**CC0**

**Part A**

Set up a database server on your own Mac, Windows, or Linux machine, or a virtual machine. Open phpMyAdmin. Create a new database called wine. Import the file wine.sql into the new database.

A1. (30 points) Submit a screenshot of phpMyAdmin demonstrating that you have successfully imported wine.sql.

Browse the tables of the wine database to answer the following questions. Note that you should not need to submit any SQL queries to answer these questions. It should be possible to answer these questions using the functionality built into phpMyAdmin.

A2. (2 points) How many tables are there in the wine database?

A3. (2 points) How many columns are in the product table?

A4. (2 points) How many rows are in the supplies table?

A5. (2 points) How many null values are in the supplier table?

Part B

For each of the following descriptions, give an SQL query that would return the desired result.

B1. (5 points) All information in the product table.

B2. (5 points) The name and status of every supplier.

B3. (5 points) The same as the previous question, but the supplier name column should be given the label “Name” rather than “SUPNAME”.

B4. (5 points) A list of all cities where suppliers are based, with each city listed exactly once.

B5. (5 points) The product number and name of all sparkling wines.

B6. (5 points) The name of every supplier whose status is between 20 and 90 inclusive.

B7. (5 points) The names of all red wines whose available quantity is less than 10.

B8. (5 points) The names of all wines whose name contains the string “Chardonnay”.

B9. (5 points) The names of all suppliers whose status is null.

B10. (5 points) The names of all suppliers whose status is not null.

B11. (10 points) Consider product 0154, the Chateau Haut Brion, 2008. The available quantity is currently 111. The editing features within phpMyAdmin to change this value to NULL. Immediately after you do this, carefully examined the results shown by phpMyAdmin. About half a dozen lines from the top there should be a line of SQL displayed, beginning with “UPDATE `product`”. This is the SQL command that was used to set the desired value to NULL. Paste in this line of SQL as your answer to this question. When you have finished, change the value of product 0154’s available quantity back to 111.

B12. (10 points) Consider your answer to the previous question. Even though we have not studied any of these SQL expressions yet, try to guess what they mean and explain your guesses in one or two sentences. You are not required to do any additional or outside research for this question. Just guess the meanings using common sense.

Part C

C1. (20 points) Suppose you are the president of a college debate society. The society currently stores information about its members in a spreadsheet. In a few sentences of your own words, describe some of the advantages that could be gained by storing this information in a database instead of a spreadsheet.