

# Cooking and Pairing Written Exam Key

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

1. Describe each step in the brewing process below.

- a. What are the two most important variables brewers control during the Mashing step? **Time and temperature**
- b. What does the Lautering step accomplish? **Separates the wort from the mash**
- c. What effect does the Boiling step have on enzymes and microbes? **Stops their activity, kills them** What effect does it have on hops flavors? **Extracts bitterness from isomerized alpha acids**
- d. What is the purpose of the Whirlpool step? **Remove particulates and coagulated proteins from the wort.**
- e. What temperature range is wort commonly brought to during the Chilling step? **40-70 F**
- f. What does yeast do during the Fermentation step? **Converts sugars to alcohol and carbonation**
- g. How does yeast activity change during the Conditioning step? **Fermentation stops and yeast settles to the bottom**
- h. What are the three methods of introducing CO<sub>2</sub> during the Carbonation step? **Natural/produced by yeast, forced/carbonation stone, bottle conditioning**

2. List the five main ingredients found in most craft beers.

1. **Water**
2. **Malt**
3. **Hops**
4. **Yeast**
5. **Carbonation**

3. Hops increase the shelf stability of craft beer. (Circle one) **True / False**

4. What are the two general categories of hops? **Aroma and bittering**

5. How is malt different from raw barley? **Malt is converted grain that is steeped, germinated, heated and kilned/roasted to develop flavor and color.**

6. (Fill in the blanks) \_\_\_\_\_ **Ale** \_\_\_\_\_ yeast is a top-fermenting yeast while \_\_\_\_\_ **Lager** \_\_\_\_\_ yeast is a bottom-fermenting yeast.

7. Which yeast type takes longer to ferment? (Circle one) **Ale / Lager**

8. What does IBU stand for and what does it indicate? **International Bitterness Units. It represents the amount of hop alpha acids in beer. 1 IBU = 1 milligram of isomerized hop alpha acids per liter of beer**

9. What do the following acronyms stand for and what do they mean?
- a. OG **Original Gravity**. The amount of sugar in wort before fermentation
  - b. FG **Final Gravity**. The amount of sugar in beer after fermentation
  - c. ABV **Alcohol By Volume**. The strength or alcohol content of the beer
  - d. SRM **Standard Reference Method**. A way of classifying the color of beer
10. List 10 of the 25 main beer styles for U.S. craft brewers and a U.S.-produced example from each:  
See pp. 16-23 for examples and styles
11. What is the style description of an American Amber Lager? **See page 17**
12. What protein and cooking method would you pair with an American Amber Lager and why?
- Roast chicken: malty sweetness pairs with maillard reaction**
- Grilled steak: char of the grill creates maillard reaction that pairs with the amber**
- Game bird (such as quail or pheasant): sauteed or roasted to match the Maillard Reaction**
13. What are the defining American hop character notes present in an American Pale Ale? **Fruity, floral, and citrus-like**
14. Due to the caramel notes in the malt of a German-Style Doppelbock, which reaction found in cooking proteins would pair well with that beer? **Maillard reaction**
15. What is the maximum ABV common in a session beer? **Five percent**
16. Herbs and spices are commonly added to Belgian-Style Saisons to add complexity. (Circle one) **True / False**
17. What are American IPAs known for in their flavor profile? **Fruity, floral, citrus-like, piney or resinous hop notes. These beers are all about hop flavor, aroma and bitterness.**
- a. What challenges are presented to the menu and pairing by this flavor profile? **Hops can increase the sensation of heat on the palate thus making the craft beer not able to refresh the palate as the last note on the palate is a strong burn from the spice reaction.**
18. What is the difference between a Belgian-Style Dubbel and a Belgian-Style Tripel? **A dubbel will use darker malt and have a deeper, richer texture while a tripel will show higher carbonation and stronger notes of belgian candy sugar.**
19. American Brett beers can be ales or lagers. (Circle one) **True / False**

