## Instructions for Use of R Markdown

Programming test answers are to be submitted using R Markdown. R Markdown provides a convenient way to prepare a report saving the author time; and, facilitating review and grading of the work. R Markdown templates have been prepared, one for each test. All that is required is to place code solutions into the spaces provided on the template, "Knit" the file to prepare an .html document and save both. The R Markdown program and .html document are to be submitted for grading. Do not submit the .md or other intermediate files. No other formats will be accepted for the programming tests.

RStudio is strongly recommended for using R Markdown. The R GUI may be used, but this requires making certain arrangements. To use the R GUI, the "R Markdown" package must be downloaded and installed from CRAN, via *install.packages()*, and loaded, via *library()*. The *render()* function may be used to knit the desired output from an existing R Markdown (.Rmd), markdown (.md) or R script (.R) file. The documentation page for *render()* details the required, "input", and optional arguments. Please note that R Markdown (.Rmd) files cannot be opened in the R Editor. If you are not using RStudio, you may use another text editor, e.g. Notepad++, *or* change the .Rmd file to type .R and open with the R Editor. If you choose the latter option, you will need to change the file back to an .Rmd prior to rendering. Neither of these options provides the auto-completion or syntax high-lighting/coloring that RStudio does. Consequently, RStudio is recommended. It may be downloaded from <a href="https://www.rstudio.com/">https://www.rstudio.com/</a>.

To familiarize yourself with RStudio, R Markdown and the steps involved, please watch the following six minute Panopto video located at:

 $\frac{https://northwestern.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=099f42}{32-5267-4064-a414-a86300e9a7e0}.$ 

Here are links for those of you who want more information on R Markdown:

rmarkdown.rstudio.com/

https://www.rstudio.com/wp-content/uploads/2015/02/rmarkdown-cheatsheet.pdf