

Advanced Viticulture and Enology Knowledge

Viticulture & Wine · Answer Key · 20 Questions

1. Which specific botanical feature is used to distinguish *Vitis vinifera* from other *Vitis* species based on the morphology of the leaf underside?

- A) The absence of trichomes (hair)
- B) The presence of arachnoid tomentum**
- C) The presence of prominent stipules
- D) The absence of a petiolar sinus

2. In the context of vine physiology, what is the primary function of the 'stomata' located predominantly on the abaxial leaf surface?

- A) Absorption of nitrogen from the atmosphere
- B) Transpiration and carbon dioxide uptake**
- C) Synthesis of anthocyanins
- D) Structural support for the leaf blade

3. Which of the following compounds is responsible for the distinct 'green pepper' aroma found in Cabernet Sauvignon and Sauvignon Blanc?

- A) Methoxypyrazine**
- B) Linalool
- C) Isoamyl acetate
- D) Diacetyl

4. What is the technical term for the physiological phenomenon where vine growth slows as temperatures drop, regardless of water availability?

- A) Veraison
- B) Senescence
- C) Dormancy
- D) Thermodormancy**

5. Which grape variety is known by the synonym 'Primitivo' in Italy and is genetically identical to Zinfandel?

- A) Crljenak Kastelanski**
- B) Negroamaro
- C) Montepulciano
- D) Aglianico

6. What is the primary objective of 'cap management' during the red wine fermentation process?

- A) To increase the alcohol content
- B) To maximize color and tannin extraction**
- C) To prevent the growth of *Brettanomyces*
- D) To regulate the fermentation temperature

7. Which chemical process involves the conversion of malic acid into lactic acid and carbon dioxide by *Oenococcus oeni* bacteria?

- A) Carbonic maceration
- B) Malolactic fermentation**
- C) Glycolysis
- D) Esterification

8. In the French classification system, what defines a 'Grand Cru' vineyard in the context of Burgundy?

- A) The classification of the specific commune
- B) The historical ownership of the land
- C) The terroir of a specific, legally defined vineyard site**
- D) The total volume of wine produced by the estate

9. What is the maximum allowed level of 'volatile acidity' (expressed as acetic acid) in most table wines before it is considered a sensory defect?

- A) 0.5 g/L
- B) 1.2 g/L**
- C) 3.5 g/L
- D) 5.0 g/L

10. Which viticultural pest, an aphid-like insect that feeds on vine roots, caused the near-total destruction of European vineyards in the late 19th century?

- A) *Drosophila suzukii*
- B) *Phylloxera vastatrix***
- C) *Lobesia botrana*
- D) *Planococcus ficus*

11. Which of the following describes the 'cordon' training system?

- A) A head-trained bush vine
- B) A cane-pruned system with a single horizontal arm
- C) A spur-pruned system with a permanent horizontal arm**
- D) A vertical shoot positioned trellis

12. What is the primary role of 'bentonite' in winemaking?

- A) To increase acidity
- B) To clarify wine by removing proteins**
- C) To induce secondary fermentation
- D) To enhance tannin structure

13. Which grape variety is the primary constituent of the classic 'Chianti' wine blend?

- A) Sangiovese**
- B) Nebbiolo
- C) Barbera
- D) Corvina

14. What does the term 'Brix' measure in the context of viticulture?

- A) The total acidity of the grape juice
- B) The sugar content of the grape juice**
- C) The pH level of the must
- D) The concentration of phenolic compounds

15. Which winemaking technique involves fermenting whole, uncrushed berries in a carbon dioxide-rich environment?

- A) Cold soaking
- B) Carbonic maceration**
- C) Sur lie aging
- D) Extended maceration

16. In the Champagne region, which grape variety is most commonly used for a 'Blanc de Noirs' sparkling wine?

- A) Chardonnay
- B) Pinot Meunier**
- C) Petit Meslier
- D) Arbane

17. What is the 'peduncle' of a grape cluster?

- A) The main stalk that attaches the cluster to the shoot**
- B) The individual stem attaching a berry to the rachis
- C) The protective skin of the berry
- D) The sugary pulp inside the grape

18. Which of these soil types is most associated with the drainage properties of 'terroir' in high-quality viticulture?

- A) Deep clay
- B) Silt-loam
- C) Stony, well-draining soil**
- D) Peat

19. What is 'sur lie' aging?

- A) Aging wine in oak barrels
- B) Aging wine in contact with dead yeast cells**
- C) Aging wine in stainless steel tanks
- D) Aging wine in the bottle before release

20. Which enzyme is commonly added during fermentation to break down pectins and improve juice yield and wine clarity?

- A) Pectinase**
- B) Amylase
- C) Lipase
- D) Cellulase