. For example, diced, dried, ground, fresh.
  - c. Write all procedures using action verbs.
  - d. Write appropriate production and post-production procedures for all potentially hazardous foods.
  - e. Calculate the recipe for 50 portions (weighing or measuring the same as a similar recipe in *Food for Fifty*.)
- ▶ Choose a recipe from a non-standardized source (popular magazine, internet, or home-sized cookbook). Compare the recipe to a similar recipe in *Food for Fifty*. Are the ingredient names descriptive? If not re-write the names to be more descriptive.

- ▶ Choose a recipe from a non-standardized source (popular magazine, internet, or home-sized cookbook). Compare the recipe to a similar recipe in *Food for Fifty*. List ingredients in the correct order based on production steps.

- ▶ Choose several recipes, from several categories of foods from *Food for Fifty* and suggest recipe changes to reduce fat, sodium, and sugar.

[Resource: *Food for Fifty*, p. 12]

- ▶ Modify three *Food for Fifty* recipes from different recipe categories to emphasize healthy alternatives.

[Resource: *Food for Fifty*, p. 12]

- ▶ Evaluate a menu and suggest ways to increase whole grains, reduce fat, and reduce sugar. Suggest recipes from *Food for Fifty* that support your suggestions.  
[Resource: *Food for Fifty*, p. 12]
- ▶ Select a menu from an ethnic restaurant. Identify *Food for Fifty* recipes that could be used to produce a similar menu. Suggest adaptations to the *Food for Fifty* recipes that would be necessary to achieve the desired ethnic profile.

### **Menu Planning and Planning Special Meals, Receptions, and Events**

- ▶ Using *Food for Fifty* recipes and menu planning information, plan menus for a reception/tea, coffee/brunch, and buffet style meal.  
[Resource: *Food for Fifty*, p. 28]
- ▶ Using *Food for Fifty* recipes and menu planning information, plan a non-selective menu and a selective menu for a specific age group. Adapt the menus for a different age group.  
[Resource: *Food for Fifty*, p. 28]
- ▶ Plan a serving table arrangement for a reception/tea, coffee/brunch, and a buffet meal.  
[Resource: *Food for Fifty*, pp. 50-54]
- ▶ Suggest alternative table arrangements for events with a small and large number of guests.  
[Resource: *Food for Fifty*, pp. 50-54]
- ▶ Suggest buffet table arrangements for rooms with various dimensions.  
[Resource: *Food for Fifty*, pp. 50-54]
- ▶ Develop plate presentation instructions for a served meal.  
[Resource: *Food for Fifty*, p. 56]
- ▶ Observe a meal being served. Critique the plate presentation.  
[Resource: *Food for Fifty*, p. 56]
- ▶ Prepare an education/training program for new employees hired to serve a served banquet meal.  
[Resource: *Food for Fifty*, p. 54]
- ▶ Demonstrate how to set a table for a served banquet meal.  
[Resource: *Food for Fifty*, p. 54]
- ▶ Demonstrate correct methods for serving a meal at a banquet.  
[Resource: *Food for Fifty*, p. 54]

## Parts I, II, and III -- Food Production Tables

*Food for Fifty* includes tables and guides that students will use for ordering food, adjusting recipes, and planning, preparing, and serving food. Basic information for cooking temperatures, food equivalents and substitutions, and equipment capacity is also given.

▶ **Tables 2.1, 2.2, and 2.3 – Direct-Reading Measurement Tables.**

These tables are useful for increasing and decreasing recipe amounts. Assignment suggestions:

1. Practice increasing and decreasing recipes using the direct-reading measurement tables.
2. Discuss briefly when Tables 2.1, 2.2, and 2.3 would be useful resources.

▶ **Table 4.1 – Amounts of Food to Serve 50.**

This table suggests amounts of food to purchase and prepare for 50 persons, based on portion size listed in the table. Assignment suggestions:

1. Calculate amount of food to purchase when portion sizes are changed.
2. Calculate amount of food to purchase when the number of portions are increased and/or decreased.
3. Discuss briefly a situation when Table 4.1 would be a useful resource.

