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SNS College of Technology, Coimbatore-35.
(Autonomous)
B.E/B.Tech- Internal Assessment -II
Academic Year 2023-2024(ODD)
First Semester

B

23CST101 –PROBLEM SOLVING AND C PROGRAMMING
[Common to CSE, IT, AI/ML, EEE]

Time: 1^{1/2} Hours

Maximum Marks: 50

Answer All Questions

PART-A (5 x 2 = 10 Marks)

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|----|--|-----|-----|
| 1. | What is an assignment statement? Give the general form of an assignment statement. | CO2 | Und |
| 2. | Write a C program to swap the two variables without using third variable | CO2 | App |
| 3. | How to declare and initialize two-Dimensional Array? | CO3 | Ana |
| 4. | Write a C Program to implement string copy operation using library function. | CO3 | App |
| 5. | Difference between strcmp () and stricmp (). | CO3 | Ana |

PART-B (13 X 2 = 26 Marks)

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|----|-----|---|----|-----|-----|
| 6. | (a) | Write a C program to calculate energy bill. Read the starting and ending meter reading and choose the appropriate decision-making statement
The charges are as follows
No of Units Consumed Rate in (Rs.)
200 - 500 3.50
100 - 200 2.50
less than 100 1.50 | 13 | CO2 | App |
| | | (OR) | | | |
| | (b) | Write a C program to implement the following
1. Reverse the given number without using library function (7)
2. Right Half Pyramid Pattern (6) | 13 | CO2 | App |
| 7. | (a) | i) Define Array and list out the various characteristics of Array in C. | 5 | CO3 | Und |

ii) Write a C program to sort an element of array in ascending order. 8 CO3 App

(OR)

(b) How string is declared and initialized? Explain any four string manipulation functions with examples 13 CO3 Und

8. (a) Write a program to calculate gross salary for the condition given below 14 CO2 App

Basic Salary (Rs.)	DA(Rs.)	HRA(Rs.)	Conveyance(Rs.)
≥ 5000	110 % of Basic	20% of basic	500
$\geq 3000 \ \&\& \ < 5000$	100 % of Basic	15% of basic	400
< 3000	90 % of Basic	10% of basic	300

(b) Write a C program that accepts (3×3 ordered matrices A and B), and compute the following 14 CO3 App
(i) Summation of Two numbers
(ii) Multiplication of Two numbers

(Note: U-Understand R-Remember Ana-Analyze App-Apply)

Prepared By

Verified By

HoD/Dean

Basic Salary(Rs.)	DA(Rs.)	HRA(Rs.)	Conveyance(Rs.)
>=5000	110 % of Basic	20% of basic	500
>=3000 &&<5000	100 % of Basic	15% of basic	400
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