PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2023
(First Semester)

Branch - **COMPUTER SCIENCE**

PROBLEM SOLVING USING 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	Which of the following is not an advantage of a flowchart? a) Better communication b) Efficient coding c) Systematic testing d) Improper documentation	K1	CO1
	2	_____ involves the use of skills that are common in the normal lives of people working in skilled craft areas. a) Patterns b) Spatial reasoning c) Hypotheses d) Inference	K2	CO1
2	3	What is the sizeof(char) in a 32-bit C compiler? a) 1 bit b) 2 bits c) 1 Byte d) 2 Bytes	K1	CO2
	4	The result of the expression 3 + 2 * 4 in C is _____ a) 20 b) 15 c) 11 d) 14	K2	CO2
3	5	Name the type of loop which is commonly used to iterate through an array in C. a) for b) for each c) while d) do-while	K1	CO3
	6	A function which calls itself is called as _____. a) Dynamic Function b) Auto Function c) Recursive Function d) Static Function	K2	CO3
4	7	Relate how the structure members are defined in C? a) Using square brackets [] b) Inside curly braces {} c) With parentheses () d) With angle brackets <>	K1	CO4
	8	Select a function which is used to write a string to a file? a) puts() b) gets() c) fputs() d) fgets()	K2	CO4
5	9	Find the index of the last argument in command line arguments. a) argc − 2 b) argc − 1 c) argc d) argc + 1	K1	CO5
	10	The C-preprocessors are specified with _____ symbol. a) # b) $ c) " " d) &	K2	CO5

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.	Illustrate the core activities of Critical Thinking and discuss it.	K4	CO1
		(OR)		
	11.b.	Classify the kinds of assignment problems based on the objective function.		
2	12.a.	List out the various kinds of Data Types in C and discuss it with relevant examples.	K4	CO2
		(OR)		
	12.b.	Compare Formatted with Unformatted console I/O statements.		
3	13.a.	Discuss the concept of Arrays in C.	K6	CO3
		(OR)		
	13.b.	Elaborate the Storage classes in C.		
4	14.a.	Specify how to access members of structures and unions with examples.	K5	CO4
		(OR)		
	14.b.	Organize the kinds of file access modes in record I/O.		
5	15.a.	Explain argc and argv using Command line argument in C.	K5	CO5
		(OR)		
	15.b.	Explain the concept of File inclusion in C.		

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	Explain the concepts of functions and data encapsulation in the procedural programming paradigm.	K5	CO1
2	17	Classify the kinds of conditional statements and discuss with its syntax in C.	K4	CO2
3	18	Elaborate the syntax for defining and declaring function parameters.	K6	CO3
4	19	Create a C program to read name and marks of n number of students and store them in a file.	K5	CO4
5	20	Compare and contrast reading/writing binary data with fread and fwrite versus reading/writing formatted data with fscanf and fprintf.	K4	CO5

Z-Z-Z   END