

UNIT-IV	8	Arrays: <ul style="list-style-type: none"> • Definition, Declaration, Initialization, Bounds checking, • One-Dimensional Array, Two-Dimensional Array, • Passing array to a function, pointer to Array. 	6	30
	9	Structure and Union: <ul style="list-style-type: none"> • Introduction to Structure, Definition, Declaration of Structure Variables, .Dot Operator, Nested Structure, Array of Structure, pointer to structure, • Introduction to Union, Difference between Structure and Union . 	4	
	10	Dynamic memory allocation : Malloc(),Calloc(),Realloc(),free(). File Handling: <ul style="list-style-type: none"> • Concept of File, Definition, File operations(create, open, read, move , write, close), • File opening Mode, Closing a file, Input/output operations, Creating and reading a file, • Command Line Argument. 	5	
Total			50	100

Text and Reference Books :

1. C: The Complete Reference (Fourth Edition), Tata McGraw-Hill Education Pvt. Ltd., 2000
2. C – programming E.Balagurusamy Tata McGray Hill, 1990
3. Ramkumar and Agrawal, “Programming in ANSI C”, Tata McGraw Hill, 1996.
4. Y.P Kanetkar, “Let Us “C” , , Infinity Science Press,2008
5. Venu Gopal, “Programming in C” ,Tata Mcgraw-Hill Publishing company Limited,1997

Branch: B.Sc(IT)	Semester-I
Subject Code: 1201	Lecture: 02 Credit: 02
Course Opted	Core Course-1 (Practical)
Subject Title	PROBLEM SOLVING USING C LAB

Course Objectives:

- To enable the students to learn a programming language.
- To learn problem solving techniques
- To teach the student to write programs in C and to solve the problems.

Course Outcomes:

The student would be able

- Read, understand and trace the execution of programs written in C language.
- Write the C code for a given algorithm.
- Implement Programs with pointers and arrays, perform pointer arithmetic, and use the pre-processor. •
- Write programs that perform operations using derived data types.
- Implement simple file operations

Module s	Sr.No.	Topic and Details	No. of Lectures/ Practicals Assigned	Marks Weightage %
UNIT-I	1	<ul style="list-style-type: none"> • Implementations of Operators : Built in Operators and function, Arithmetic, Logical, Relational, bitwise, Precedence and Associativity, composite statements. Unary, binary and ternary operators. 	4	08
	2	<ul style="list-style-type: none"> • Concept of header files, Preprocessor directives: #include, #define. And macros implementations , 		
	3	<ul style="list-style-type: none"> • Console based I/O and related built in I/O function: printf(), scanf(), getch(), getchar(), putchar(); 		
UNIT-II	4	<ul style="list-style-type: none"> • Implementation of Control Statement: Decision Making Statements, if, Nested if, if-else, Nested if-else, if-else-if, switch, etc. The Conditional Expression, static variables 	12	24
		<ul style="list-style-type: none"> • Implementation of Iterative Statements- The for loop, . The while loop, The do-while loop, 		
		<ul style="list-style-type: none"> • Implementation of Jumping Statements- The goto & label ,The break & continue, The exit() function 		
	5	<ul style="list-style-type: none"> • Implementation of Functions: Defining and accessing, passing arguments, Function prototypes, function calling mechanism, call by value, call by reference, recursive function. 		
	<ul style="list-style-type: none"> • Implementation of String Manipulations 			

	6	<ul style="list-style-type: none"> Implementation of Pointer Declaration and Initialization of Pointer variables, pointer Arithmetic, Pointers and Character Strings 		
UNIT-III	7	<ul style="list-style-type: none"> Implementation of 1-D and multi dimension Array, One-Dimensional Array, Two-Dimensional Array, Passing array to a function, pointer to Array. 	5	10
	8	<ul style="list-style-type: none"> Programs Using Structure and Union : Defining and Declaring Structure Variables, .Dot Operator, Nested Structure, Array of Structure, pointer to structure, Examples of Union. 		
UNIT-IV	9	<ul style="list-style-type: none"> Programs using Dynamic Memory Allocation : Malloc(),Calloc(),Realloc(),free(). 	4	8
	10	<ul style="list-style-type: none"> Programs using I/O Operations File Handling : File operations(create, open, read, move, write, close) Input/output operations on file Character by –(fgetc, fputc), Reading and writing files 		
Total			25	50

Text and Reference Books:

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