▶ **Table 4.2 – Food Weights and Approximate Equivalents in Measure,**

▶ **Table 4.10 – Weight and Approximate Measure Equivalents for Commonly Used Foods.**

Information in these two tables is useful when converting recipe ingredients from weight to measure or vice versa. Assignment suggestions:

1. Calculate the approximate weight of foods when the volume is known.
2. Calculate the approximate measure for foods with a known weight.
3. Discuss briefly a situation when Tables 4.2 and 4.10 would be useful resources.

▶ **Table 4.3 – Yield, Availability, and Storage of Fresh Fruits and Vegetables.**

This table provides information for determining the weight differences between as purchased fresh produce (AP) and edible portion weight after preparation (EP). Assignment suggestions:

1. Calculate EP yield for a fresh fruit or vegetable item. Compare the results with the corresponding product in Table 4.3. Discuss the reasons for any variance between actual EP percent and Table 4.3.
2. Calculate amount of fresh produce to purchase when EP weights are known.
3. Discuss briefly a situation when Table 4.3 would be a useful resource.
4. Discuss reasons for EP yields to be different from amounts in Table 4.3.

Table 4.3 also provides information for fresh fruit and vegetable availability.

Assignment suggestions:

1. Use a menu from a restaurant, nursing home, school, etc., and identify the produce that is appropriate to be purchased fresh. (Assume a specific season of the year).
2. Evaluate a printed menu for appropriateness served during the different seasons of the year.
3. Discuss the issues that must be considered when storing fruits and vegetables.
4. Suggest a storage arrangement for a produce refrigerator.

▶ **Table 4.8 – Basic Equivalents in Measures and Weights.**

Information in this table is useful when converting measures from large units to smaller units.

Assignment suggestions:

1. Calculate number of cups per gallon, quart, pint; number of teaspoons/ tablespoons per cup.
2. Convert ounces, pounds, and volume measurements to metric measurements.
3. Discuss briefly a situation when Table 4.8 would be a useful resource.

▶ **Table 4.12 – Metric Equivalents for Weight, Measure, and Temperature.**

Information in this table is useful when metric equivalents are needed for weights, measures, and temperatures. Assignment suggestions:

1. Calculate metric weights from U.S. weights and vice versa.
2. Convert temperatures from Fahrenheit to Centigrade.
3. Discuss briefly a situation when Table 4.12 would be a useful resource.

▶ **Table 6.3 – Convection Oven Baking Times and Temperatures,**

▶ **Table 6.4 – Deep-fat Frying Temperatures,**

▶ **Table 7.4 – Refrigerator Defrosting Times for Meats, Seafood, and Poultry.**

Information in these three tables provides guidelines for thawing, baking, and frying times of foods in several food categories. Assignment suggestions:

1. Write a timing schedule for thawing, baking, and frying various foods.
2. Calculate a timing schedule for products using a conventional oven and a convection oven.
3. Discuss briefly a situation when Tables 6.3, 6.4, and 7.4 would be useful resources.

▶ **Table 7.1 – Guidelines for Reducing the Risk of Food-borne Illness,**

▶ **Table 7.3 – Cold Food Storage Temperatures,**

▶ **Table 7.5 – Temperatures and Bacteria Growth,**

▶ **Table 7.6 – Safe Internal Temperatures for Cooked Foods,**

▶ **Table 7.7 – Food Serving Temperatures and Holding Times,**

▶ **Table 7.8 – Food Cooling and Storage Procedures,**

▶ **Table 7.9 – Time and Temperature Standards for Reducing Food Safety Hazards of Potentially Hazardous Foods (PHF),**

▶ **Table 7.12 – Potentially Hazardous Foods.**

These tables provide the recommended procedures and standards for reducing the safety hazards of Potentially Hazardous Foods (PHF). Assignment suggestions:

1. Using the information in Tables 7.1, 7.3, 7.5, 7.6, 7.7, 7.8, 7.9, and 7.12 prepare a safe food handling lesson for a storekeeper, cook, and service employee. Tailor the lessons so they match the traditional responsibilities for each category of employee. For example, the storekeeper lesson should include handling raw food before production, the cook during production and post production, and service during the time the food is served.
2. For this assignment, select an entree recipe from a popular magazine or home-sized cookbook. Rewrite the recipe using a format similar to recipes in *Food for Fifty* and include all production and post-production information that will reduce food safety hazards.



