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Question Paper Code: U7C03

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2024

Seventh Semester

Computer Science and Business Systems

21UCB703-IT WORKSHOP

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

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| 1. List out the Strength of MATLAB | CO1- U |
| 2. How do Creating MATLAB matrix variables | CO2- App |
| 3. How to find whether the given number is positive number or not | CO2- App |
| 4. How to access and print the third element of the array A = [1 2 3 4 5] in MATLAB. | CO2- App |
| 5. Write MATLAB code to solve the Matrix with Specific Patterns. | CO2- App |
| 6. How to Define Magic Matrix with example. | CO1- U |
| 7. Define M-File Scripts. | CO1- U |
| 8. List the types of methods in input to a script | CO1- U |
| 9. Define Examining values. | CO1- U |
| 10. Scenario: Data Processing Script Failing | CO2- App |

You have a script that processes data from a file, but it fails with a "Index exceeds matrix dimensions" error.

PART – B (5 x 16= 80 Marks)

11. (a) Explain in detail about the good programming practices in MATLAB. CO1 - U (16)

Or

- (b) Explain in detail about the controlling the hierarchy of operations of precedence with example for MATLAB? CO1 - U (16)

12. (a) You can determine whether a character is a vowel or a consonant by checking if it is one of the vowels (a, e, i, o, u) or not. CO2 - App (16)
- Or
- (b) How you can implement this Compute the GCD using the Euclidean algorithm in MATLAB using a while loop: CO2 - App (16)
13. (a) Describe detail about the mathematical functions in MATLAB with example. CO1- U (16)
- Or
- (b) How to define special matrices and list out the some special matrices. how to create them, and their properties. CO1- U (16)
14. (a) Write a example of a MATLAB function that computes the square and cube of a number CO2- App (16)
- Or
- (b) Write a example of a MATLAB function that computes the arithmetic operations. CO2- App (16)
15. (a) Suppose you have a function that is supposed to calculate the average of a list of numbers, but it's not returning the expected results. Here's how you might debug this issue. CO2- App (16)
- Or
- (b) Scenario: Performance Issues with Large Data Sets CO2 - App (16)
A function that performs matrix operations runs very slowly with large matrices.