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**ND—11—2023**

**FACULTY OF SCIENCE AND TECHNOLOGY**

**B.Sc. CS (Second Semester) EXAMINATION**

**NOVEMBER/DECEMBER, 2023**

(CBCS/Revised Pattern)

**COMPUTER SCIENCE**

(Intro. to Programming Language Using C) (Part-2)

**(Saturday, 2-12-2023)**

**Time : 10.00 a.m. to 1.00 p.m.**

*Time—3 Hours*

*Maximum Marks—75*

*N.B. :—* (i) All questions are compulsory.

(ii) Figures to the right indicate full marks.

(iii) Assume suitable data, if required.

(iv) Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt any *five* of the following (3 marks each) :

15

(a) Explain types of functions.

(b) Explain operations on file.

(c) Explain concept of union.

P.T.O.

- (d) Explain `calloc()` memory allocation function.
- (e) Explain difference between structure and union.
- (f) Explain dereferencing pointers.
- (g) Explain `strlen()` string library functions.

2. Attempt any *three* of the following (5 marks each) : 15

- (a) What is function ? Explain in detail.
- (b) Explain command line arguments.
- (c) Explain Dynamic memory allocation.
- (d) Write a program to find max of two numbers using function.
- (e) Explain storage classes in detail.

3. Attempt any *three* of the following (5 marks each) : 15

- (a) What is pointer ? Explain Pointer declaration.
- (b) Explain recursion with suitable example.
- (c) What is structure ? Explain nested structure.
- (d) Write a program pointer-to-pointer.
- (e) Explain the concept of array of structure.

4. Attempt any *three* of the following (5 marks each) : 15

- (a) Explain Pointer declaration.
- (b) What is file ? Explain how to create FILE.
- (c) Explain pointer to structure in detail.
- (d) What is function ? Explain in detail.
- (e) Write a program to find factorial of given number using recursion.

5. Write short notes on any *three* of the following (5 marks each) : 15

- (a) strcmp() & strcat()
- (b) pointer-to-pointer
- (c) Random access file
- (d) malloc()
- (e) Types of file.