- ▶ **Table 7.6 – Safe Internal Temperatures for Cooked Foods,**
- ▶ **Table 7.7 – Food Serving Temperatures and Holding Times.**

Information in these tables provides safe end-point cooking temperatures for meats, fish, and poultry and for safe food serving temperatures and holding times. Assignment suggestions:

1. Using a recipe without the end-point cooking temperatures and the safe holding temperatures identified, add the internal cooking temperature requirements, and safe serving and holding times, for the potentially hazardous meat, fish, or poultry products (Potentially Hazardous Foods).
2. Discuss the relationship between safe food and quality food.
3. Discuss briefly a situation when Tables 7.6 and 7.7 would be useful resources.

- ▶ **Table 7.18 – Dipper Equivalentents,**
- ▶ **Table 7.19 – Ladle Equivalentents.**

Information in these two tables provides approximate measures and weights for dippers and ladles of various sizes. Assignment suggestions:

1. Calculate the number of ladles and/or dippers that a specified amount of food will yield.
2. Measure the number of ladles or dippers that are possible from different pan sizes and using different sized ladles or dippers.
3. Calculate yield differences when a different size dipper or ladle is used for portioning food than the recipe specifies.
4. Calculate the different weights for dippers and ladles that are measured level versus rounded.
5. Calculate the food cost per serving difference for a juice punch that is portioned using an 8 oz ladle instead of a 6 oz ladle. Information to use for calculations: food cost for 1 gallon is \$5.00.
6. Discuss briefly a situation when Tables 7.18 and 7.19 would be useful resources.

- ▶ **Table 7.20 – Recommended Mixer Bowl and Steam-Jacketed Kettle Sizes for Selected Products.**

This table is helpful in specifying the size of equipment to use when preparing varying product batch sizes. Assignment suggestions:

1. For different categories of recipes in *Food for Fifty*, identify the size of mixer bowl or steam-jacketed kettle that is most appropriate to use for making 75 and 150 portions.
2. Discuss reasons for selecting correctly sized mixer bowls or steam-jacketed kettles. Discuss problems that can occur when the wrong sized mixer bowls or steam-jacketed kettles are used.
3. Discuss briefly when Table 7.20 would be a useful resource.

- ▶ **Table 7.16 – Pan Capacities for Baked Products,**
- ▶ **Table 7.17 – Counter Pan Capacities,**
- ▶ **Table 4.11 – Common Can Sizes.**

These tables give information for pan and can size capacities. Assignment suggestions:

1. Discuss briefly when Tables 7.16, 7.17, and 4.11 would be useful resources.

► **Table 7.21 – Large-equipment Requirements for Basic Cooking Methods.**

This table identifies the large equipment used for cooking foods by different cooking methods.

Assignment suggestions:

1. Identify the equipment requirements to produce a specific menu.
2. Write a one day menu that can be produced in a kitchen with the following large equipment: (provide list of equipment)
3. The kitchen's steam-jacketed kettle is being repaired and not available for making the marinara sauce. What equipment substitution would be appropriate in order to make the sauce? What recipe changes might need to be considered when using the alternate piece of equipment you selected?

### **Part III – Foods and Food Production**

Part III of *Food for Fifty* describes common categories of foods and includes purchasing information and quantity food production fundamentals. Included also are guidelines for evaluating food quality and preparing and serving food safely. Knife and other small equipment information are included. Student assignment suggestions for Part III:

