23ELU311N/23ELU311

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2025
(Third Semester)

Branch - **ELECTRONICS**

C PROGRAMMING

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	What does the #include directive do in a C program? a) To define variables b) To include external libraries or header files c) To initialize functions d) To allocate memory	K1	CO1
	2	Which of the following is a valid data type in C? a) real b) double c) integer d) boolean	K2	CO1
2	3	Which of the following operators has the highest precedence in C? a) * b) + c) ++ d) =	K1	CO2
	4	Choose the result of the expression 10 / 4 in C when using integer division. a) 2.5 b) 2 c) 2.0 d) 4	K2	CO2
3	5	Which of the following loops will always execute at least once, even if the condition is false? a) while b) do-while c) for d) None of the above	K1	CO2

	6	How do you initialize a one-dimensional array with the values {1, 2, 3, 4, 5} in C?
		a) int arr[] = 1, 2, 3, 4, 5;
		b) int arr[5] = {1, 2, 3, 4, 5};
		c) int arr[5] = (1, 2, 3, 4, 5);
		d) int arr[5] = [1, 2, 3, 4, 5];
			K2	CO2

4	7	Find out the following correctly defines a function with no variables and no return value in C.
		a) void function(); b) int function();
		c) void function(int a); d) int function(void);
			K1	CO1

	8	How do you access the value stored at the address a pointer is pointing to in C? a) Using the `&` operator. b) Using the `*` operator. c) Using the `->` operator. d) Using the `[]` operator.	K2	CO2
5	9	What is the purpose of nesting structures in C? a) To store multiple values of the same type b) To allow a structure to contain another structure as a member c) To declare arrays inside a structure d) To define structures inside functions	K1	CO1
	10	Select the read a line from a file in C. a) fscanf() b) fgets() c) fwrite() d) fget()	K2	CO2

Cont...

SECTION - B (35 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Analyze the portability of C code benefit developers when working with different hardware platforms.	K4	CO1
		(OR)		
	11.b.	Explain the structure of C program.		
2	12.a.	Construct the priority of operators in C.	K3	CO2
		(OR)		
	12.b.	Develop the if-else and if-else if statements in C with examples.		
3	13.a.	Explain the differences between while, do-while, and for loops in C.	K4	CO3
		(OR)		
	13.b.	Explain how incremental (++) and decremental (--) operators work in C.		
4	14.a.	Develop a program to demonstrate the use of a function with variables as parameters and returning a value.	K3	CO4
		(OR)		
	14.b.	Build the advantages of using pointers in C.		
5	15.a.	Determine the array of structures in C. How do you declare the elements.	K5	CO3
		(OR)		
	15.b.	Explain nested structures in C with an example.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Examine the different categories of data types in C, and explain how their sizes and ranges differ.	K4	CO1
2	17	Develop a C program using the switch-case statement to determine the day of the week based on a given number (1 to 7).	K6	CO3
3	18	Discuss about how to declare and initialize a one-dimensional array in C.	K5	CO3
4	19	Analyze the concept of functions in C, and explain their types, and with examples.	K4	CO4
5	20	Justify the file I/O functions in C with examples.	K5	CO5

Z-Z-Z END