COFFEE SKILLS PROGRAM

Brewing
Professional

Written Examination
Student Version

Name: _____

Exam Date: _____ Course Trainer: _____

Email Address: _____

Postal Address: _____

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Company: _____ SCA Membership No: _____

PLEASE NOTE:
Please answer all questions.
This is a closed-book exam. No conferring is allowed. A passing score is 80%.
The maximum allowable time for this examination is 45 minutes.
If the exam is given in a language that is not your first language, an extra 15 minutes is available upon request of the examiner.

Results

Points Earned: ___ / 35 points = _____%

☐ Pass
☐ Fail

Specialty Coffee Association

BREWING

1. A 5 liter brew made with 120 grams of regular filter grind coffee in a flat-bed 5 liter brew basket will achieve Gold Cup?
   a. True
   b. False

2. Extracting the maximum from ground coffee will optimize the resultant beverage:
   a. True
   b. False

3. If I brew with 2L of water and a 1:17 brew ratio, what is my approximate expected volume of finished brew?
   a. 2.5L
   b. 1.5L
   c. 1.8L
   d. 1.6L

4. What micron range contains the highest percentage of grounds for filter brewing (gravity/immersion/pressure)?
   a. 200 – 300 microns
   b. 400 – 900 microns
   c. 700 – 1200 microns

5. During the wetting of the coffee bed, the release of CO2 gases, causing the coffee bed to rise, is often referred to as:
   a. Blooming
   b. Degassing
   c. Hydrolysis

6. When brewing filter coffee, what does the first stage of extraction yield?
   a. High Solids
   b. Low Solids and Low Ph
   c. Average Solubles

7. With the same brewing parameters on two different brews of the same coffee, one light roast, one dark roast; which coffee will yield a higher TDS?
   a. Light roast
   b. Medium roast
   c. Dark roast

8. How does a dark roast profile affect the brewing process?
    a. Higher oil content of dark roast releases more flavor during extraction
    b. A darker roast is more brittle, yielding more fines upon grinding and darker roasted soluble matter dissolves (extracts) quicker.
    c. Dark roast has more beans by volume because they are lighter in weight, therefore more beans equals more extraction.

9. Keeping all parameters the same, an immersion brew with agitation will yield a higher extraction than an immersion brew without agitation?
    a. True
    b. False

10. What micron range contains the highest percentage of grounds for espresso brewing?
    a. 200 – 300 microns
    b. 400 – 900 microns
    c. 700 – 1200 microns

11. If you would like to increase your beverage extraction you just need to add more coffee:
    a. True
    b. False

12. If you increase your brew volume from a 2 liter brew to a 12 liter brew, you will reduce the dose of coffee:
    a. True
    b. False

13. If you have 1.25 strength at 1:16 brew ratio, what is your extraction reading?
    a. 18 %
    b. 18.5%
    c. 18.2%

14. What are the 7 elements of essential brewing?
    a. Correct coffee, contact time, temperature, dwell time, quality water, correct grind for brew method, appropriate filter method
    b. Correct water to coffee ratio, blooming phase, temperature, turbulence, quality water, correct grind for brew method, pre-wetting the filter
    c. Correct water to coffee ratio, contact time, temperature, turbulence, quality water, correct grind for brew method, appropriate filter method

15. With all other parameters being equal, if using a metal sieve (filter) vs a paper filter, what characteristics of the finished brew would be different?
    a. Lower temperature
    b. Increased body
    c. Increased sweetness

16. When measuring espresso TDS, what do you need to do to the brewed sample before measuring using a refractometer?
    a. Cool to room temperature and syringe filter the sample
    b. Remove crema
    c. Stir three times to blend crema with coffee

17. A brew yields 1.2% Strength and 22% Extraction. What parameters would you change to achieve 1.2% Strength and 20% Extraction?
    a. Coffee to water ratio & grind setting
    b. Grind distribution & temperature
    c. Brewing method & filter medium

18. If you brewed with 306g of water, and achieved a strength of 1.30% at 20.2% extraction, how much ground coffee was used?
    a. 16gr
    b. 18gr
    c. 20gr

