

**R13**

Code No: 811AC

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****MCA I Semester Examinations, July/August - 2021****COMPUTER PROGRAMMING****Time: 3 Hours****Max.Marks:60****Answer any five questions****All questions carry equal marks**

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- 1.a) What is a data type? List various data types in C and write about their sizes in bytes.  
b) Enumerate all the operators in C with appropriate examples. [6+6]
- 2.a) Evaluate the following expression in C with the values A=5, B=20, C=15, D=10  
 $A + (B * C / D) - A + C * D$   
b) Write a C program to find biggest of given three numbers. [6+6]
- 3.a) Demonstrate all the decision making statements in C with examples.  
b) Write a C program to find the sum of 20 natural numbers. [5+7]
- 4.a) Differentiate between call by value and call by reference in C.  
b) Write a C program to generate Fibonacci series using recursive functions. [6+6]
- 5.a) How to define and declare multi-dimensional arrays? Give an example.  
b) Write a C program for multiplication of two matrices. [5+7]
- 6.a) Define a pointer. What are the advantages of pointers than arrays?  
b) Discuss about malloc( ) and calloc( ) memory allocation functions with suitable examples. [6+6]
- 7.a) Demonstrate self-referential structures in C with suitable examples.  
b) Explain about enumerated data types in detail. [7+5]
- 8.a) Write syntax and examples for fopen( ), fclose( ) and fflush( ) functions.  
b) Write syntax and examples for positioning functions in C. [7+5]

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