PESIT Department of Computer Science and Engineering

Course: Correlation
Semester: 2014 Spring (January – May)
Instructor: BNR (Dr. B. Narsing Rao)

Assignment: 10
Topic: Correlation
Due by: Midnight on Tuesday, April 15, 2014
Method: Send zip archive (.zip, .rar, etc.) by email to bnrao@pes.edu
The name of the zip archive should be: DA-A10-your USN-your name
(USN must be upper case and your name should be in mixed case)
The zip archive should contain the following (see below for details):

1. PDF report (see below)
2. Source file containing R functions (named DA-A09-USN-Name.R) used

Use the file glass.csv (the same file that was used for Assignment DA-02). However, for this assignment, you should all the attributes except the Type attribute (i.e. delete that attribute for the purpose of this assignment).

Write suitable R functions to do the following:

1. Generate a pair wise correlation matrix for all the variables. There are nine of them: RI, Na, Mg, Al, Si, K, Ca, Ba, Fe); so there will be (9 * 8)/2 = 36 correlations
2. For each of these correlation coefficients, determine the 95% confidence interval for the corresponding population correlation coefficients
3. Determine which of the population correlation coefficients can be considered to be significantly different from zero
4. Generate plots only for those pairs where the correlation is significant

Produce a report that summarizes the results as well as your observations on correlations that are significant.