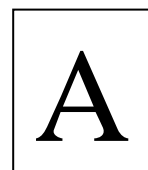


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SNS College of Technology, Coimbatore-35.
(Autonomous)
B.E/B.Tech- Internal Assessment -I
Academic Year 2023-2024(EVEN)
Second Semester (Regulation R2023)
COMPUTER SCIENCE AND ENGINEERING



23ITT101 – PROGRAMMING IN C AND DATA STRUCTURES

Time: 1^{1/2} Hours
50

Maximum Marks:

Answer All Questions

PART A — (5 x 2 = 10 Marks)

- | | | |
|---|-----|-----|
| 1. Define pseudocode. Write a pseudocode to find greatest of two numbers. | CO1 | REM |
| 2. Draw the flow chart to find whether a number even or odd. | CO1 | APP |
| 3. Write a program to determine whether a person is eligible to vote | CO1 | APP |
| 4. List out the significance of break statement in loops | CO2 | UND |
| 5. Give the difference between while and do-while statements. | CO2 | REM |

PART B — (2 x 13 = 26 Marks & 1 x 14 = 14 Marks)

- | | | | |
|--|-----|-----|----|
| 6. (a) i) Explain in detail about Structure of C programming with a Sample C program. | CO1 | UND | 8 |
| ii) Draw flow chart along with the pseudo code to find area of a Rectangle. | CO1 | APP | 5 |
| (OR) | | | |
| (b) i) Discuss the different types of operators used in C | CO1 | UND | 6 |
| ii) Explain the data types and its types in C with suitable examples. | CO1 | UND | 7 |
| 7. (a) Enumerate the operation of various looping statements in C with suitable examples. | CO2 | REM | 13 |
| (OR) | | | |
| (b) i) An Armstrong number is a three-digit integer such that the sum of the cubes of its digits is equal to the number itself. For example, 371 is an Armstrong number since $3^3 + 7^3 + 1^3 = 371$. Write a c program to find whether a given number 417 is an Armstrong number or not | CO2 | APP | 7 |
| ii) Write C program to print first ten natural numbers. | CO2 | APP | 6 |

8. (a) Give the algorithm, Flowchart and Pseudo code to check whether given number is positive, negative or zero. CO1 APP 14

(OR)

(b) Assume an example of grading system of the students in an institution. The grading is done according to the following rules:

Obtained marks	Grade
100-95	A+
85-94	A
75-84	B
60-74	C
50-59	D
<50	FAIL

CO2 APP 14

Now Construct a C program to Calculate students' grade using if-else ladder concept.

(Note: Und-Understand Rem-Remember Ana-Analyze App-Apply)