20XW47 – MATHEMATICAL COMPUTING LAB

M.Sc-Software Systems
– IV SEMESTER

PROBLEM SHEET – 3

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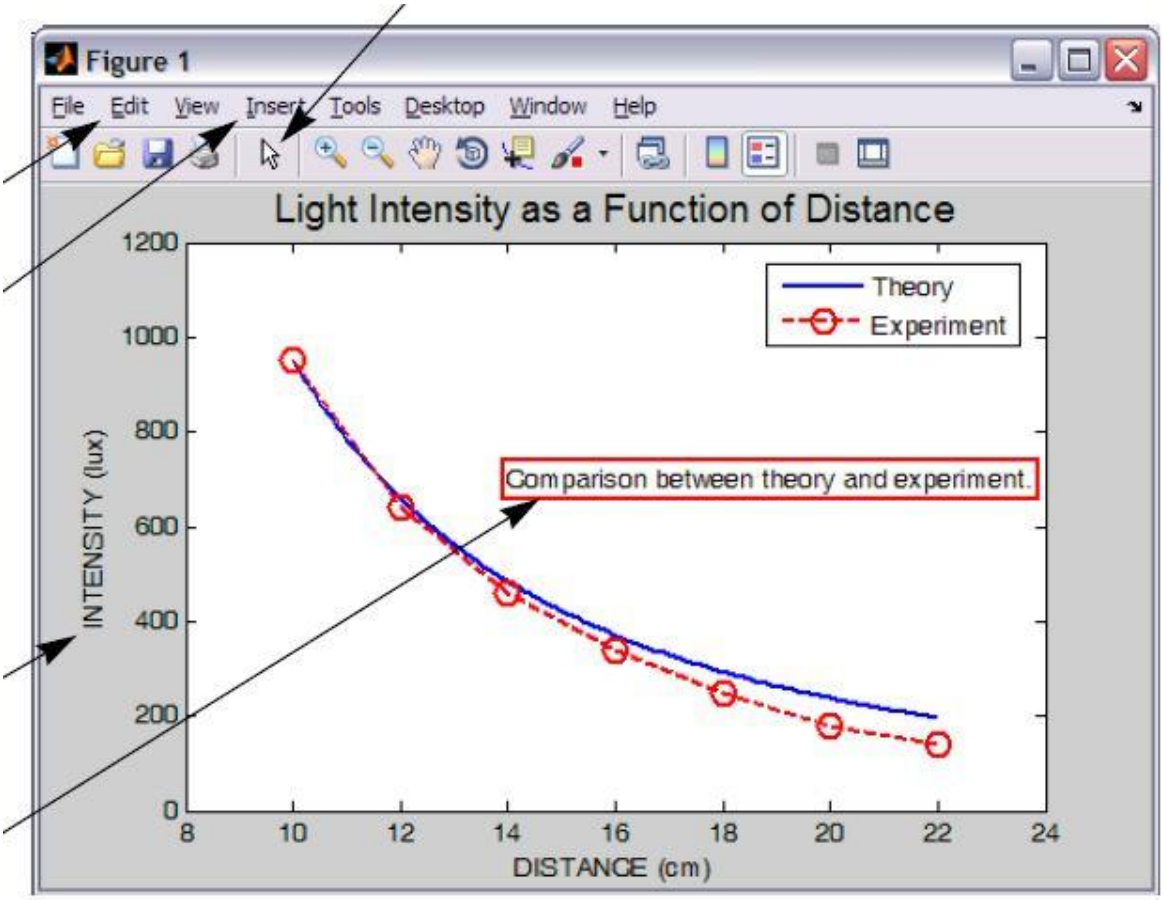
1. Plot using the following table

X:	1	2	3	4	5	6	7	8	9	10
Y:	2	5	6	7	8	10	13	15	18	19

2. Do the problem 1 with dotted red line, circle marker with green edge and yellow face, 2 units line width and 12 units marker size.
3. Create a vector X whose first element is -2, last element is 4 and increment 0.01. Then plot the function $y = 3.5^{-0.5x}\cos(6x), -2 \leq x \leq 4$.
4. Plot $x^2, x^3, \log(x), \frac{1}{x}\ if\ 1 \leq x \leq 10$.
5. Plot $\sin(x), \cos(x), \tan(x)\ if\ 0 \leq x \leq 2\pi$.
6. Using ***fplot*** command, plot the function $\frac{(x+5)^2}{4+3x^2}, -3 \leq x \leq 5$.
7. Using ***plot*** command, plot the function $y = 3x^3 - 26x + 10$, and its first and second derivatives, for $-2 \leq x \leq 4$, with different color lines and all in the same plot.
8. Do the problem 7 using ***hold on*** and ***hold off*** commands.
9. Do the problem 7 using ***line***command.
10. Plot the function $y = \frac{95000}{x^2}$as given in the following figure (some arrows are given in the figure but no need to create them) using ***plot***, ***xlabel***, ***ylabel***, ***title***, ***axis***, ***text*** and ***legend*** commands.



11. Plot the functions given in problem 4 as separate plots in a same page.
12. Make two separate plots of the function $f(x) = (x+1)(x-2)(2x-0.25) - e^x$, one plot for $0 \leq x \leq 3$ and one for $-3 \leq x \leq 6$ in two different windows.