20. What are the three main organizations that are responsible for categorizing beer styles?
1. Brewers Association
  2. Beer Judge Certification Program
  3. CraftBeer.com
21. Why should beers with a "crisp and clean" flavor profile be paired delicately?
- To allow the subtle notes of the beer to speak through the pairing.
22. (Fill in the blank) Hops contribute the majority of the \_\_\_\_\_aroma\_\_\_\_\_ found in an American IPA.
23. Spice flavors found in most beers can be attributed to the \_\_\_\_\_yeast\_\_\_\_\_ used.
24. Fruit and toffee flavor profiles come mainly from what ingredient(s) in craft beer? Fruit and toffee flavors can come from the use of specific yeast strains, caramel roast malts, and barrel aging.
25. What are the six types of packaging available for craft beer?
1. Draught
  2. Individual bottles
  3. Large-Format bottles
  4. Magnum bottles
  5. Can
  6. Growler
26. What is the number-one factor in how well a draught beer will pour? Temperature
27. When pouring beer, it is recommended to rest the glass on the nozzle of the draft system. (Circle one) **True / False**
- a. Why? This prevents unsanitary conditions and glass breakage.
28. What is the recommended size of the collar of foam or "head" for most craft beer? One inch
29. What is the temperature range at which cask beers are commonly served? 45-55 F
30. As a general guideline \_\_\_\_\_38-45\_\_\_\_\_ degrees F is the recommended serving temperature for American craft beer.
31. What are the proper steps for presenting and opening an individual bottle of craft beer at the table?
- a. Present the bottle to the guest unopened, with label facing the guest.
  - b. Keeping bottle vertical, remove cage and cork or cap.
  - c. Hold glass at a slight (45-degree) angle and pour beer into glass.
  - d. While pouring the last third of the bottle, raise bottle away from glass to create nice collar of foam.
  - e. Unless requested, remove bottle and present glass to guest.

32. Stronger beers should be served at (Circle one) **warmer** / **colder** temperatures compared to weaker ABV beers.
33. Lagers are commonly served colder than ales. (Circle one) **True** / **False**
34. What is the recommended temperature range at which to store the following packaging types?
- Kegs of craft beer: **Less than 40 F**
  - Bottles and/or cans of craft beer: **Less than 50 F**
  - Cellared craft beer: **45-55 F**
35. When evaluating the aroma of a craft beer, you should swirl the craft beer in the glass before the first smell. (Circle one) **True** / **False**
36. What would you pair with a Belgian-Style Wit beer, and why? **The most classic pairing is shellfish, whether mussels, clams, scallops or prawns. A light cooking method and use of citrus are the most classic pairing techniques.**
37. (Fill in the blank) Hop bitterness is balanced and settled on the palate by the addition of \_\_\_\_\_ **sugar** \_\_\_\_\_ to a dish.
38. What is one of the best cooking methods to compare the roast of a malt to the protein of a dish? **Grill**
39. What craft beer style would you recommend to cleanse the palate of a sauce made from a veal stock reduction? Why? **Porter, Stout, Dubbel, Quadrupel. Looking for an answer that uses alcohol to cut fat or roasted malt flavors to match the richness.**
40. In pairing a saison with Dungeness crab, what main flavor of the saison will the crab highlight? **Yeast**
41. Draw lines to match each of the following craft beer styles with the best cheese for pairing.

- |                         |       |                 |
|-------------------------|-------|-----------------|
| a. Brown Ale            | _____ | a. Gouda        |
| b. American IPA         | _____ | b. Fresh Chevre |
| c. Kolsch               | _____ | c. Blue Cheese  |
| d. Belgian-Style Tripel | _____ | d. Triple Creme |
| e. Imperial Stout       | _____ | e. Aged Cheddar |

42. Rank the following craft beer styles in the proper order for tasting (1-5).

- a. Kolsch **2**
- b. Imperial Porter **3**
- c. American IPA **4**
- d. Belgian-Style Wit **1**
- e. American Wild Ale **5**

43. As a fresh craft beer ages, what is one of the first things to disappear from the flavor profile? **Hop aroma**

44. A beer that pours with a weak or non-existent collar of foam may be too old to serve. (Circle one) **True / False**

45. (Fill in the blank) Generally, only craft beers with an ABV of at least **8%** should be considered for cellaring.

46. Establishments who choose to offer vintage beer examples inherit full responsibility for a beer that is cellared and served past its normal age range. (Circle one) **True / False**

47. You are working on a three-course beer dinner menu. The main ingredient of each dish is listed below. Finish out each course and pair each one with a craft beer style. Include tasting notes to explain the interactions you intend for the pairing.

a. First Course: Diver Scallop \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b. Second Course: Duck Breast \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

c. Third Course: Dark Chocolate \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

48. What is "palate fatigue"? **When the guest's palate has been overwhelmed by too many beers and/or courses, leaving them unable to fully perceive what is presented.**

49. Deglazing a pan with an American IPA is a good way to add flavor to a sauce. (Circle one) **True / False**
50. A guest asks for a craft beer that will have notes of dark roasted malt and chocolate. What beer style would you recommend? **Robust Porter**
51. You have two guests at the table. One is drinking an American Pale Ale and the other has started with a saison. What dish would you recommend they start out with? **Charcuterie preparations or cheese are a great start. A game bird appetizer or composed salad would work as well. Avoid strong flavors of spice, sweet, and heat as they will not compliment both beers at the same time. Lightly fried appetizers will work as well.**
52. In your own words, define craft beer: **Craft Beer is not defined. A craft brewer is small, independent and traditional. See page 6 for full definition.**
53. What is your favorite craft beer right now and why?  
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**Exam Answer Key Available for download at [CraftBeer.com/Culinary](http://CraftBeer.com/Culinary)**