RV Educational Institutions
RV College of Engineering
Approved by AICTE
New Delhi

Academic year 2022-2023 (Odd Sem)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Fundamentals of Programming Using C

Date	November 2023	Maximum Marks	50
Course Code	CS113AT	Duration	90 Min
Sem	I	CIE - I	

SL No.	Test Questions	M	BT	CO
1.a	Differentiate between the following: i. Hardware and software ii. System software and Application software. Give an example for each.	06	L1	CO1
1.b	What are the rules to be followed while naming the variable or any identifier?	04	L2	CO1
2.a	Draw a flow chart to print the sum of even terms contained within the numbers 0 to 20.	05	L3	CO2
2.b	Write an algorithm to check whether a number is odd or even.	05	L2	CO2
3.a	Explain the structure of a c program with an example.	04	L2	CO2
3.b	Discuss the Process of Compiling and running a c program with a neat diagram.	06	L1	CO2
4.a	List and explain Basic Data types in C.	05	L1	CO2
4.b	What are C tokens? Explain the different classes.	05	L2	CO2
5.a	Discuss any the 3 types of errors that may occur in a C program with the help of example.	04	L2	CO1
5.b	Explain the following in brief: i. Control Unit(CU) ii. Arithmetic and Logical Unit(ALU) Memory Unit(registers).	06	L1	CO1

CO1	Analyse problems and design solution using program design tools
CO2	Evaluate the appropriate method/data structure required in C programming to develop solutions by investigating the problem.
CO3	Design a sustainable solution using C programming with societal and environmental concern by engaging in lifelong learning for emerging technology
CO4	Demonstrate programming skills to solve inter-disciplinary problems using modern tools effectively by exhibiting team work through oral presentation and written reports.

BT-Blooms Taxonomy, CO-Course Outcomes, M-Marks

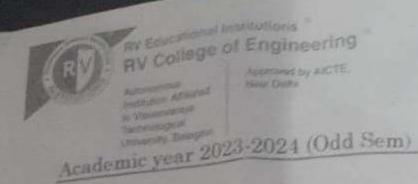| Marks Distribution	Particulars		CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5	L6
	Test	Max Marks	20	30	-	-	23	22	05			

mic year 2023-2024 (Odd Sem)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Fundamentals of Programming Using C

Date	December 2023	Maximum Marks	50
Course Code	CS113AT	Duration	90 Min
Sem	1	CIE = II	

SL No.	Test Questions	M	BT	CO
1.a	Write a C program using switch to input a character and check whether it is Vowel, Consonant, Number or Special character.	6	4	3
1.b	Differentiate Type Casting and Type Conversion with suitable examples	4	4	2
2.a	Explain the following with respect to arrays by giving examples: i. Declaration ii. Compile time initialization	5	2	4
2.b	Differentiate between switch and elseif ladder .	5	3	2
3.a	Write a C program to print the factorial of a given number.	5	4	3
3.b	Explain Entry Controlled and Exit Controlled Loop with suitable examples?	5	2	4
4.a	Explain Bitwise operators with examples.	6	2	1
4.b	Write the output for the following: i. int ans=++a *(3+8)%35-28; given a=5 ii. printf("%+15.6f",1543.123);	4	4	1
5.a	Using else if ladder ,write a C program to read the marks of a student and print the grade by checking the following conditions : 90-10=S 80-89=A 70-79=B 60-69=C 50-59=D 40-49=E <40=F	6	4	3
5.b	Differentiate between break and continue with suitable examples.	4	3	2

CO1	Analyse problems and design solution using program design tools
CO2	Evaluate the appropriate method/data structure required in C programming to develop solutions by investigating the problem.

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550

Academic year 2023-2024 (Odd Sem)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Fundamentals of Programming Using C

Date	JAN 2024	Maximum Marks	50
Course Code	CS113AT	Duration	90 Min
Sem	I	Improvement CIE	

SL No.	Test Questions	M	BT	CO
1.a	Write a C program for adding two equal dimension Matrices.	6	L2	CO2
1.b	Differentiate one-dimensional and two-dimensional arrays with an example for each.	4	L3	CO3
2	Discuss the following string related functions with syntax and an example for each. i)strcmp ii) strncat iii)strstr iv) strlen v)strcpy	10	L1	CO1
3.a	Write a C program using function that sorts the given elements in descending order.(use bubble sort)	6	L3	CO4
3.b	Write a C function, to check whether the given year is a leap year or not.	4	L3	CO2
4.a	What are the advantages of using functions? Explain function declaration with syntax.	6	L4	CO4
4.b	Differentiate between actual and formal arguments with an example for each.	4	L3	CO3
5.a	List and explain any three character handling functions?	6	L2	CO2
5.b	Write a C program to traverse and print the elements in a single-dimensional array.	4	L3	CO1