- Write a non-selective menu (one meal). Prepare a food production schedule for the menu (assume 50 guests). Identify on the production schedule the large equipment necessary to produce the meal.
- Discuss the benefits for converting spices from volume measurement to weight measurement. What reasons are there for measuring spices by volume?
- Discuss the reasons for weight/measure differences between different forms of dry spices (i.e., ground, leaf, whole).
- Peruse a trade magazine (*FoodService Director, Food Management, Restaurants and Institutions*, etc.) or a popular magazine (*Bon Appétit, Cooks Illustrated, Cooking Light, Food and Wine, Fine Cooking, Saveur*, etc.). Discuss creative ideas for using fresh herbs in cooking and garnishing.
- Peruse a trade magazine (*FoodService Director, Food Management, Restaurants and Institutions*, etc.), a popular magazine (*Bon Appétit, Cooks Illustrated, Cooking Light, Food and Wine, Fine Cooking, Saveur*, etc.), and a recently published cookbook. Identify the flavor profile of several ethnic recipes.
- Identify the spice profile for foods from different regions of the world. Compare the spice profile of several ethnic recipes with the spice profile you have identified.
- Peruse a trade magazine (*FoodService Director, Food Management, Restaurants and Institutions*, etc.) or a popular magazine (*Bon Appétit, Cooks Illustrated, Cooking Light, Food and Wine, Saveur*, etc.). Find a recipe that uses fresh herbs in a creative way. Identify a recipe in *Food for Fifty* that could be adapted to make a similar recipe as in the trade or popular magazine that you

chose. Discuss the adaptations that would need to be made. Re-write the *Food for Fifty* recipe to reflect the adaptations you suggest.

- ▶ Prepare a spice blend suggested in *Food for Fifty* (p. 133). Compare the flavor profile of the prepared spice blend with a similar purchased spice blend product. Discuss ways to use spice blends.
- ▶ Identify the desirable sensory attributes for a food product and evaluate the food according to the attributes identified.
- ▶ Evaluate a menu item for quality characteristics throughout the preparation steps and when served.
- ▶ Evaluate and compare the quality of a purchased product and a similar product made from scratch.
- ▶ Write a quality standard for a product in each recipe category of *Food for Fifty* (beverages, breads, desserts, eggs/cheese, fish/shellfish, meat, pasta/rice/cereals/grains/beans, poultry, salads/dressings, sandwiches/sauces/marinades/rubs, soups, vegetables).
- ▶ Discuss why product standards are helpful in producing quality food.
- ▶ Evaluate menus for their appropriateness to serve clientele who follow food customs/practices of different religions (Catholic, Church of Jesus Christ of the Latter Day Saints, Hindu, Jewish, Muslim, Protestant, Seventh-Day Adventist).
- ▶ Identify tough and tender cuts of beef. Discuss the appropriate cooking methods for tough and tender cuts of beef.
- ▶ Calculate the amount of edible product (EP) that is expected from: 5 lb ground beef (80% lean) (AP) and 10 lb white potatoes (AP). Calculate the amount of as purchased product (AP) that is required to yield 5 lb ground beef (EP) and 10 lb white potatoes (EP).
- ▶ Demonstrate correct knife skills for chopping herbs, onions, garlic.
- ▶ Demonstrate how to cut vegetables into different shapes.

## **Part IV – Recipes**

Part IV of *Food for Fifty* includes standardized recipes for foods in all menu categories. Assignment suggestions for Part IV include:

- ▶ Choose a recipe from a non-standardized source (popular magazine, internet, or home-

sized cookbook). Compare the recipe to a similar recipe in *Food for Fifty*. Identify several reasons for why the recipe may not produce the same product look and quality when prepared in a commercial kitchen.

- ▶ Choose a recipe from a non-standardized source (popular magazine, internet, or home-sized cookbook). Compare the recipe to a similar recipe in *Food for Fifty*. What differences could you expect to see if both products were made and evaluated side-by-side.
- ▶ Following recipes and cooking timetables in Part IV, calculate production start times for roast beef, whole turkey, and roasted vegetables. Assume a 6:00 p.m. meal start time.

## Appendix

The appendix is a useful resource for menu planning using *Food for Fifty* recipes and for directing food production. Assignment suggestions for the Appendix include:

- ▶ Plan a menu using the menu items listed in Appendix A, p. 825.
- ▶ Following the garnish suggestions in Appendix A, suggest appropriate garnishes for several foods in each *Food for Fifty* recipe category.
- ▶ Discuss appropriate garnishes for several *Food for Fifty* recipes. Are any of the garnishes selected dependent on season of the year because of produce availability and cost?
- ▶ Evaluate/critique the garnishment of food shown in trade magazines or popular cookbooks.
- ▶ Compare and contrast the food pricing methods as described in Appendix C, p. 832.
- ▶ Calculate yields for a variety of meats and vegetables. Use formulas in Appendix D, p. 833.

