

WSET Level 3 Award in Wine and Spirits

Practice Short Answer Questions

Name:-.....

Question 1

The following question relates to the wines of Germany.

Due to the challenging climate in the Mosel, all the very best vineyards share similar characteristics. Explain what the climatic challenges in the Mosel are and identify and explain how three vineyard characteristics help to overcome these challenges.

Climatic challenges

The climate in the Mosel is cool and there is a risk of frost and in extreme case winter freeze. This means that it can be a struggle to ripen grapes and that crops and the vine itself can be severely damaged in the winter/spring.

3 marks

Vineyard characteristic 1

The vineyards are all on steep slopes that have a south facing aspect. This maximizes the exposure of the grapes to both heat and light which means that these sites are better able to ripen fruit every year. These slopes can also reduce the risk of spring frost as cold air will sink past the vines to the lowest point.

3 marks

Vineyard characteristic 2

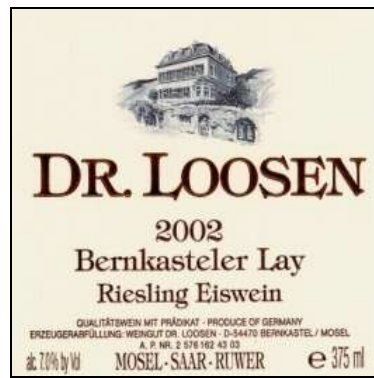
The soils in the best vineyards have a high stone/slate content. These stones can store and radiate heat back into the vineyard and this added warmth can ensure the grapes ripen fully in a cool climate. This extra heat can also be important in helping to mitigate the risk of spring frosts.

3 marks

Vineyard characteristic 3

The vineyards are located right by the river and this will reflect light back up into the vineyard. Light is a key element needed to ripen grapes and this will help to increase the level of light in the vineyard. The thermal mass of water and flowing water can help to mitigate the effect of frost too.

3 marks



These two premium quality wines have very different characteristics. Under the headings below explain how, what happens as the grapes develop, up to the point when they are crushed, has a direct impact on the style and quality of these two wines.

Sweetness and acidity

Both wines are very sweet which is a quality balanced by high acidity. This is achieved in very different ways.

*Beerenauslese: The grapes need to ripen as healthy grapes and then they will need to be infected by the fungus *botrytis cinerea* (Noble Rot). The fungus shrivels the grapes and allows water to evaporate. This concentrates the sugar and acid in the grapes resulting in juice that is very high in acidity and sugar when the grapes are crushed.*

Eiswein: In this case the grapes must ripen and remain rot free and unpicked in the vineyard. During the winter when temperatures are low enough (-8C) the grapes freeze on the vine. They are picked when frozen and crushed/pressed. The ice that forms in the juice gets trapped in the press and the remaining liquid is concentrated in sugar and acid.

8 marks

Flavour characteristics

The flavour of the wine is very different due to the way in which the concentration is achieved. Noble Rot adds flavor complexity to the wine (honey, dried fruit, orange marmalade) whereas the healthy grapes used in Eiswein simply have water removed so they have a pure, highly concentrated varietal character.

4 marks

TOTAL: 24 marks

Question 2

The following question relates to the wines of California.

- a) White Zinfandel is typically a fruity, medium-sweet, low alcohol wine with a medium rosé colour. Under the headings below describe an option a winemaker might use to achieve these characteristics in a wine and explain how this chosen technique works.

Colour

The colour in a rose comes from the skins of black grapes, in this case Zinfandel. The colour extraction from the skins needs to be managed so that the wine does not become red. One obvious option is drawing off. The juice is only kept in contact with the skins for a very short period (6-48 hrs) limiting the amount of colour extracted. The juice is then separated from the skins to stop colour extraction.

5 marks

Fermentation

We would expect most student would comment on the medium-sweet, low alcohol character of the wine.

The alcohol in the wine comes from the yeast converting sugar into alcohol. In order to make a medium sweet, low alcohol wine, fermentation must be stopped before all the sugar is consumed to give a wine that has sweetness and a low alcohol. The fermentation can be stopped by either adding extra SO₂ to stun the yeast or by chilling the fermenting must to stop the yeast from working. Either way, the yeast then needs to be removed by filtration or else the wine will start to ferment again.

Note: Some students may focus on fruity aspect of the wine. This would be beyond the range of most students and would not be expected in order to get full marks. Students would need to cover the choice of yeast and fermentation temperature and the impact of both to get the marks.

6 marks

Maturation

This is not a style of wine that will benefit from long ageing of any length. It does not have the tannin, acidity or alcohol to make sure this happens. The appeal is the fresh fruity taste and these are likely to fade rapidly. Therefore the wine will be stored in inert vessels which will not add extra flavour and keep the wine away from oxygen which would compromise the fruit. It will be bottled young and sold as quickly as possible.

5 marks

- b) California has a reputation for making medium acid, full bodied Chardonnays with flavours of hazelnut, butter and vanilla. Describe two techniques that a winemaker could use to achieve this style and explain how they work.

Technique 1

Malolactic Fermentation: this takes place after the alcoholic fermentation has finished. Malic acid is converted to Lactic acid which softens and reduces the acidity. This process also adds buttery, hazelnut flavours to a wine.

