School of Computing

First CIA Test – December 2021

Course Code   : **CSE101**

Course Name   : **Problem Solving and Programming in C**

Year & Programme : I Year - I Sem **(Semi Theory)**

Duration: 45 minutes   Max Marks: 25

PART-A

Answer all the questions   **5×2=10Marks**

1. Identify the valid and invalid identifiers from the list below.
   1styear
   tax_rate
   student-no
   temperature

2. Identify the errors in the following code segment
   char ch1= 'C',ch2= 'A';
   int i=65,a,c;
   float b=97;
   a=ch1%ch2;
   c=i%b;

3. What input is required in the following program to produce the output shown below?

                          Output:
                          ch1=a ch2=b ch3=c
   ```
   #include<stdio.h>
   void main()
   {
   char ch1,ch2,ch3;
   scanf("%cy%cy%c",&ch1,&ch2,&ch3);
   printf("ch1=%c ch2=%c ch3=%c",ch1,ch2,ch3);
   }
   ```

4. Fill the appropriate statements in the following program to get the output shown below.
              Output:
              1 3 5 6 7
   ```
   #include<stdio.h>
   void main()
   { int i=1;
        for(;i<10;i++)
        {
                   if(i==2||i==4)
     ------------------//statement1
   printf("%d ",i);
   if(i==7)
     ------------------//statement2
      }}
   ```

5. What value should be entered into the second printf statement in the following program to get the output in the format shown below?

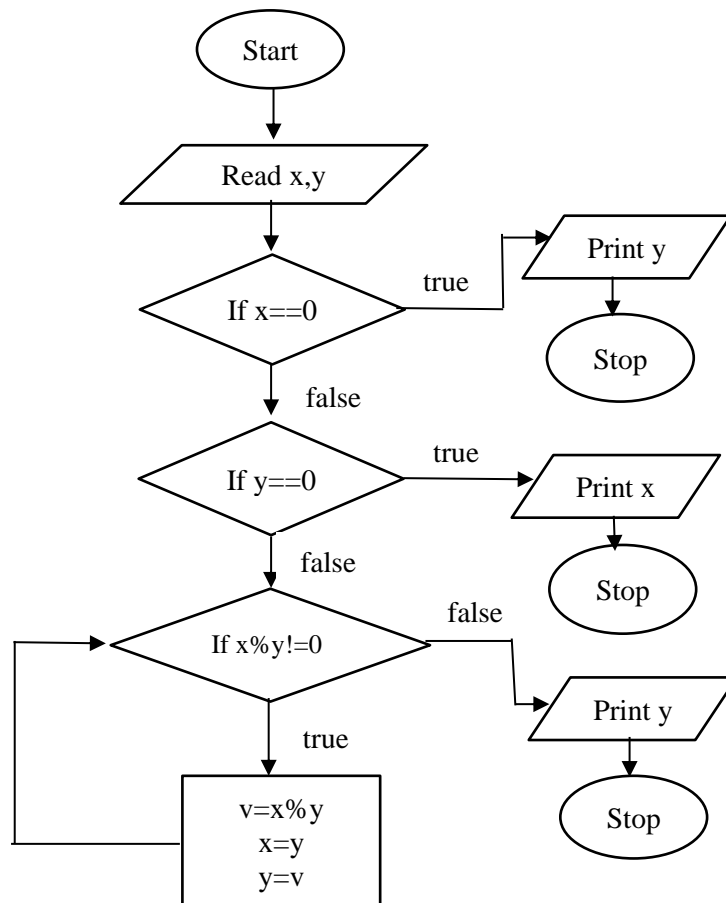**Output:**
```
Sastra University
           Sastra
```

```
#include<stdio.h>
void main()
{char str[]="Sastra University";
printf("%17s\n",str);
printf("%___s",str);
}
```

PART-B

Answer all the questions   **3×5=15Marks**

6. Write a C program for the following flowchart, then find the output for x=49, y=your registration number's last two digits.

7. Write a C code to test whether the given number is a power of 2 or not.

Eg. $32 = 2^5$; output $= 32$ is a power of 2
    24   output $= 24$ is not a power of 2

8. Explain the relational and logical operators in C