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

Programoffered:B.Tech(AllBranches) **Year/Sem:I/I**
Max.Marks:25 **Duration:1 Hour**

Course Code and Title: 21CSS101J: Programming for Problem Solving

Part-A: 10 X 1 Marks (MCQ)

S.No.	Question
1	Every C program consists of _____ function(s). (a) Only one (b) Only two (c) One or two **(d) One or many**
2	Which of the following is not a correct variable type? (a) Float **(b) Real** (c) Int (d) Double
3	Which of the following is not a valid C variable name? a) int number; b) float rate; c) intvariable_count; **d) int $main;**
4	Which of these is NOT a relational or logical operator? **(a) =** (b) || (c) == (d) !=

5	What will be the output of the following code snippet?
	#include <stdio.h>
	int main() {
	int a = 3, b = 5;
	int t = a;
	a = b;
	b = t;
	printf("%d %d", a, b);
	return 0;
	}
	(a) 3 5
	(b) 3 3
	(c) 5 5
	(d) 5 3

6	What is the output of the following code snippet? int main() {

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	int sum = 2 + 4 / 2 + 6 * 2;
	printf("%d", sum);
	return 0;
	}
	(a) 2
	(b) 15
	(c) 16
	(d) 18

7	What will be the output of the following code snippet?
	#include <stdio.h>
	int main() {
	int a = 3;
	int res = a++ + ++a + a++ + ++a;
	printf("%d", res);
	}
	(a) 12
	(b) 24
	(c) 20
	(d) 18

8	Which of the following is true for variable names in C? a) They can contain alphanumeric characters as well as special characters b) It is not an error to declare a variable to be one of the keywords(like goto, static) **c) Variable names cannot start with a digit** d) Variable can be of any length
9	Operator % in C Language is called.? (a) Percentage Operator (b) Quotient Operator **(c) Modulus** (d) Division

10	What will be the output of the following code snippet?
	void solve() {
	printf("%d ", 9 / 2);
	printf("%f", 9.0 / 2);
	}
	(a) 4 4.5000
	(b) 4 4
	(c) 4.500 4.500
	(d) 4.5 4.50

Part- B: 5 X 2 Marks

S.No.	Question
1	**Define keyword, constant and variable.**

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	Keywords Every word in a C program is classified as either a keyword or an identifier. All keywords have fixed meanings predefined in the language and these meanings can not be changed. **Identifier / Literals** In programming languages, constants are usually called as literals and variables are called as identifiers. **Constants / Variables** As name suggests, a constant is an entity whose value doesn't change during the course of program execution. A variable, on the other hand, is an entity whose value may change during the course of program execution.
2	**Why do we use header files?** A header file is a file with extension .h which contains C function declarations and macro definitions to be shared between several source files. There are two types of header files: ➢ The files that the programmer writes (user defined) ➢ The files that comes with your compiler.(System header files) Each header file contains information (or declarations) for a particular group of functions. Like stdio.h header file contains declarations of standard input and output functions available in C which is used for get the input and print the output. Similarly, the header file math.h contains declarations of mathematical functions available in C. When we want to use any function in our c program then first we need to import their definition from c library, for importing their declaration and definition we need to include header file in program by using #include. Header file include at the top of any C program.
3	**What is variable? Give the rules for variable declaration.** A variable name can start with the alphabet, and underscore only. It can't start with a digit. No whitespace is allowed within the variable name. A variable name must not be any reserved word or keyword, e.g. int, goto, etc.

4	Write a C program to check whether the person is eligible to vote.
	
	`#include<stdio.h>`
	
	`int main() {`
	`  int age;`
	
	`  printf("Enter your age\n");`
	`  scanf("%d", &age);`
	
	`  (age >= 18) ? printf("Yes, you are eligible for voting!") : printf("You, you are not eligible for voting!");`
	
	`  return 0;`
	`}`

5	**Write a C program to find the largest of three numbers**

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```
# include <stdio.h>
int a, b, c, big ;
printf("Enter three numbers : ") ;
scanf("%d %d %d", &a, &b, &c) ;
big = a > b ? ( a > c ? a : c) : (b > c ? b : c) ;
printf("\nThe biggest number is : %d", big) ;
}
```

Part - C: 1 X 5 Marks

S.No.	Question

A	Write a program that prints the numbers 1 to 4 on the same line. Write the program using the following methods.
	a) Using one printf statement with no conversion specifiers.
	b) Using one printf statement with four conversion specifiers.
	c) Using four printf statements.
	`#include <stdio.h>`
	
	`int main() {`
	`  int x, y, z, a;`
	
	`  // a`
	`  printf( "1, 2, 3, 4\n" );`
	
	`  x = 1;`
	`  y = 2;`
	`  z = 3;`
	`  a = 4;`
	
	`  // b`
	`  printf( "%d, %d, %d, %d\n", x, y, z, a );`
	
	`  // c`
	`  printf("1, ");`
	`  printf("2, ");`
	`  printf("3, ");`
	`  printf("4\n");`
	
	`  return 0;`
	`}`

	OR
B	Display the following checkerboard pattern with eight Printf statementsand then display

	the same pattern with as fewPrintf statements as possible. * int main() { printf("* * * * * * * *\n"); printf(" * * * * * * * *\n"); printf("* * * * * * * *\n"); printf(" * * * * * * * *\n"); printf("* * * * * * * *\n"); printf(" * * * * * * * *\n"); printf("* * * * * * * *\n"); printf(" * * * * * * * *\n"); printf("\n\n"); printf("* * * * * * * *\n" " * * * * * * * *\n" "* * * * * * * *\n" " * * * * * * * *\n" "* * * * * * * *\n" " * * * * * * * *\n" "* * * * * * * *\n" " * * * * * * * *\n"); return 0; }

CourseOutcome(CO)andBloom'slevel(BL)CoverageinQuestions

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