COLLEGEOFENGINEERINGANDTECHNOLOGY,SRMISTDEPARTMENTOFCOMPUTING TECHNOLOGY

CYCLETEST–I
AcademicYear:2022-2023(ODDSemester)

Programoffered:B.Tech(AllBranches) **Year/Sem:I/I**
Max.Marks:25 **Duration:50minutes**

CourseCodeandTitle:21CSS101J:ProgrammingforProblemSolving

CourseLearningRationale(CLR):

CLR-1: Think and evolve with a logic to construct an algorithm and pseudocode that can be converted into a program.

CourseLearningOutcomes(CLO):

CLO-1: To solve problems through computer programming. Express the basic data types and variables in C

PartA(10*1=10Marks)

Sl.No	Question	CO	PO	BL	Marks	PICODE
1	Which one of the following has the least precedence? A. ++ B. && C. ( ) **D. ,** **Answer.D**	1	2	2	1	2.5.2
2	Identify thecorrectorderofevaluationfortheexpressionD=5 0+12* 4/32% 4- 10 **a. */%+- =** b. =*/%+- c. /*%-+= d. %/- +=* **Answer.A**	1	2	2	1	2.5.2

3 **A**	Identify which is not a valid C variable name? A. int number; B. float rate; C. int variable_count; D. int$main; **Answer.D**	1	1	1	1	2.5.2
4	The format specifier that is used to read or write a character is _____ A. %f B. %d C. %c D. %s **Answer.C**	1	1	1	1	2.5.2
5	What is the result of logical or relational expression in C? a) True or False b) 0 or 1 c) 0 if an expression is false and any positive number if an expression is true d) false if 0 **Answer.B**	1	2	2	1	2.5.2
6Th	The following operator type is used to compare two values A. Unary B. Relational C. Assignment D. Equal **Answer.B**	1	1	1	1	2.5.2
7.	The size of() operator is a ____ type of operator used to calculate the size of the data types A. Unary B. Binary C. Relational D. Logical **Answer.A**	1	2	2	1	2.5.2
8.	Identify the invalid expression A. Result = a++ -b * 2; B. Result = ++a * 5; C. Result =/ 4; D. Result = 2, 4 **Answer. D**	1	1	2	1	2.5.2
9.	_____ is used to write the pseudo code with hierarchy. a. Colon b. Braces c. Parenthesis d. Indentation	1	1	1	1	2.5.2

	Answer. D					
10.	A binding is _____ if it first occurs _____execution or can change during execution of the program. a. static, before b. static, during c. dynamic, before d. dynamic, during **Answer. D**	1	1	2	1	2.5.2

PartB(5*2=10Marks) Answer all questions

Sl.No	Question	CO	PO	BL	Marks	PI Code
11	Write a Pseudocode for finding sum and average of three numbers. **Ans:** Pseudocode SUM_AVG BEGIN READ A, B, and C CALCULATE sum=A+B+C CALCULATE average=SUM/3 PRINT sum and average END	1	2	2	2	2.5.2

12	Illustrate a C program to calculate simple interest.
	Ans: #include <stdio.h>
	main()
	{
	int p,n; float r,si;
	p=1000;
	n=3;
	r=8.5;
	si = p*n*r/100;
	printf(" Simple Interest = %f" , si);
	}
		1	2	2	2	2.5.2

13	Distinguish between '=' and '==' operator with example. Ans: Where = is an assignment operator and == is a relational operator. Example: **If i=5, it assigns the integer value 5 to the variable i. While comparing (i==5), it returns true since I is exactly equals to 5.**	1	1	1	2	2.5.2
14	Where does global, static, and local, register variables, free memory and C Program instructions get stored? Ans: Global: Wherever the linker puts them. Typically the ―BSS segment‖ on many platforms. Static: Again, wherever the linker puts them. Often, they're intermixed with the globals. The only difference between global and static are whether the linker will resolve the symbols across compilation units.Local: Typically on the stack, unless the variable gets register	1	2	1	2	2.5.2

	allocated and never spills.Register: Nowadays, these are equivalent to —Locall variables. They live on the stack unless they get register-allocated.					

