**IT-223 - Assignment #2**

**How to complete your assignment:**All questions in this assignment should be saved into a Microsoft Word document or any ‘doc’ or ‘RTF’ compatible file.  PDF is also fine. This file will then be submitted. When using SPSS, note that you can right-click any graph and choose 'copy'. You can then paste the graph directly into your Word document.

**Datasets:** On this assignment, you will be asked to use various datasets that you can open in SPSS.  Retrieve datasets for this course module checklist and download it.

You will need to refer to the **'SPSS Primer'** to answer most of these questions.

**Each question is worth 10 points.**

**Question #1:**A certain test has the distribution N(470, 85)

1.      What score is needed in order to reach the 93rd percentile or above?

2.      60% of students will achieve a score of at least \_\_\_\_\_?

3.      What percentage of students will score between 380 and 580?

**Question #2**: The following table gives the number of days required for certain type of tree to flower after being treated with a certain new form of enriched soil.

**52,97,112,112,115,117,121,123,124,127,129,132,137,172**

1.      Enter these data by hand into SPSS.  (You will notice that SPSS will tend to add two decimal places – you can ignore this).

2.      Using SPSS, provide a boxplot.

3.      Calculate the 5-number summary (do this yourself, not with SPSS).

4.      If you encounter a starred datapoint on the boxplot created by SPSS, what do you think it represents?

**Question #3: (12):**Use the file **acidrain.sav**. This dataset records the acidity of rainwater from a series of experiments. The acidity is recorded as 'pH' measurements.

1.      Using SPSS, draw a histogram of the pH values from the experiments. Right click the graph, and paste it into your Word document. Do you think this data is normally distributed? How can you help confirm? (Using SPSS, draw any graphs you think might be necessary).

2.      Using SPSS, determine the mean and standard deviation of the pH. Look for '**Descriptive Statistics**' in the SPSS Primer. Read the resulting table, and type out the mean and SD of the dataset.

3.      A pH of 4.9 is quite acidic. What percentage of rainwater measurements had a pH of 4.9 or below ?

**Question #4:** Use the dataset **callcenter80.sav** for this question. This dataset is a list of the duration of telephone calls (in seconds) to a customer support line for a company over a certain period of days.

1. Graph the histogram for this dataset.
2. Then report the mean and standard deviation.
3. How many calls lasted longer than 4 minutes?