## Multiple Choice Questions

### Food Production

1. Ethylene gas produced by some fruits and vegetables will:
  - a. inhibit ripening of all fruits and vegetables
  - b. inhibit ripening of some fruits and vegetables
  - c. promote ripening of some fruits and vegetables
  - d. promote ripening of all fruits and vegetables
  
2. Creaming flour, baking powder, and shortening before adding sugar, salt, liquids, and eggs is an example of what method of mixing butter or shortened cakes?
  - a. conventional
  - b. dough-batter
  - c. dry blending and wetting
  - d. muffin
  
3. An adequately mixed yeast dough will:
  - a. develop a soft sticky surface
  - b. lighten slightly in color
  - c. spring back when touched lightly
  - d. stretch to resemble a thin membrane
  
4. Quick breads are leavened by:
  - a. baking soda, active dry yeast
  - b. baking powder, steam
  - c. compressed yeast, steam
  - d. steam, hydrogenated shortening
  
5. The function of mixing and kneading yeast dough is to:
  - a. develop a gluten structure that will entrap the carbon dioxide gas
  - b. force out excess carbon dioxide so the yeast fermentation can begin
  - c. tighten the gluten strands so the bread will rise quickly and evenly
  - d. warm the dough to an optimal temperature for yeast fermentation
  
6. Very cool storage (32 – 45 F) is recommended for:
  - a. chili powder
  - b. cinnamon
  - c. fennel
  - d. poppy seeds

7. The flavor and texture of yeast bread depends primarily on:
- developing the gluten structure
  - the amount of carbon dioxide produced
  - the oven temperature
  - the fermentation process
8. Gluten structures relax when yeast dough:
- bakes to 180 F
  - is mixed until the fat completely coats the gluten strands
  - reaches 105 - 115 F
  - rests for 10 - 15 minutes after pressing out the air bubbles
9. A béchamel sauce is:
- brown
  - red
  - white
  - yellow (butter)
10. From the foods listed below, choose the most appropriate substitution:

An appropriate substitution for **Fresh Herbs** is:

- $\frac{2}{3}$  less of whole dried herbs (by measure, not weight)
- $\frac{1}{3}$  less of whole dried herbs (by measure, not weight)
- $\frac{2}{3}$  less of dry ground herbs (by measure, not weight)
- $\frac{1}{3}$  less of dry ground herbs (by measure, not weight)

An appropriate substitution for **Unsweetened Chocolate** is:

- butterscotch chips and molasses
- chocolate chips
- cocoa and fat
- Dutch process cocoa

An appropriate substitution for **Buttermilk** is:

- butter and non-fat dry milk
- butter and skim milk
- lemon juice and water
- unflavored yogurt

An appropriate substitution for **Brown Sugar** is:

- a. granulated sugar and molasses
- b. granulated sugar and corn syrup
- c. granulated sugar and melted caramel
- d. granulated sugar and honey

11. What criterion is used for evaluating food for quality during preparation and throughout service?

- a. taste
- b. presentation
- c. temperature
- d. all of the above

12. The quantity of appetizers needed to serve customers will depend mostly on the:

- a. beverages being served
- b. nature of the group being served
- c. season of the year
- d. size and configuration of the serving table

13. Select the fat that would be best suited for sautéing (high heat).

- a. pure olive oil
- b. extra virgin olive oil
- c. butter
- d. clarified butter

