

Advanced Viticulture and Enology

Viticulture & Wine · Answer Key · 20 Questions

1. Which process involves the conversion of malic acid into lactic acid by *Oenococcus oeni* bacteria to reduce wine acidity?

A) Carbonic maceration

B) Malolactic fermentation

C) Chaptalization

D) Sulfiting

2. What is the primary function of the rootstock in grafted *Vitis vinifera* vines?

A) To increase sugar accumulation in berries

B) To enhance vine photosynthetic efficiency

C) To provide resistance against phylloxera

D) To regulate canopy density

3. In viticulture, what does the term 'veraison' specifically signify?

A) The onset of ripening and color change

B) The dormant winter period

C) The completion of primary fermentation

D) The pruning of secondary shoots

4. Which chemical compound is largely responsible for the 'cork taint' defect in bottled wine?

A) 2,4,6-trichloroanisole (TCA)

B) Ethyl acetate

C) Acetaldehyde

D) Methoxypyrazine

5. What is the primary botanical family to which the grapevine genus *Vitis* belongs?

A) Rosaceae

B) Vitaceae

C) Solanaceae

D) Ericaceae

6. Which technique involves harvesting grapes that have been frozen while still on the vine to produce concentrated dessert wines?

A) Botrytization

B) Late harvest

C) Cryo-extraction

D) Eiswein production

7. What is the primary purpose of 'trellising' in a commercial vineyard?

- A) To prevent soil erosion
- B) To manage vine vigor and maximize sun exposure**
- C) To increase grape skin thickness
- D) To accelerate the fermentation process

8. Which mineral nutrient deficiency in grapevines commonly manifests as chlorosis of the leaves?

- A) Nitrogen
- B) Potassium
- C) Magnesium
- D) Iron**

9. What is the technical term for the study and identification of grape varieties?

- A) Ampelography**
- B) Pomology
- C) Enology
- D) Viticulture

10. Which gas is intentionally added during the bottling of some white wines to prevent oxidation and maintain freshness?

- A) Carbon dioxide
- B) Sulfur dioxide**
- C) Methane
- D) Helium

11. What is the result of 'chaptalization' in winemaking?

- A) Increased alcohol potential**
- B) Decreased bitterness
- C) Higher acidity levels
- D) Increased color extraction

12. Which fungus is known as 'noble rot' when it infects grapes under specific climatic conditions to concentrate sugars?

- A) Botrytis cinerea**
- B) Oidium tuckeri
- C) Plasmopara viticola
- D) Uncinula necator

13. Which component of the grape berry provides the majority of the tannins found in red wine?

- A) Pulp
- B) Skin and seeds**
- C) Stem
- D) Juice

14. What is the primary impact of high canopy density on grape development?

- A) Increased sugar levels
- B) Decreased fungal disease pressure
- C) Reduced airflow and increased humidity**
- D) Accelerated ripening

15. What is the significance of the 'degree days' calculation in viticulture?

- A) Measuring soil pH levels
- B) Estimating heat accumulation for grape ripening**
- C) Predicting rainfall patterns
- D) Determining harvest labor requirements

16. Which winemaking method involves fermenting whole, uncrushed grape clusters in a carbon-dioxide-rich environment?

- A) Cold soaking
- B) Carbonic maceration**
- C) Batonnage
- D) Racking

17. What defines a 'terroir' in the context of viticulture?

- A) The specific brand of winemaking equipment
- B) The complete natural environment in which a wine is produced**
- C) The duration of barrel aging
- D) The specific chemical additives used in the vineyard

18. Which element is the primary substrate for yeast metabolism during alcoholic fermentation?

- A) Citric acid
- B) Hexose sugars**
- C) Tartaric acid
- D) Succinic acid

19. In red wine production, what does the 'cap' refer to?

- A) The layer of skins and solids that rises to the top of the fermenter**
- B) The wax seal on the bottle
- C) The protective netting used against birds
- D) The final layer of yeast sediment

20. What is the function of the 'bâtonnage' technique in winemaking?

- A) Clarifying the wine using egg whites
- B) Stirring the lees to add texture and flavor**
- C) Adjusting the sulfur levels
- D) Filtering the wine before bottling