

P.G.D.C.A. Semester – I

DCA - 101 : Fundamentals of Programming Language ‘C’

Teaching Scheme (per week)		Teaching Scheme (per semester)		Examination Scheme					
Th. (Hours)	Pr. (Hours)	Total (Hours)	Credit	Internal		External		Total	
Th. (Hours)	Pr. (Hours)	Total (Hours)	Credit	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)
4	---	40	4	30	----	70	---	100	---

Unit – I	[17 Marks]
<p>Introduction to Programming: Concepts of Algorithm and Flowcharts, problem solving examples using algorithm and flowchart, Types of Programming languages, Characteristics of higher level language, Compiler and Interpreter</p> <p>Overview of C: Introduction, Importance of C, Sample C programs, Basic structure of C programs, Programming style, executing of C program.</p> <p>Constants, Variables and data Types: Introduction, Character Set, C tokens, Keywords and Identifiers, Constants, Variables, Data types, Declaration of Variables, Defining symbolic constants.</p>	
Unit – II	[18 Marks]
<p>Operators and Expression : Introduction, Arithmetic of Operators, Relational Operators, Logical Operators, Assignment Operators, Increment and Decrement Operators, Conditional Operators, Bit-wise Operators, Special Operators, Arithmetic Expressions, Evaluation of expressions, Precedence of arithmetic operators, Type conversions in expressions, Operator precedence and associativity, Mathematical functions.</p> <p>Managing Input and Output Operators : Introduction, reading a character, writing a character, formatted input, formatted output.</p>	
Unit – III	[17 Marks]
<p>Decision making branching: Introduction, Decision making with IF statement, Simple IF statement, the IF ELSE statement, Nesting of IF ... ELSE statements, The ELSE IF ladder, The switch statement, the ternary (? :) Operator, the GOTO statement.</p> <p>Decision Making Looping: Introduction, the DO-WHILE statement, the DO-WHILE... statement, The FOR statement, Jumps in loops Break and continue.</p>	
Unit – IV	[18 Marks]
<p>Array : Introduction, One-dimensional, arrays, Two-dimensional arrays, Initialization of two-dimensional arrays, Concept of Multidimensional arrays</p> <p>Handling of Character strings : Introduction, Declaring and initializing string variables, Reading strings from</p>	

	terminal, Writing strings to screen, Arithmetic operations on characters, Putting string together, String Operations: String Copy, String Compare, String Concatenation And String Length, String Handling functions, Table of strings.	
--	---	--

Text Book:

1. **Programming in ANSI C**, Balagurusamy, Tata McGraw-Hill

Reference Books:

1. Programming in C, by Pradip Dey & Manas Ghosh, Publisher – Oxford
2. The Complete Reference, Herbert schildt Fourth Edition
3. Let Us C , Yashwant Kanetkar, BPB Publications
4. Programming in C, by Reena thareja Publisher – Oxford

Question Paper Scheme:

University Examination Duration : 3 Hours.

Q.1 Descriptive / Long questions. (12 Marks)

Q.2 Descriptive / Long questions. (12 Marks)

Q.3 Descriptive / Long questions. (12 Marks)

Q.4 Descriptive / Long questions. (12 Marks)

Q.5 -

A. Unit I ,II,III and IV – Objectives/Short Questions (12 Marks)

B. Program related to syllabus of above subject (10 Marks)

Note: Options should be given in all questions.