

Roll No. ....

**DD-770**

**M. A./M. Sc. (Fourth Semester)**

**EXAMINATION, 2020**

**MATHEMATICS**

**(Optional—A)**

**Paper Fifth**

**[Programming in 'C' (With ANSI Features)—II]**

*Time : Three Hours*

*Maximum Marks : 70*

**Note :** Attempt any *two* parts from each question. All questions carry equal marks.

**Unit—I**

1. (a) What is difference between local variable and global variable ? Explain with example. 7
- (b) What do you mean by storage classes ? Explain the different types of storage classes. 7
- (c) Write short notes on the following : 7
  - (i) The register specifier
  - (ii) ANSI rules for the syntax and semantics

**Unit—II**

2. (a) What do you understand by pointer ? Explain the pointer arithmetic. 7

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- (b) Write a program in C for find biggest number among three numbers using pointer. 7
- (c) Explain the following : 7
- (i) Arrays of Pointer
  - (ii) Passing Arrays as Function Arguments

**Unit—III**

3. (a) Write a program in 'C' to read matrix A ( $M \times N$ ) and matrix B ( $N \times P$ ) and calculate its multiplication using functions. 7
- (b) What is the role of recursion function ? Explain with any *one* C program that using recursion function. 7
- (c) Explain the following : 7
- (i) Macro substitution
  - (ii) Line control

**Unit—IV**

4. (a) Write a program in 'C' to define a structure student with name, class and roll-no. Enter data for 10 students and then point the name of the first and the last student. 7
- (b) What is the role of dynamic memory allocation. Explain the dynamic memory allocation functions. 7
- (c) Explain the following : 7
- (i) Linked List
  - (ii) Enum Declarations

**Unit—V**

5. (a) What do you understand by error handling ? How to use in program ? Explain with any *one* program. 7

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- (b) What is the role of Header file in C language ? Explain any *two* header files. 7
- (c) Explain the following : 7
- (i) Input and output streams
  - (ii) Unbuffered I/O Random Access

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