

Hall Ticket Number:

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Code No. : 13762 N (C)

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD
(Accredited by NAAC with A++ Grade)

B.E. III-Semester Bridge Course Main Examinations, February-2024

Problem Solving through Programming using C

(I.T.)

Time: 3 hours

Max. Marks: 50

Note: Answer all questions from **Part-A** and any **FIVE** from **Part-B**

Part-A (10 × 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1.	Define a flow chart .List all symbols used in it.	2	1	1	1
2.	Write the output of the following code. <pre>void main() { int a= 2, b=10; int c=a^b; printf(“%d”,c); }</pre>	2	3	1	1
3.	Write a function which takes input two integers and returns their sum.	2	1	2	1
4.	What is the output of below code <pre>void main() { int a= 2; for(a=1;a <99;a++); printf(“%d”,a); }</pre>	2	3	2	1
5.	Show the flow of execution of recursive function calls made to compute factorial of a number N.	2	2	3	1
6.	List any 2 pre-processor commands.	2	2	3	1
7.	Define a Pointer variable. What is its significance?	2	1	4	1
8.	Write a c program demonstrating strlen() function.	2	1	4	1
9.	Define a self-referential structure PERSON with attributes name, age, gender and a child.	2	3	5	1
10.	Give example of a nested structure.	2	1	5	1

Part-B (5 × 6 = 30 Marks)					
11. a)	Write a Program to find prime numbers between 100 to 200 both numbers inclusive.	4	3	1	2
b)	What is type conversion? Explain with the help of suitable code snippet.	2	2	1	1
12. a)	Write a program that reads an N-digit number and calculates the sum of its digits using loops.	3	3	2	2
b)	Write three functions max(), min() and mean() , each of which accept a number as input and return the maximum, minimum, average of its digits respectively.	3	3	2	2
13. a)	Differentiate between Linear search and binary search.	3	2	3	1
b)	Write C Program that computes multiplication of two matrices and print the result. The dimensions of each matrix should be provided by the user.	3	3	3	2
14. a)	Write a C function mystreat() which takes input two strings S1, S2 and returns the concatenation of the two strings, without using built-in string library function.	3	3	4	2
b)	How do you create a two dimensional array using malloc(). Illustrate with an example.	3	2	4	1
15. a)	Define a structure in C. Demonstrate the use of structure with an example.	3	2	5	1
b)	Summarize the need of files in C. Write a program to demonstrate file access.	3	2	5	1
16. a)	Explain precedence and associativity of arithmetic operators in C, with examples.	3	2	1	1
b)	Write a C Program to compute total electricity bill as per below constraints. i) first 200 units is free ii) 201 to 250 units are charged for rupees 1.5 per unit iii) above 250 units are charged for rupees 1.85 per unit iv) in the total sum a cess of 10% is added	3	3	2	1
17.	Answer any <i>two</i> of the following:				
a)	Explain about recursive evaluation of exponent of a number with sample C Program	3	3	3	1
b)	Discuss any four string manipulation functions with suitable examples.	3	2	4	1
c)	Write a C Program that copies a string from a file F1 to other file F2. Also, write the expected output of the program	3	1	5	1

M : Marks; L: Bloom's Taxonomy Level; CO; Course Outcome; PO: Programme Outcome

i)	Blooms Taxonomy Level - 1	20%
ii)	Blooms Taxonomy Level -- 2	40%
iii)	Blooms Taxonomy Level -- 3 & 4	40%