CO1	Analyze problems and design solution using program design tools
CO2	Evaluate the appropriate method/data structure required in C programming to develop solutions by investigating the problem.
CO3	Design a sustainable solution using C programming with societal and environmental concern by engaging in lifelong learning for emerging technology
CO4	Demonstrate programming skills to solve inter-disciplinary problems using modern tools effectively by exhibiting team work through oral presentation and written reports.

BT-Blooms Taxonomy, CO-Course Outcomes, M-Marks

Marks Distribution	Particulars		CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5	L6
	Test	Max Marks	14	16	8	12	10	12	22	6	-	-

RV COLLEGE OF ENGINEERING*

(An Autonomous Institution affiliated to VTU)

I/II Semester B. E. Regular / Supplementary Examinations Feb-2024

Common to AS / CH / IM / ME / EC / EE / EI / ET / CV

FUNDAMENTALS OF PROGRAMMING USING C (ELECTIVE)

Maximum Marks: 100

Time: 03 Hours

Instructions to candidates:

1. Answer all questions from Part A. Part A questions should be answered in first three pages of the answer book only.
2. Answer FIVE full questions from Part B. In Part B question number 2 is compulsory. Answer any one full question from 3 and 4, 5 and 6, 7 and 8 & 9 and 10.

PART-A

1	1.1	List the advantages of flowcharts.	02
	1.2	Write an algorithm to find the area of triangle.	02
	1.3	_____ Phase is also called construction or code generation phase.	01
	1.4	C programs are converted into machine language with the help of _____	01

	1.5	What is the output of the below snippet? and why?
		`#include < stdio.h >`
		`int main ( )`
		`{`
		`  if (0,1,-1)`
		`    printf ("programming in c");`
		`  else`
		`    printf ("nothing");`
		`  return 0;`
		`}`
			02

	1.6	Name the string handling function that is used to copy 'n' characters from one string to another and write its syntax.	02
	1.7	Write a program snippet for reversing the given number using for loop.	02
	1.8	Write the syntax for declaring a two dimensional array. Give an example.	02
	1.9	List the types of functions.	02
	1.10	Define a structure COMPLEX with fields as realPart, imgPart show how do you assign values for atleast one complex number using structure.	02
	1.11	Write the syntax for declaring an integer pointer and make it point to an integer variable.	02

PART-B

2	a	With a neat diagram explain the basic computer organization in detail.	08
	b	What is a flowchart? Write the symbols used for writing flowchart. Write flowchart to determine the largest of three numbers.	08

3	a	List and explain the different files associated with every C program.	08
	b	What is a token? Explain the different types of tokens in C language with suitable example.	08

OR

4	a	How C files are compiled and executed once you write a C program? Explain with a neat diagram.	08
	b	Write a C program to check whether a given four digit number is palindrome or not.	08

5	a	Differentiate between entry controlled and exit controlled loops with example.	08
	b	Write a C program to print all even numbers from 1 to n.	08

OR

6	a	Why do you need arrays? Explain in detail the various ways of initializing a two dimensional array.	08
	b	Write a C program to delete an element from an array at specified position by the user.	08

7	a	Differentiate between character array and strings using example.	04
	b	Write a C program to find the length of a string without using string handling functions.	06
	c	Illustrate using an example declaration of function and definition of function.	06

OR

8	a	Write a C program to concatenate two strings without using string handling function.	08
	b	Write a C program to explain the concept of caller and callee when user defined functions are used.	08

9	a	Write a C program to add the elements of the array passed as a parameter from the main function and print the result back in main function.	08
	b	Write a C program to define a structure called EMPLOYEE, with member variables as name, employee id and salary. Illustrate the following in the program:	
		i) Creating 3 variables for the defined structure.	
		ii) Initializing the values to all the structure variables using runtime initialization	
		iii) Print the details of the employee with highest salary among the three.	08

OR

10	a	Write a C program to search an element in an integer array passed as a parameter from the main function and print the result back in main function.	08
	b	Write a C program to demonstrate nesting of structures. List the advantages of nesting of structures.	08