

10) One major pathogen (microbe) that is typically a problem to quality wine grape production in BC is

- a) Powdery Mildew b) Downy Mildew c) Kloeckera
d) Schizosaccharomyces e) none of the above

11) When someone is an anosmic, that person:

- a) confuses red and green
b) confuses red, green and yellow
c) lacks the gene for alcohol dehydrogenase and consequently has a very low tolerance level for alcohol
d) is unable to perceive a number of or all aroma compounds
e) none of above

12) Our gustatory ability to taste the bitter component of wine depends on

- a) the detection threshold
b) the activity of circumvalate papillae on the tongue
c) the olfactory bulb
d) the activity of fungiforme papillae on the tongue
e) an efficient olfactory system

14) When considering the aromas/flavours of a wine, the ____ threshold refers to the smallest amount of a substance that can be detected and identified by a person.

- a) impulse b) detection c) recognition d) gustatory e) olfactory

15) The scientific classification (genus & species) of one of the main native wine grapes from North America is

- a) Vitis labrusca b) Vitis vinifera c) Vinis vitificus d) Saccharomyces cerevisiae

19) The **varietal** aromas of wines (e.g. lychee) typically come from

- a) the skins of the grapes b) the pips of the grapes c) the malo-lactic fermentation
d) the oak barrels e) the pulp of the grapes f) all the above

20) The country with the most wine production globally is typically:

- a) Germany b) Spain c) South Africa d) Italy e) USA f) Australia

21) The aroma compound released by ladybugs caught in “grape must “ is very similar to

- a) grape norisoprenoids that have a kerosene aroma
b) grape hexanals that has a green apple/vegetal aroma
c) grape monoterpenes that can have an unpleasant barnyard aroma
d) methoxypyrazines that have an unpleasant green pepper-like and/or rancid peanut butter-like aroma
e) all of the above

23) For **red wines**, the berry surface:volume ratio is especially important to

- a) disease resistance b) photosynthesis c) the sugar:acid ratio
d) alcohol level e) the amount of colour/flavour extraction

24) Winter pruning generally removes about

- a) 60% of buds b) 10% of canes c) 40% of canes d) 90% of buds e) 90% of cordons

26) An example of a white wine-grape variety that ripens unusually early (typically early September in BC); typically the wine from it has some floral aromas and also its acidity tends to be low-medium:

- a) Riesling b) Muller Thurgau c) Pinot Noir d) Sauvignon Blanc e) Cabernet Sauvignon

28) (4 marks) Discuss benefits & a limitations in using mechanical harvesting for wine-grapes instead of hand-picking:

29) (2 mks) An example of a vine training system is the “Double Guyot”.

A. Briefly describe this system (plus a simple diagram with labels to illustrate is recommended) and it’s renewal system (continue next page).

B. (2 marks) Briefly describe one other example of wine grape training systems – one that uses a different renewal system (plus a simple diagram with labels to illustrate is recommended).

30) a. (2 marks) An established vineyard of Cabernet Sauvignon in a clay-loam soil in the mid Okanagan Valley has a quite large projected harvest of 8 tons/acre and now it is August 12th. It has been a cool cloudy and somewhat wet summer, but it has become very warm and dry this past week. The grower was going to start full irrigation, but his neighbour has advised this might not be a good idea. Please explain why irrigation would not be the best option for this grower.

31) (2 marks) Match grape variety with the number of the related “typical” varietal aroma/bouquet

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|-----------------------|-------|--|
| a) Sauvignon Blanc | _____ | 1. earthy, strawberry/raspberry, cherry, tea, clove-spice, smoky |
| b) Gewurztraminer | _____ | 2. smoky, black currant, blackberry,/cherry black pepper |
| c) Cabernet Sauvignon | _____ | 3. guava, grapefruit, passionfruit, grass/asparagus/green pepper |
| d) Pinot Noir | _____ | 4. rose/honeysuckle, lychee, honey apricot, hint nutmeg-spice |

32) (4 marks). Connect the month with the number of a main activity/process/event that is most often associated with it (for a typical vineyard in the Okanagan for example.)

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|---------------------|-------|---|
| a) August | _____ | 1. unwanted canes/buds are pruned off |
| b) early July | _____ | 2. frost protection is especially required |
| c) January-February | _____ | 3. netting and/or noisemakers are set up; veraison |
| d) May | _____ | 4. shot cluster can occur if poor (wet/cold) weather occurs |