

INTRODUCTION TO MATLAB WORKSHOP (DAY – 5)

QUIZ PROBLEMS – 12th April 2025

Instructions:

1. Read questions and instructions carefully. Do not copy from each other.
2. Make the code clean, so that it's easy to read.
3. Enjoy!!

Question 1: [Marks: 3]

Generate a random integer $x_{integer} \in [500, 1000]$. Use if-else statement to check whether it is divisible by 15.

Question 2: [Marks: 1 + 3 + 1]

(a) Generate an array of dimension 1×51 where all the elements are zero.

(b) Now you need to set the values of all the odd indexed (e.g., 1st, 3rd, 5th, etc.) elements to the square of their corresponding index.

[Hint: Use loop. The array should look like: [1 0 9 0 25 0 49 ...]]

(c) Generate a random integer $x_{rand} \in [100, 200]$ and append it in the previous array.

Question 3: [Marks: 3 + 4]

Here is the link of a .csv file:

<https://drive.google.com/file/d/1DbreBt8Gk3o4Un3loSwhmxbGfa7IKtRp/view?usp=sharing>

(a) The provided .csv file contains data on India's population over different years. Download the file and upload it to the Current Folder section in MATLAB. Read the data from the file, using the first row as the x-axis (years) and the second row as the y-axis (population). Ensure that both axes are labelled clearly.

(b) Notice that some data points (years and corresponding population) are missing. Generate the missing data points by interpolation and save the data in the form of .csv file.