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BCA Odd Semester (I) Examination, February 2025

Paper Name: Introduction to 'C' Programming
Time: 3 Hours

Paper Code: BCA 101
Maximum Marks: 75

Section A

(15 Marks)

ALL QUESTIONS ARE COMPULSORY

Q. N.	Questions	Marks
1	Which of the following is not a valid C data type? a) int b) real c) char d) float	1
2	What is the size of an <code>int</code> data type in C on a 32-bit machine? a) 2 bytes b) 4 bytes c) 8 bytes d) 16 bytes	1
3	Which of the following is a valid conditional statement in C? a) for b) if c) switch d) both b and c	1
4	What does a pointer store in C? a) Value of the variable b) Address of the variable c) Size of the variable d) None of the above	1
5	The <code>break</code> statement in C is used to: a) Exit a loop b) Skip an iteration c) Terminate the program d) None of the above	1
6	What is a union in C? a) A data type storing multiple values b) A data type where all members share the same memory location c) A keyword for loops d) None of the above	1
7	How many keywords are there in C (ANSI C standard)? a) 30 b) 32 c) 28 d) 35	1
8	What is the default return type of a function in C? a) int b) void c) float d) char	1
9	Which of these is not a loop structure in C? a) do-while b) for c) foreach d) while	1

10	What is the purpose of the <code>goto</code> statement in C? a) Iteration b) Jump to a labeled statement c) Break from a loop d) Function call	1
11	Which header file is required to use <code>printf()</code> and <code>scanf()</code> functions? a) <code>stdlib.h</code> b) <code>math.h</code> c) <code>stdio.h</code> d) <code>string.h</code>	1
12	What does the term "token" in C programming refer to? a) Data type b) Operator c) Smallest unit of a program. d) Loop	1
13	What is recursion? a) A function calling itself b) A function returning a pointer c) A loop in a function d) None of the above	1
14	What symbol is used to denote a comment in C? a) <code>//</code> b) <code>/*</code> c) <code>#</code> d) Both a and b	1
15	Which keyword is used to define a structure in C? a) <code>union</code> b) <code>struct</code> c) <code>typedef</code> d) <code>enum</code>	1

Section B

(30 Marks)

ATTEMPT ANY FIVE QUESTIONS

Q. N.	Questions	Marks
1	Explain the differences between structure and union in C with examples.	6
2	Write an algorithm and draw a flowchart for finding the factorial of a number.	6
3	Describe the various types of loops in C with their syntax.	6
4	What are tokens in C? List and explain the different types of tokens.	6
5	Explain the features of C programming language.	6
6	Write a program in C to demonstrate the use of pointers with arrays.	6
7	What is the purpose of the <code>switch</code> statement? Write a program to demonstrate its usage.	6

Section C

(15 Marks)

ATTEMPT ANY TWO QUESTIONS

Q. N.	Questions	Marks
1	Write a program in C to perform matrix addition using arrays. Explain the logic behind your code.	15
2	What is recursion? Write a recursive function in C to calculate the Fibonacci series up to n terms and explain how it works.	15
3	Discuss problem-solving techniques in programming. Explain how algorithms and flowcharts aid in problem-solving.	15
4	Explain the concept of pointers in detail. Write a program in C to demonstrate the use of pointers with functions.	15