

C

Reg. No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Question Paper Code :R1207

B.E./B.Tech. DEGREE EXAMINATION, APRIL 2024

First Semester

Computer Science and Engineering

R21UCS107- PROBLEM SOLVING AND C PROGRAMMING

(Common to ECE, IT, CSBS, AI&DS, CSD, CSE(AIML), IOT & CYBER SECURITY)

(Regulations R2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (5 x 1 = 5 Marks)

1. Identify the Valid Identifier? CO1- U
 - a) @@@123 b) @123
 - c)_123\$ d) Keyword
2. ----- keyword transfers control to a labeled statement? CO1- U
 - (a) goto (b) break (c) auto (d) continue
3. In an array x[10], the x represents the ? CO1- U
 - (a) base address (b) base value (c) void pointers (d) None of the above
4. What will be the output of the following C program? CO4- App

```
#include <stdio.h>
int add(int a, int b) {
    return a + b;
}
void main() {
int result = add(5, 3);
printf("%d\n", result);
}
```

 - (a) 8 (b) 53 (c) Compiler Error (d) done

5. Which of the following is the collection of different data types? CO1- U
 (a) structure (b) string (c) array (d) All of the above

PART – B (5 x 3= 15 Marks)

6. What is the purpose of scanf() and printf() functions?. CO1- U
 7. Write a C program using goto statement. CO3- App
 8. Write a C program to get a string and print the string. CO1- U
 9. Write a C program to add two numbers without using return type. CO4- App
 10. Differences between Structure and Union. CO1- U

PART – C (5 x 16 = 80 Marks)

11. (a) (i) Draw a flowchart and Write a C Program to find the biggest of three numbers CO2- App (8)
 (ii) Write a C program in C to find the area and Circumference of a circle CO2- App (8)
 Or
 (b) (i) Write a C program in C to find the area and Circumference of a circle CO2- App (8)
 (ii) Draw a flowchart and Write a C Program to find the simple interest CO2- App (8)
12. (a) (i) Write a C program to read the age of a candidate and determine whether he is eligible to cast his/her own vote. CO3- App (8)
 (ii) Write a C program to print the numbers from 1 to 5 using while, do-while and for loop statements. CO3- App (8)
 Or
 (b) (i) Write a C program to Check whether the number is Prime or not using do-while loop. CO3- App (8)
 (ii) Write a C program to print the numbers in Fibonacci Series using a while loop. CO3- App (8)
13. (a) (i) Write a C Program to print the elements of 2D-array CO4- App (8)
 (ii) Write a C program Find the Length and size of the String using String Functions CO4- App (8)
 Or
 (b) Write a C program to take 5 string from the user and store them in a string and print the elements stored in the string CO4- App (16)

14. (a) (i) Write a C program to find the Factorial of a given number using recursion in C. CO4- App (8)
(ii) Write a C program to calculate the area of the square using functions. CO4- App (8)

Or

- (b) Write a C program to swap two numbers using pass by value and pass by reference. CO4- App (16)
15. (a) Create a C programming using an Structure called Student with name, class, rollnum, total marks as members. Find and display the grade of each student. CO4- App (16)
>80 – Grade A
>60 – Grade B
> 50 – Grade C
<50 - Fail

Or

- (b) Create a Union called Book to store information about a book. The Union should include the following members: CO4- App (16)
title: A character array to store the book's title
author: A character array to store the book's author
isbn: An integer representing the book's ISBN
number Of Pages: An integer representing the book's number of pages

