

Kadi Sarva Vishwavidhyalaya, Gandhinagar

BCA Semester II

BCA203 – Part 2: Core 4

Programming With ‘C’

Rationale:

To develop the concept of advanced programming using world’s most popular Middle Level Language through “C”

Learning Outcomes: The student will be able to ...

- Develop users define function.
- Use a concept of structure and union.
- Develop type of data storing with File Handling
- Know the importance of reference process by pointer.
- Know the concept of Dynamic Memory Allocation.

Teaching Methodology:

- Application and Real life examples
- Theory Method with illustration and presentation
- Models
- Charts
- Practical Implementation Simulators
- Animated Video

Evaluation Scheme:

The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations which consist of Term Work such as class test, quizzes, class participation, home assignments, presentation, Regular Attendance

Teaching and Evaluation Scheme:

Sub. Code	Sub. Type	Subject Title	Teaching Scheme		Exam Scheme				
			Cr.	Hrs. / Week	Theory		Practical		Total Marks
					Internal	External	Internal	External	
BCA 203	Core	Programming with ‘C’	4	4	30	70	-	-	100

Course content:

Unit-I

(25%)

Objective: Understand what a function is and how its use benefits a program. Learn how a function declaration, call, and definition are constructed.

User- Defined Functions:

Introduction, Need for user-defined functions, Elements of UDF (function definition, function call and function declaration), return value and their types Category of functions - No arguments and no return values, Argument with no return values, No argument with return values, Arguments with return values, Nesting of functions, Recursion.

Text Book Reference Page No: 262 to 289

Unit-II

(25%)

Objective: Understand the user defined data type called structure and unions and its members and variables

Structures:

Introduction, Structure definition, declaration and initialization of structure, accessing structure member, Comparison of structures and Arrays, Arrays of structures variable, array within structure ,concept of Structures within Structures, Structures and functions

Union:

Introduction, union definition, declaration and initialization of union, accessing union member, Comparison of structure and union

Text Book Reference Page No: 317 to 335

Unit-III

(25%)

Objective: Learn the concept of memory addresses and pointers

Pointers:

Introduction, concept and application of pointers, Accessing the address of a variable, Declaring and initializing pointers, Accessing a variable through its pointer, Pointer expressions, Pointer increments and scale factor, Pointers and arrays (one dimensional), Pointers and character strings, array of pointer, Pointers and Functions

Text Book Reference Page No: 351 to 373

Unit-IV

(25%)

Objective: Know about the concept of streams used in the C file system. Comprehend how to process different files using standard library function. Understand the concept of dynamic memory allocation and Pre-processors

File Management in C:

Introduction and Application, Defining and opening a file, closing a file, file handling functions, Command line arguments.

Dynamic Memory Allocation:

Introduction, Memory allocation functions (malloc, calloc, free, realloc)

Text Book Reference Page No: 389-405,411-416

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 Reenathareja Publisher–Oxford

Reference Link:

www.carrerskill.com

www.mcqsets.com

www.indiabix.com

www.sanfoundry.com

Question Paper Scheme:

University Examination	Duration: 3 Hours.	Total marks: 70
Q.1-Unit-I & II		(11 Marks)
Objective / Short Questions		
Q.2-Unit-I		(12 Marks)
Descriptive / Long questions		
Q.3-Unit-II		(12 Marks)
Descriptive / Long questions		
Q.4-Unit-III & IV		(11 Marks)
Objective / Short Questions		
Q.5-Unit-III		(12 Marks)
Descriptive / Long questions		
Q.6-Unit-IV		(12 Marks)
Descriptive / Long questions		

Note: Q.2,3,5 and Q.6 must have at least 40% Internal Options (i.e. Attempt Any 3 out of 5)

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