14. Dry heat cooking does not include:

- a. broiling
- b. barbequing
- c. braising
- d. roasting

15. Moist heat cooking does not include:

- a. frying
- b. poaching
- c. en papillote
- d. blanching

16. The primary heat transfer for roast beef is:

- a. convection
- b. conduction
- c. radiation
- d. induction

17. What process is responsible for starch thickening a liquid?

- a. caramelization
- b. evaporation
- c. gelatinization
- d. coagulation



## **Food Safety**

18. Which method below is the least effective procedure for cooling hot food?
- Cut large food items into smaller pieces
  - Pour hot thin foods (to a depth of not more than 4 inches) into chilled pans
  - Set pan of food in an ice water bath, stir ice and food frequently
  - Stir hot foods once or twice during cooling
19. Any food that can support rapid bacterial growth and cause food-borne illness:
- is a potentially hazardous food (PHF)
  - is required to meet HACCP standards
  - requires heating to 165° F before serving to elderly adults and young children
  - all of the above
20. Foods excluded from the definition of a potentially hazardous food (PHF) are foods:
- cooked to 165 F for at least 15 minutes
  - with a natural barrier such as rind on fruit
  - with a pH above a 4.6
  - with water activity ( $A_w$ ) below 0.85
21. A probe/stem food thermometer should be calibrated by placing the stem in:
- boiling water and adjusting the dial to 212°F
  - ice and adjusting the dial to 32°F
  - ice water and adjusting the dial to 32°F
  - an oven and adjusting the dial to the same temperature as the oven

## Menu Planning

22. USDA nutrient standards for the National School Lunch Program set target goals for:
- B Vitamins
  - Calories
  - Cholesterol
  - Sodium
23. Nutrient Standard Menu Planning and Assisted Nutrient Standard Menu Planning:
- are the same except one requires food-based and one computer based nutrient analysis
  - are the same except for the party responsible for nutrient analysis
  - both require food-based nutrient analysis
  - require different styles of computer software for nutrient analysis
24. A federally approved school food service menu planning system that requires nutrient analysis of the menu is called:
- Assisted Nutrient Standard Menu Planning
  - Child and Adult Care Food Program (CACFP) Menu Planning
  - Enhanced Food-based Menu Planning
  - National School Lunch Program (NSLP) Menu Planning
25. When planning a menu, choose the correct sequence for choosing categories of food:
- Plan **first** the desserts, followed by salads, vegetables, and then entrees
  - Plan **first** the salads, followed by entrees, vegetables, and then desserts
  - Plan **first** the vegetables, followed by salads, desserts, and then entrees
  - Plan **first** the entrees, followed by vegetables, salads, and then desserts
26. “Offer versus serve” refers to:
- A provision in the food-based menu planning that allows students to choose less than all the food items offered.
  - A provision in the NuMenus menu planning program that allows students to choose less than all the food items offered.
  - A requirement of the National School Lunch Program (NSLP).
  - A provision in the NSLP that improves child nutrition while keeping costs low.

**Review the following menu before answering question 27**

***Orange Juice***

***Bagel and Cream Cheese***

***Breakfast Omelet***

***Hot Tea or Coffee***

27. Is the menu an example of:
- a. A la carte menu
  - b. Non-selective menu
  - c. Selective menu
  - d. Table d'hote menu

## Recipes

28. A standard recipe format includes:
- HACCP
  - Identification of Potentially Hazardous Foods (PHF)
  - Portion size
  - Storage and reheating instructions
29. A forecast change requires a recipe be extended from 50 to 125 servings. You choose to use the *factor method* for increasing the yield. The correct formula for determining the *factor* is:
- Divide 125 by 50
  - Divide 50 by 125
  - Multiply 50 by 2.5
  - Multiply 125 by 2.5
30. Recipe yield refers to the:
- number of servings the recipe will produce
  - factor used to expand a recipe
  - weight of product per pan
  - number of servings per pan
31. When portioning ingredients for a recipe, it is most accurate to:
- measure ingredients
  - weigh ingredients
  - use EP amounts
  - use AP amounts
32. Cooking times and temperatures given in recipes may vary because of the:
- amount of food in the oven
  - amount of food per pan
  - size of pan
  - all of the above
33. In using a convection oven instead of a conventional oven, the following change(s) is/are appropriate:
- reduce the temperature by approximately 25 - 50° F
  - increased the time by 10 - 15%
  - adjust time based on the product category
  - all of the above

## Problem Solving Questions

1. You have been asked by the organizers of a charity picnic to provide purchasing advice. The organizers are planning for 100 guests to attend the event. The menu and serving size information is listed below. What amount of food would you recommend be purchased?

