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**Question Paper Code: R4226**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2025

Fourth Semester

Computer Science and Engineering

R21UCS426 - FUNDAMENTALS OF C PROGRAMMING

(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. The default statement is executed when\_\_\_\_\_ CO1-U  
(a) All the case statements are false                      (b) One if the case is true  
(c) One if the case is false                      (d) None of the mentioned
3. The operator used to find the size of any variable \_\_\_\_\_ CO1-U  
(a) sizeof()                      (b) sizof()                      (c) size of()                      (d) size()
4. What is the purpose of a return statement in a function? CO1-U  
(a) To exit the function immediately                      (b) To specify the function name  
(c) To return a value from the function                      (d) To declare variables
5. Which function is used to allocate dynamic memory in C? CO1-U  
(a) malloc()                      (b) calloc()                      (c) realloc()                      (d) All of the above

PART – B (5 x 3= 15 Marks)

6. List the types of Tokens in C. CO1-U
7. Draw the flowchart to explain the working of nested if condition. CO2- App
8. What is the use of strcpy( ) andstrupr( ) functions? CO1- U
9. Define recursion, with example. CO1- U
10. Define Structure in C. How to declare members in Structure? CO1- U

PART – C (5 x 16= 80 Marks)

11. (a) i) Write a C program in C to find the area and Circumference of a circle.(8) CO2-App (16)  
ii) Write a C program to find the average of three numbers (8)  
Or
- (b) i) Write a C program to perform arithmetic operations (8) CO2-App (16)  
ii) Write a C program which takes as input P,N,R. Compute the simple interest and display the result. (8)
12. (a) i) Write a C program to check whether a given number is positive or negative. (8) CO2-App (16)  
ii) Write a C program to read the age of a candidate and determine whether he is eligible to cast his/her own vote. (8)  
Or
- (b) i) Write a C program to Check whether the number is Prime or not using do-while loop. (8) CO2-App (16)  
ii) Write a C program to Print Even Numbers from 2 to 10 using a for Loop in C. (8)
13. (a) Write a C program for Matrix multiplication using 2D-Array. CO2-App (16)  
Or
- (b) Write a C program using all String Handling Functions CO2-App (16)
14. (a) Write a C Program to find the sum of two numbers using the all four aspects of Function call. CO2-App (16)  
Or
- (b) Write a C program to find a factorial of a given number numbers using pass by value and pass by reference. CO2-App (16)
15. (a) Create a Union called Book to store information about a book. The Union should include the following members:  
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 page CO2-App (16)  
Or
- (b) Write a C Program using structures to prepare the employee pay roll of a Company. CO2-App (16)