

Faculty of Science

B.Sc (Computer Science) I-Year, CBCS-I Semester Backlog Examinations, January 2021

PAPER: PROGRAMMING IN C

Time: 2 Hours

Max Marks: 80

I. Answer any **FOUR** of the following questions

(4x20=80 Marks)

1. Describe generation and classification of programming languages, compiling, interpreting and software development.
2. Write algorithms and flowcharts for the following:
 - i) Binary search
 - ii) Factorial of N^{th} number
3. What are special control statements? Explain in detail with C programs.
4. Explain in detail about functions of ctype.h and string.h with C programs.
5. What are storage classes? Define inline functions. Explain these concepts with C programs.
6. Discuss about arrays and pointers and pointers and strings with C programs.
7. Define structure and union. Distinguish between structure and union. Write a C program to add two complex numbers by passing structure to a function.
8. (a) Write a C program to write all the members of an array of structures to a file using fwrite(). Read the array from the file and display on the screen.
(b) Write a C program to count the total number of characters inside the source file.

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B.Sc (Computer Science) I-Year, CBCS-I Semester Backlog Examinations, January 2021

PAPER: PROGRAMMING IN C (OLD)

Time: 2 Hours

Max Marks: 80

- I. Answer any **FOUR** of the following questions (4x20=80 Marks)
1. Define algorithm. Explain in detail about different ways of stating algorithms.
 2. What is the structure of a C program? Explain about C tokens, keywords, identifiers and data types in detail.
 3. What are iterative statements used in C? Explain in detail with suitable C examples.
 4. What are string handling functions? Write a C program for addition and multiplication of two $N \times N$ matrices.
 5. What is a recursion? Write C programs for Tower of Hanoi and generation of Fibonacci numbers using recursion concept.
 6. Explain the following with C program examples:
 - i) Array of pointers
 - ii) Dynamic memory allocation
 7. Discuss about accessing of a members of a structure (Union) and array of structures (Union) with C program examples.
 8. Define file and record. Explain about working with binary files and random access to files of records with C programs.