Food items:

Serving size and information:

Fresh Roasted Brisket on a Bun	4 oz meat and 1 bun per person
Potato Chips	1 cup per person
Apples	1 apple per person (113 size)
Celery and Carrot Sticks	3 - 4 sticks per person
Ice Cream Cones	1 #12 dipper of ice cream in a cone
Ice Tea	14 oz paper cup, serve tea with ice
Lemonade	14 oz paper cup, serve lemonade with ice

How much food would you recommend the picnic organizers purchase:

Uncooked Brisket:

Hamburger Buns:

Potato Chips:

Apples:

Celery (AP):

Carrots (AP):

Ice Cream:

Ice Cream Cones:

Ice Tea (gal):

Lemonade (gal):

2. The food production shift leader compiled a list of EP produce needed for the next day's salad bar. A new employee in the ordering department is unsure of the AP amounts to order. Using the EP amounts listed below, how much AP product would need to be ordered?

<u>Food Item</u>	<u>EP Amount Specified</u>	<u>AP Amount Required</u>
Diced Avocado	10 lb	_____
Peeled Cucumbers	15 lb	_____
Head Lettuce	6 lb	_____
Tomatoes	72 slices for sandwiches	_____
Chopped Green Onions	4 lb	_____

3. Answer the following questions.

1 Tbsp of vanilla extract weighs how many ounces? .....

4 oz of vanilla extract measures how many tablespoons? .....

4 oz of vanilla extract measures how many cups? .....

How many cups in a pint? .....

How many ounces in a pint? .....

How many tablespoons in a pint? .....

How many ounces in a gallon? .....

How many cups in a gallon? .....

How many quarts in a gallon? .....

How many cups in a quart? .....

How many grams in an ounce? .....

How many milliliters in a cup? .....

What is the approximate weight of 1 cup of all purpose flour? .....

8 oz lightly packed brown sugar measures approximately? .....

A number 10 dipper weighs approximately? .....

How many number 10 dippers of ice cream would fit in a quart measure? .....

How many number 16 dippers of ice cream would fit in a quart measure? .....

A muffin recipe is calculated for 2 oz/muffins. What size of dipper should be used? ....

4. Adding bowl/kettle/pan sizes to recipes will reduce the chance for error resulting from employees selecting the wrong size piece of equipment. For the items listed below, what size of bowl, kettle, or pan would you recommend the employee use? What is the amount or weight of the product?

a. 27 dozen Peanut Butter Cookies (p. 324)

Mixing Bowl Size: \_\_\_\_\_

Amount/Weight of Product: \_\_\_\_\_

b. 20 lb uncooked Spaghetti (p. 505)

Steam-Jacketed Kettle Size: \_\_\_\_\_

Amount/Weight of Product: \_\_\_\_\_

c. 120 portions of Chocolate Cake (p. 298)

Mixing Bowl Size: \_\_\_\_\_

Amount/Weight of Product: \_\_\_\_\_

d. 200 servings of Split Pea Soup (p. 752)

Steam-Jacketed Kettle Size: \_\_\_\_\_

Amount/Weight of Product: \_\_\_\_\_

5. After panning White Cake (p. 291) into cake pans sized differently from those specified in the standardized recipe, 2 ½ lb of batter remained.

a. What size of cake pan would you choose to bake the remainder of the batter?

\_\_\_\_\_

b. Approximately how many cupcakes would the 2 ½ lb of batter yield?

\_\_\_\_\_



6. An employee returning to work after being injured in a car accident has a 10 lb pound lifting restriction. Mark **yes** or **no** if the employee would be able to lift the following:

- a. 10 x 12 x 2 ½ inch counter pan of meat loaf:                    \_\_\_ yes                    \_\_\_ no
- b. 18 x 26 x 2 inch pan of cake:    \_\_\_ yes                    \_\_\_ no
- c. 10 x 12 x 6 inch pan of soup:    \_\_\_ yes                    \_\_\_ no
- d. 5 quarts of hot spiced cider:    \_\_\_ yes                    \_\_\_ no
- e. 3 gallon tub of ice cream:    \_\_\_ yes                    \_\_\_ no
- f. #10 can of canned apricots:    \_\_\_ yes                    \_\_\_ no
- g. Two number 5 squat cans of tuna fish:                                \_\_\_ yes                    \_\_\_ no
- h. One case of number 3 cylinder cans of tomato juice (12/cs):    \_\_\_ yes                    \_\_\_ no
- i. One 10 x 12 x 4 inch pan of mashed potatoes:                        \_\_\_ yes                    \_\_\_ no