CSIT140
[ET]

Enrol. No. ....

END SEMESTER EXAMINATION : JAN. 2022

PROGRAMMING IN C

Time : 3 Hrs. Maximum Marks : 60

Note: *Attempt questions from all sections as directed.*

SECTION – A **(24 Marks)**

Attempt any four questions out of five.
Each question carries 06 marks.

1. What is an identifier (variable)? What are the rules to construct identifier (variable)? Classify the following as valid/invalid Identifiers.

   (i) num2 (ii) $num1

   (iii) +add (iv) a_2

   (v) 199_space (vi) _apple

   (vii) #12

2. Define the logical operators in C language.

3. Show the different control statements with the help of appropriate example.

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4. What do you understand by call by value and call by reference? Explain with the help of suitable examples.

5. What will be the output of the following code:

(i)
```c
# include <stdio.h>
void areaperi (int, float *, float *);
int main()
{
    int radius;
    float area, perimeter;
    printf ( "Enter radius of a circle" );
    scanf ( "%d", &radius );
    areaperi ( radius, &area, &perimeter );
    printf ( "Area = %f\n", area );
    printf ( "Perimeter = %f\n", perimeter );
    return 0;
}

void areaperi ( int r, float *a, float *p )
{
    *a = 3.14 * r * r;
    *p = 2 * 3.14 * r;
}
```

(ii) # include <stdio.h>

```c
void fun (int, int);

int main()

{

int i = 5, j = 2 ;

fun (i, j ) ;

printf("%d %d\n", i,j) ;

return 0 ;

}

void fun (int i, int j)

{

i = i * i ;

j = j*j ;

}
```

SECTION – B   (20 Mark

Attempt any **two** *questions out of* **three.**

Each question carries 10 marks.

6.   (a) Write a C program to find GCD of two nur

using ternary operator and for loop.

(b) Write a calculator program in C language to do simple operations like addition, subtraction, multiplication and division. Use switch statement in your program.

(5)

7. Give the scope and life time of the following :

(i) External variable

(ii) Static variable

(iii) Automatic variable

(iv) Register variable

8. What is a file? Explain with an example the file handling functions.

SECTION – C (16 Marks)
(Compulsory)

9. (a) Explain the difference between structure and union with the help of suitable examples.

(4)

(b) What are the different operations that can be carried out on a file Also list down all the modes in which a file can be opened.

(6)

(c) Write a C program to swap two numbers using call by address(pointers or reference) method.

(6)