4 marks

Technique 2

Oak: this can be used during the alcoholic fermentation and during a period of maturation prior to bottling. In order to get strong vanilla flavours new oak is required as this characteristic of the oak fades every time it is used.

Note:

- There is no specification in the question over the quality level of this wine so the marks would be equally valid if a student mentions oak staves/inserts or barrels.
- Lees stirring would also be a valid answer.

4 marks

TOTAL: 24 marks

Question 3

a. A *Fino* Sherry is aged under *flor* in a *solera* system.

i. What does *flor* need to survive and thrive

Flor needs certain nutrients and environmental conditions to survive and thrive.

Nutrients: oxygen, alcohol, there are other nutrients in the wine too.

Environmental factors: The alcohol in the wine needs to be no more than 15.5%abv, the temperature needs to be cool to moderate and the humidity high.

6 marks

ii. Does the *solera* system maintain these conditions

The solera system is set up so that that the younger wines are constantly being fed into older wines. This means as the alcohol and other nutrients are consumed by the flor they are constantly being replaced by a fresh supply of nutrient rich wine. In order to maintain a steady flow of nutrients, wine for sale is regularly drawn from these solera systems.

4 marks

iii. Some *Finos* enter *Amontillados solera* systems for further ageing. What has to be done to a *Fino* before this can happen? What impact does this have on the style of the final wine.

The Fino is refortified to 17%abv. This kills the flor in the wine and means that flor cannot grow any further. This means that Amontillado then age oxidatively and therefore the flavor linked with this type of maturation (toffee, leather, spice, walnut etc.) will develop.

4 marks

- b. If they are opened in 2012, a 1992 Vintage Port and a 20 year old Tawny port would be a similar age but very different in style. Describe how these wines will have been handled from fortification to service in 2012 and the impact this will have had on their style.

Vintage Port

Vintage Ports are the premium ruby styles where primary fruit aromas are needed in the young wine for it to age to style. Consequently oxygen contact is kept to a minimum. First the wines are bottled when they are young (18 months to 3 years) and in the time before bottling they are stored in large old oak vats (new oak flavours are not part of the style) or even inert tanks. The wines then age in bottle. Although over 20 years there will be some colour loss these wines will still be clearly red in colour and have developed fruit and high tannins.

This wine is the product of a single vintage and the wine will have the unique qualities of that year.

5 marks

20 year old Tawny Port

Tawny Ports undergo a very different maturation process. They will be stored in seasoned oak pipes (550L). New oak flavours are not part of the style of Port. These wines will then undergo an oxidative ageing process which will mean that the colour browns and the tannins will soften too. The wines will have aromas linked to this ageing process (dried fruit, walnut, coffee)

This is also a blended wine and the age statement is an average age of the wine in the blend. This is how the style is kept similar for one bottling to the next

5 marks

TOTAL: 24 marks

Question 4

The following question relates to a restaurant scenario.

- a) A restaurant has its top wines in long-term storage. Under the headings below state what the ideal storage conditions are and what conditions should be avoided and why?

Temperature

The wines should be stored where the temperature is cool and constant and, preferably between 10-15C.

Extremes of hot (early maturation and decline, cause off aromas) and cold (cork failure) should be avoided as should wide temperature fluctuations.

4 marks

Storage of bottles sealed under cork

These bottles need to be stored on their side so that the wine stays in contact with the cork. This keep the cork moist and it maintains a better seal. If the bottle is stored standing up then the cork may dry out and the seal fail, resulting in oxidation.

4 marks

- b) During service a customer asks you to recommend an Australian alternative for his two favourite wines.

Recommend alternative wines that have a similar style, quality and price. You must account for the factors in the vineyard and winery which make your choices appropriate. Also explain any important differences between the wines.

i. **Meursault Premier Cru**

Alternative wine stating grape variety and region of origin

Yarra Valley Chardonnay

2 marks

Factors in the vineyard and winery

Chardonnay is grown widely throughout Australia and many areas are simply too warm to create a wine that is similar in style to top quality Burgundian whites. The Yarra Valley is an area that is cooled by cool winds that blow in off the coast and by altitude and so the wines do not have the very ripe tropical fruit character of the warmer areas that would be untypical of Burgundy. Nevertheless it is possible that these wines could have a fruitier quality than their Burgundian counterparts. The wine would also need to be barrel fermented and matured in French oak and this should be done in a more restrained style than some Australian wines. The wine would also need to have a savory quality and so it is likely that the musts will not have been clarified so much prior to fermentation.

6 marks

ii. **Margaux**

Alternative wine stating grape variety and region of origin

Margaret River Cabernet Sauvignon

2 marks

Factors in the vineyard and winery

Margaret River, right on the seaboard, has a very similar maritime climate to Bordeaux and has made a specialty of producing premium quality Cabernet Merlots where the cooler conditions mean the fruit can have more similar fruit characteristics to Bordeaux than a warmer areas where their fruit would be riper and jammier. The wine should have a more structured tannin character and a restrained use of new oak although the final choice should be led by the customers preferred style of Margaux where wines are becoming riper with more new oak influence.

6 marks

TOTAL: 24 marks