19. To achieve a finished brew volume of 440mls, using 30 gr of coffee, what is your approximate brew water volume?
    a. 500ml
    b. 525ml
    c. 475ml

20. If you were to break a brew into three stages, what does the last stage typically contain?
    a. Average Solids
    b. Low Solids
    c. High Solids

21. A brew of 1.3% strength and 20% extraction, using a coffee to water ratio of 1:17 is Gold Cup, as measured on the SCA Coffee Brewing Control Chart?
    a. True
    b. False

22. What does the SCA Coffee Brewing Control Chart communicate?
    a. Visual representation of the relationship between brewer and their equipment
    b. Visual representation of the relationship between strength & extraction
    c. Visual representation between roast profile and flavor in the cup

23. What parameter can you change to increase the solubles yield of a 1.10% brew that tastes weak and underdeveloped?
    a. Increase dose
    b. Use coarser grind
    c. Use finer grind

24. When brewing at 88C/190F, what characteristics would you expect in your finished brew?
    a. Brighter acidity
    b. Increased extraction
    c. Unbalanced flavors

25. If you brewed at 1:16 and measured 1.50% strength, what could you do to reduce the strength, but keep the same extraction?
    a. Change the coffee to water ratio by increasing the dose
    b. Change the coffee to water ratio by decreasing the dose
    c. Change the grind profile to increase contact time

26. If your water has chlorine traces and a total hardness of 75ppm and an alkalinity of 50ppm, what treatment would you recommend?
    a. Carbon Filter with no other filtration
    b. Reverse Osmosis with 10% by pass
    c. Sodium softener with Carbon Filter

27. How is bypass used in reverse osmosis water treatment?
    a. All Untreated water is prevented from entering RO system
    b. Treated water passes through RO membrane in reverse direction
    c. Pre-RO water is used to re-mineralize the RO water to desired TDS

28. If you are brewing 2 liters of coffee with 120g of ground coffee and have a 15% by pass, on which brew ratio line would you chart this?
    a. 1:14
    b. 1:15
    c. 1:16

29. What will typically happen if you brew filter coffee at 98°C/208°F
    a. Dissolve too much of the bean fiber into solution
    b. Over-extract coffee and pull out undesirable flavors
    c. Burn the caffeine molecules

30. Water for coffee should be:
    a. Free of chlorine/chloramine
    b. Never be filtered – treated
    c. Contain high levels of iron
    d. Always be softened to a total hardness < 30 ppm

31. What combination of Alkalinity and Total Hardness will give more body in the cup?
    a. Higher alkalinity and higher total hardness level
    b. Lower alkalinity and higher total hardness level
    c. Lower alkalinity and lower total hardness level
    d. Higher alkalinity and lower total hardness level

32. All water needs to be softened – choose the correct response:
    a. YES, hardness is a problem for equipment and coffee extraction
    b. NO, you should first measure the water and evaluate if any water treatment is required
    c. YES, total hardness and carbonates (buffer) should always be reduced to a minimum
    d. YES, equipment suppliers will not accept any warranty claims without softener filter on the equipment

33. What impact will a sodium softened water have on my filter coffee?
    a. Increase salty taste of the coffee
    b. Boost coffee extraction
    c. Reduce extraction of fine flavor compounds
    d. Deliver an under-extracted coffee

34. If I have a water with alkalinity of 120ppm, total hardness 140 ppm, pH 7.8 without technical support (filtration) going into the equipment, I can expect:
    a. The equipment will have no issues and deliver strong body coffee
    b. The equipment will scale up and require frequent maintenance
    c. The equipment will require more time to reach the right temperature
    d. The equipment temperature probe will react faster at lower temperature

35. If I have a water with alkalinity 45ppm, pH of 7.0, and total hardness 80ppm; I can expect:
    a. Coffee will deliver inconsistent in brewing, under extraction, higher acidity
    b. Coffee will tend to taste empty, flat and sour
    c. Coffee will deliver a richer coffee flavor, strong body, balanced but missing fine flavors and aromas
    d. Coffee will be bright, clean and balanced in the cup with fine aromas and flavors.

END OF EXAM