SHREE DEVI INSTITUTE OF TECHNOLOGY

Kenjar, Mangalore-574142

MASTER OF COMPUTER APPLICATIONS

I Internal Test - January 2025

Sem/Sec: 1st Sem | **Max. Marks: 30**

Course Name: Programming and Problem-Solving Using C | **Duration: 1 Hour**

Course Code: MMC101 | **Date: 27/01/2025**

Question Number		Note: Answer any one full question from each part	Marks	RBT Level	CO
		PART A			
I	1	Write the structure of a typical C-Program and explain the significance of each section	8	L1	CO1
	2	Explain the difference between while and do-while loops with respect to the minimum number of times the body of the loop is executed. Draw the respective flow charts.	7	L2	CO2
		OR			
II	3	What is an Operator? Explain different categories or types of Operator available in C.	8	L1	CO1
	4	Explain the two – way selection(if, if-else, nested if-else, cascaded if-else) in C language with syntax.	7	L2	CO2
		PART B			
III	5	Explain the compilation process in C. Describe each step involved, from the source code to the executable, and highlight the role of the preprocessor, compiler, assembler, and linker.	8	L2	CO1
	6	Explain different types of Loops in C with Syntax and Example	7	L2	CO2
		OR			
IV	7	What are preprocessor directives in C? Explain the different types of preprocessor directives with examples	8	L1	CO1
	8	Write a C Program to Print the following Pattern for a given number of rows *n*. **For Example**, if the **n= 4** the Patter will be as below: * * * * * * * * * *	7	L1	CO2

Subject Faculty **IA Coordinator** **Head of the Department**

SCHEME OF EVALUATION:

SEM: 1st SEM, 1st Internal			Max. Marks: 30
COURSE NAME: **Programming and Problem-Solving using C**			
COURSE CODE: MMC101			Date: 27-01-2025
Question Number		**Note: Answer any one full question from each part**	Marks
I	1	**Definition (1 mark):** Clear and concise explanation the C Structure. **Explain each section with example (7 Marks) :** Explain each section with suitable example	**8M**
	2	**Definition of While an do-while with syntax (4 mark):** Explanation of what is while and do while. And the difference between the two with syntax and explanation. **Flow Chart (3 Marks) :** Draw the flow chart for both while and do while.	7M
		OR	
II	3	**Definition (1 Mark):** What an operator is. **Unary Operator(1Mark): Define and** Explain all the unary operators **Binary Operator (4 Mark):** List and Explain diff Binary operators **Ternary Operator (2 Mark):** Explain ternary operator with syntax and example.	8M
	4	**Definition (1 Mark):** Purpose of conditional statements. **if Statement (1 Mark):** Definition, Syntax and example. **if-else Statement (2 Marks):** Definition, Syntax and example. **Nested if-else (2 Marks):** Definition, Syntax and example. **Cascaded if-else (1 Mark):** Definition, Syntax and example.	7M
III	5	**Definition** (1 Mark): Briefly explain that compilation is converting source code into an executable file. Steps in Compilation Process (7 Marks): o **Diagram (1 Mark):** Draws the diagram and explain each section. o **Compilation (2 Marks):** Converts preprocessed code into assembly code. o **Assembly (2 Marks):** Converts assembly code into machine code (object file). o **Linking (2 Marks):** Links object files and libraries to generate an executable file.	8M
	6	**Definition** (1 Mark): Explain the purpose of loops in repetitive tasks. **Types of Loops (6 Marks):** **for Loop** (2 Marks): Definition, Syntax and example. **while Loop** (2 Marks): Definition, Syntax and example. **do-while Loop** (2 Marks): Definition, Syntax and example.	7M
		OR	
4	7	**Definition and Diagram (3 marks):** Give the Define of pre processive directives and draw a well-labeled and clear diagram of three-schema architecture. **Explanation for Common Preprocessor Directives (5 marks):** Explain all the available Preprocessor Directives with example	8M
	8	Write a C program to print the following **pattern** for a given number of rows n(**7 Marks**): Write a program which takes n as input and prints the given patter with n number of rows	7M

Faculty In-charge **HOD**