IMSC. (MATHS & COMPUTING) - VI Sem.
LAB. ASSIGNMENT 4

COMPUTING LAB – MATLAB (**IMM6004**)

Date of Allotment: **11/04/2020**

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1. Evaluate the working of the following functions with suitable examples

   (a) plot,
   (b) subplot
   (c) plot3
   (d) bar
   (e) meshgrid, surfplot

   Write a program on the following and display the output:

2. Using Newton–Raphson's method, find the real root of the equation $f(x) = x - e^{-x}$ correct to four decimal places. Compare the result with Bisection and Regula Falsi method.

3. Find the double root of the equation $f(x) = x^3 - 7x^2 + 16x - 12$ using Newton–Raphson's method correct to three decimal places. Compare the obtained result with Generalized Newton's method (or modified Newton–Raphson method).

4. Evaluate the positive root of the equation lying near 0.5 of the equation $\cos(x) - xe^x = 0$ correct to four decimal places using Newton's method. Compare the obtained result with Regula–Falsi method.