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Group A

Q1 Answer any four questions.

1*2.5=16

- Demonstrate the difference between continue and break statement with example.
- What is escape sequence? Write any three commonly used escape sequences.
- Declare a variable to store the serial and write the printf statement to display it as 5 digit numbers with leading zeros.
- Write the statement to display any number which is divisible by 2 or 4 using conditional operator.
- Rewrite the following loop statement to display all even numbers-
int value[5] = {12, 10, 15, 18, 29};
for (i=0; i<10;)

{
i++;

if (value[i]%2==0) printf("%d", value[i]);

- To read any data to a variable from keyboard we must have to use & before the variable. Explain the reason.

Q2 Answer any three questions.

3*5=15

- Identify all possible (both the compile-time and run-time) errors of the following program code and also specify the reasons.
void main()

```
{  
    const float pi = 0.0;  
    float radius, area = 0.0;  
    scanf("%f", radius);  
    pi = 3.514;  
    area = pi * radius * radius;  
    printf("Area is ", area);  
}
```

- Write a program that will read a character, toggle the case (i.e. convert to upper-case for lower-case input and vice versa) and display the converted character.
- Evaluate the following expression:
i) ch = 'A', num = 20;
num%3+30+ch == 'a'
ii) x = 20; y = 32
x += x*(++y)
- Specify any four syntactical rules for naming an identifier. Give examples for each one.

1-5 d

1-5 d

Write the syntax of the switch statement.

Write a program to display the binary-weight series 1+2+4+8+16.....+1024. Also show the sum of this series.

Rewrite the following code using while statement.

```
for(i = 0; i < 20; i++)
```

2.5

6

```
main()
{int i=0,x=0;
for(i=1;i<10;++i)
{if(i%2==1)
x++; x+=i;
else
x--;
printf("%d",x);
continue;
}
```

10V 010327613
12 21

```
main()
{int i=0,x=0;
for(i=1;i<10;++i)
{if(i%2==0)
x++;
else
x--;
printf("%d",x);
break;
}
```

b) Mention all types of unary operator. Give an example of (type) and i++.

Q5.a) Subtract 110101_{10} from 1011010 using 2's complement method.

b) Suppose the initial state of an integer array, designated X, can be represented like the following one

9	20	7	9	5	4	2	1	0	10
---	----	---	---	---	---	---	---	---	----

The numeral values of the cells in the representation corresponds to the contents of the array

X. What would be the output for following C code:

```
For(int i=0;i<10;i++){
X[i]= X[i]*i;
Printf("%d\n", X[i]);}
```

c) What is the advantage of switch? Give an example.

Q6.a) Write the code for Fibonacci Sequence using function.

b) Define 'call by value' and 'call by reference' with an appropriate example.