3070

~~3030~~ - COMPUTER PROGRAMMING IN C

Teaching Schedule Per Week			Progressive Assessment		Examination Schedule (Marks)				
					Theory		Practical Ex.		Total
Lectures	Practical	Credits							
3	2	5	50		3Hrs	100	50		200

Pre-requisite	Source	Semester	Theory	Test	Total	TW	PR	Gr Total
~~Nil~~ 1007	COM		—	—	—	50	50	100

RATIONALE: - Many organisations and educational institutions have substantial number of interconnected computers in operation located far apart. Computer networks has made resource sharing, accessing remo databases, data transfer, etc. simpler, faster & cost effective.

COURSE CONTENTS	Hrs	Mks
1. INTRODUCTION TO C History of C language, important features of C language and structure of C language.	02	03
2. LEXICAL ELEMENTS OF C LANGUAGE C character set, constants, variables, variable declaration, data types, labels, delimiters, reserved words and expressions.	04	06
3. INPUT / OUTPUT IN C Conversion specification, Input functions, Output functions and formatted Input / Output.	03	05
4. OPERATORS & EXPRESSIONS IN C Arithmetic operators & expressions, hierarchy of operators, relational operators, logical operators, assignment operators, increment / decrement operators, bitwise data manipulation, data type conversion and mixed mode operations.	05	06
5. C CONTROL STRUCTURES Unconditional control-the **go to** statement, bi-directional conditional control -the **if-else** structure, multi directional conditional control-**the switch** statement, loop control, the **for** statement, the **while** statement, the **do-while** statement, break and continue statement.	06	14
6. C FUNCTIONS C function, C library functions, user defined functions, advantages of functions, arguments & parameters, return statement, function declaration, recursive functions, scope of the variables, scope rules for identifiers, storage class specifiers.	06	14
7. ARRAYS & STRINGS IN C Arrays, one-dimensional array, array declaration, multi-dimensional array, array initialisation, rules to initialise an array, strings, strings/character array.	06	15
8. STRUCTURES Structure, declaration of a structure, access members of a structure, initialising a structure, array of structures, structures within a structure.	05	15
9. POINTERS Concept of pointers, declaration of pointers, pointer initialisation, pointer operators, pointer arithmetic.	06	14
10. FILE HANDLING IN C File-the definition, file handling in C, declaring a file, opening a file, reading from and writing to files, choosing a file.	05	08
Total	48	100

PRACTICAL

1. Exercise involving Output & Input formats control.
2. Exercise with operators, expressions in C.
3. Exercise on control statements.
4. Exercise with arrays & strings.
5. Exercise with functions & subroutines.
6. Exercise with file handling.
7. Exercise with structure & pointers.

REFERENCE BOOKS

1. Working with C by Yeshwant Kanetkar
2. The spirit of C by Henry Mullish,Hirbert L.Copper
3. The C Programming Language by Brain W. Kernigham, Denis M. Ritchie.
4. Understanding pointers in C by Yeshwant Kanetkar