RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES

B.Sc. (General) Degree Examination
Third Year – Semester I – March/April 2014

PHY 3214 – GRAPHICAL PROGRAMMING FOR PHYSICS

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

---

1.   Create VI's for the followings.

   a). For the calculation of voltages over two resistors connected in series.
        Inputs: the total voltage, the values of two resistances
        Outputs: the voltage across each resistance

   b). For the calculation of currents through two resistors connected in parallel
        Inputs: the total current, the values of two resistances
        Outputs: the currents through each resistance

2. a)   Make a VI with the following facility.
        When you write a character, if the character is a simple letter between a and z a
        Boolean indicator is switched on.

   b). Make a Boolean 4-input AND & NAND functions.

3.   Create a VI with two string controls. In the first you shall enter a general string
        expression and in the other you shall enter a search string. Use String Functions to
        eliminate the search string from the general string and present the result in a string
        indicator. Show also the position (numeric indicator) of the search string in the
        general string.

4. Using *Simulate Signal Express VI* and *Build XY Graph Express VI*, obtain Lissajou's curves in an *X/Y graph*.
Choose the frequencies for X and Y and trim the movement with the Trim Slider (for this you may use *Formula Express VI*)