15	Compute the size of the int, float, char and double variable by using a C program with suitable code.
	Ans:
	`#include<stdio.h>`
	`intmain()`
	`{`
	`printf("Size of char: %ld byte\n",sizeof(char));`
	`printf("Size of int: %ld bytes\n",sizeof(int));`
	`printf("Size of float: %ld bytes\n",sizeof(float));`
	`printf("Size of double: %ld bytes", sizeof(double));`
	`return0;`
	`}`
		2	3	2	2	2.5.2

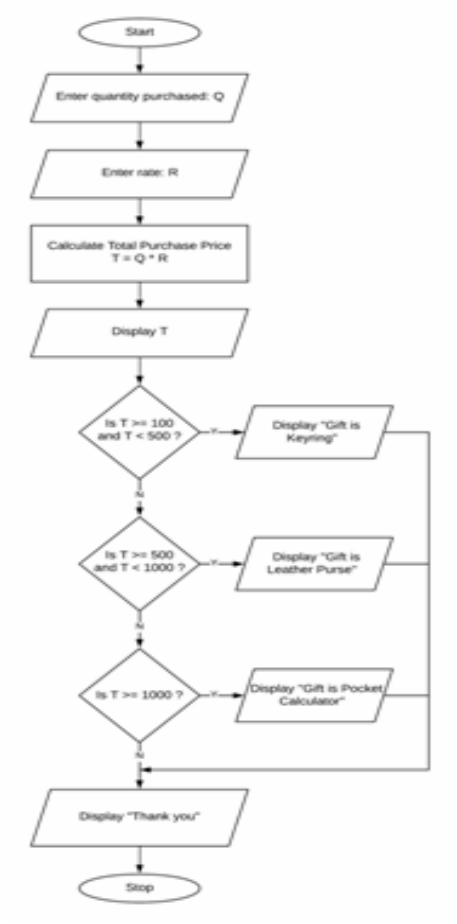
PartC(1*5=5Marks)

Sl.No	Question	CO	PO	BL	Marks	PI Code

16	Write a suitable C program to calculate Gross Salary of an employee. Given Basic Pay, HRA and DA. PF is 12% of the Basic Pay.
	Ans:
	`#include <stdio.h>`
	`int main()`
	`{`
	`char name[30];`
	`float basic, hra, da, pf, gross;`
	`printf("Enter name: ");`
	`gets(name);`
	`printf("Enter Basic Salary: ");  scanf("%f",&basic);`
	`printf("Enter HRA: ");`
	`scanf("%f",&hra);`
	`printf("Enter D.A.: ");`
	`scanf("%f",&da);`
	`/*pf automatic calculated 12%*/`
	`pf= (basic*12)/100;`
	`gross=basic+da+hra+pf;`
	`printf("\nName: %s \nBASIC: %f \nHRA: %f \nDA: %f \nPF: %f \n***GROSS SALARY: %f ***",name,basic,hra,da,pf,gross);`
	`return 0;`
	`}`
		1	2	2	5	2.5.2

	output : Enter name: Mike Enter Basic Salary: 23000 Enter HRA: 9500 Enter D.A.: 9500 Name: Mike BASIC: 23000.000000 HRA: 9500.000000 DA: 9500.000000 PF: 2760.000000 ***GROSS SALARY: 44760.000000 ***					
	(OR)					
17	Draw the flowchart for the given constraints "Input the quantity purchased and the rate. Calculate the total purchase price and display it along with the gift to be presented. The gifts to the customers are given as under: The flowchart will end with a 'Thank you' message. Ans:	1	2	2	5	2.5.2

Amount of Purchase (Rs.)	Gift
100 and above but less than 500	A key ring
500 and above but less than 1000	A leather purse
1000 and above	A pocket calculator



CourseOutcome(CO)andBloom'slevel(BL)CoverageinQuestions