RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES

B.Sc. (General) Degree Examination
Third Year – Semester I – October 2014

PHY 3214 – GRAPHICAL PROGRAMMING FOR PHYSICS

Answer **ALL** questions Time allowed: 2 Hours

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1. (a) Make a VI with following facility. When you write a character, if the characters is a capital letter between G and W, a Boolean indicator is switched on.

   (b) Create a VI where two real numbers between 20 and 50 are inputs via " pointes slide" controls. Visualize the sum, the difference, the product and the quotient of these numbers. Show the results on four "meters".

2. Make a VI when the user can choose one out of four strings ("text commands") and put it together with a fixed string and thereafter joined with another four-choice string alternative. The resulting string indicator should look something like the following: optional string 1 (one of four) + fixed string + optional string 2 (one of four others)

3. (a) Create an array with integers from 1 to 500. Present the result using a "wave form graph".

   (b) Create an array with 200 numbers from 1 to 100 (Note that the first element is 1 and the last element is 100). Convert the array values using the logarithm function and present the result in a "wave form graph".

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4. Create a sine wave using "simulate signal VI". Display it on the front panel. User should be able to change the frequency. Using "spectral measurements Express VI" determine the frequency. Add another two signals to the spectrum and analyze it. Place the VI inside a "while loop" and use "time delay express VI" to have a better demonstration about the VI.