BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)
B. Tech. Sem - VII Computer Science & Business Systems : SUMMER : 2025
SUBJECT: ITC-V: IT WORKSHOP

Day : Friday
Date : 16/05/2025

S-24197-2025

Time : 02:30 PM-05:30 PM
Max. Marks : 60

N.B.:

1) All questions are **COMPULSORY.**
2) Figures to the **RIGHT** indicate **FULL** marks.
3) Assume suitable data if necessary.
4) Draw neat diagrams **WHEREVER** necessary.

Q.1 Can you provide a brief overview of the history of MATLAB and its evolution as a programming language and environment for scientific computing? **(10)**

OR

Q.1 What are the some of the basic features that make MATLAB a popular choice for scientific and engineering applications and how does it compare to other programming languages in terms of ease of use and functionality? **(10)**

Q.2 How do you create and define variables and MATLAB and what precautions should you take to avoid overwriting existing variables? **(10)**

OR

Q.2 When encountering error messages in MATLAB, what steps can you take to diagnose and correct them effectively? **(10)**

Q.3 How do you create a matrix in MATLAB and what is the difference between entering a vector and entering a matrix? **(10)**

OR

Q.3 Explain the use of indexing and the colon operator when working with matrices in MATLAB. How can you access specific elements or submatrices within a large matrix? **(10)**

Q.4 What are some essential components to consider when creating a simple plot in MATLAB? **(10)**

OR

Q.4 How can you add titles and axis labels to your MATLAB plot for better visualization? Explain the concept of using multiple data sets in one plot. Why might you want to do this in data visualization? **(10)**

Q.5 Differentiate between M- File Scripts and M- File functions in MATLAB. **(10)**

OR

Q.5 What are the potential side- effects that you should be aware of when working with M- File Scripts in MATLAB? **(10)**

Q.6 Why is it important to prepare for debugging before you start the process in MATLAB? **(10)**

OR

Q.6 What is the purpose of setting breakpoints and how can you set them in your MATLAB code? **(10)**

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