



Question paper 30-9-2024

Programming For Problem Solving (SRM Institute of Science and Technology)



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|----------|--|--|--|--|--|--|
| A) 15 20 | | | | | | |
| B) 15 10 | | | | | | |
| C) 10 15 | | | | | | |
| D) 15 15 | | | | | | |

Part-B (5 x 4 = 20 Marks)
Answer all the questions

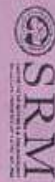
| Sl. No | Question | Mar | BL | CO | PO | PI Code |
|--------|--|-----|----|----|----|---------|
| 11 | With suitable examples discuss the concept of variables in C. Devise an algorithm to read the age of two of your friends and find the sum, product and difference of their ages. | 4 | 2 | 1 | 1 | 1.4.1 |
| 12 | Debug the code given below so as to generate the desired output 1 2 4 5. #include<stdio.h> void main() { for(int i=1;i<5;i++) { if(i==3) { break; } printf("%d\t", i); }} | 4 | 4 | 2 | 2 | 2.4.2 |
| 13 | Complete the program by filling in the missing parts in some statements. #include<____> void main() { int m; printf("Input m value"); scanf("____", &m); { ____(m) } 9: printf("Autumn"); break; case 6: printf("Summer"); break; case 5: printf("Spring"); case 1: printf("Winter"); } | 4 | 4 | 2 | 2 | 2.4.2 |

| | | | | | | |
|----|---|---|---|------|---|-------|
| 15 | You are assigned to create a program for a school that calculates the average marks of students in a class. | 4 | 3 | 1, 2 | 2 | 2.1.3 |
|----|---|---|---|------|---|-------|

Part C (2 x 10 = 20 Marks)

| Sl.No | Question | Mar | BL | CO | PO | PI Code |
|-------|---|-----|----|----|----|---------|
| 16 | Design an algorithm and implement the same using C program for carrying out the following tasks: • Read age, year of study, section, 10 th marks, 12 th marks. • Product of age and year of study. • Sum and Difference of 10 th and 12 th marks. • Double the age without using the multiplication operator (Hint: use the shift operator) | 10 | 3 | 1 | 2 | 2.1.3 |
| (OR) | | | | | | |
| 17 | Write a C program that reads an integer from the user and performs the arithmetic operations sequentially. The program should output a single final result. 1. Add 10 to the number. 2. Multiply the result by 2. 3. Subtract 5 from the result. 4. Divide the result by 3 (integer division). | 10 | 3 | 1 | 2 | 2.1.3 |
| 18 | Write a C program that checks two given temperatures and returns true if one temperature is less than 0 and the other is greater than 100, otherwise, it returns false. | 10 | 3 | 2 | 2 | 2.1.3 |
| (OR) | | | | | | |
| 19 | Write a C program and an algorithm to help your C.R in determining the average age of your class. Course Outcome (CO) and Bloom's level (BL) Coverage in Questions | 10 | 3 | 2 | 2 | 2.1.3 |





SRM Institute of Science and Technology
College of Engineering and Technology
School of Computing

SRM Nagar, Kattankulathur - 603203, Chengalpattu District, Tamil Nadu
Academic Year: 2024-25 (ODD)

SET 1

Registration Number K A 2 4 1 1 0 2 9 0 1 0 0 4 2

Test: C1
Course Code & Title: 21CCS101J Programming for Problem Solving
Year: Assem: II

Date: 30-09-2024
Duration: 1hr 40 mins
Max. Marks: 50

Course Articulation Matrix: (to be placed)

| S.No | Course Outcome | PO1 | PO2 | PO3 | PO4 | PO5 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|
| 1 | CO1 | 2 | 3 | | | | | | | | | 2 |
| 2 | CO2 | 1 | 3 | | | | | | | | | 2 |
| 3 | CO3 | 2 | 3 | | | | | | | | | 2 |
| 4 | CO4 | 2 | 3 | | | | | | | | | 2 |
| 5 | CO5 | 2 | 3 | | | | | | | | | 2 |

Course Outcomes (CO):

CO-1: Solve problems through computer programming. Express the basic data types and variables in C.
CO-2: Use appropriate data types in simple data processing applications. To create programs using the concept of arrays.

Part A (10*1 = 10 Marks)

| Sl.No | Question | Marks | BL | CO | PO | PI Code |
|-------|---|-------|----|----|----|---------|
| 1 | Mention the starting point of c program execution. (a) #include (b) void main() (c) Opening curly braces '{' (d) None of these | 1 | 1 | 1 | 1 | 1A1 |
| 2 | How Many Keywords are there in C? (a) 31 (b) 32 (c) 64 (d) 63 | 1 | 1 | 1 | 1 | 1A1 |
| 3 | Identify the output void main() { float a=654.1239; printf("%0.3f",a); } (a) Compiler error (b) 654.123900 (c) 654.123 (d) 654.124 | 1 | 2 | 1 | 2 | 2A2 |

| | | | | | | |
|----|---|---|---|---|---|-----|
| 4 | Which operator is used to compare two values? (a) Logical operator (b) Relational operator (c) Assignment operator (d) None of these | 1 | 2 | 1 | 2 | 2A2 |
| 5 | After executing the code segment given below what will be the value of x? $a = 10 + 2 * 12 / (3 * 2) + 5;$ (a) 31 (b) 19 (c) 11 (d) 29 | 1 | 2 | 1 | 2 | 2A1 |
| 6 | Which loop statement is faster in C Language? (a) for (b) while (c) do while (d) All work at same speed | 1 | 2 | 2 | 2 | 2A2 |
| 7 | In the given code segment, how many times the value of i is checked? <pre>i = 0; while (i < 3) i++;</pre> (a) 2 (b) 3 (c) 4 (d) 1 | 1 | 2 | 2 | 2 | 2A1 |
| 8 | Value stored in b after executing the code segment given below <pre>int a=3; int b= ++a + a++ + --a;</pre> (a) 12 (b) 13 (c) 10 (d) Cannot be decided | 1 | 2 | 1 | 2 | 2A2 |
| 9 | What is the output of the program? <pre>#include <stdio.h> int main() { printf("Hello Boss."); }</pre> (a) Hello Boss. (b) Hello Boss (c) No output (d) Compiler error | 1 | 2 | 1 | 2 | 2A3 |
| 10 | Choose the correct output of the program? <pre>int main() { register a=10; { register a=15; printf("%d",a); } printf("%d",a); return 20; }</pre> | 1 | 2 | 1 | 2 | 2A2 |