

1. Name the header files to which the following function belong to: [2]
- a) `log10(x)`
  - b) `isdigit( )`
  - c) `strlen( )`
  - d) `exit(0)`
2. Write the output of given program segment: [2]
- ```
char outer, inner;
for(outer='F'; outer>='A'; - -outer)
{
for(inner='A'; inner<=outer; inner++)
cout<<inner;
cout<<endl;
}
```
3. Write any one difference between the following. [3]
- i. `isupper( )` and `toupper( )`
  - ii. `puts( )` and `putchar( )`
  - iii. `break` and `continue`
4. Observe the following program SCORE.CPP carefully. If the value of NUM entered by the user is 5, choose the correct possible output(s) from the options from (i) to (iv), and justify your option. [1]
- ```
//PROGRAM: SCORE.CPP
#include<stdlib.h>
#include<iostream.h>
void main( )
{
randomize( );
int Num, rndnum;
cin>>Num
rndnum=random(Num)+5;
for(int N=1; N<=rndNum; N++)
cout <<N<<" ";
}
```
- output option:
- i) 1 2 3 4
  - ii) 1 2
  - iii) 1 2 3 4 5 6 7 8 9
  - iv) 1 2 3

5. In the following program, if the value of N given by the user is 15, what maximum and minimum values the program could possibly display. [1]

```
#include<iostream.h>
#include<stdlib.h>
void main( )
{
int N, Guessme;
randomize( );
cin>>N;
Guessme=random( N)+10;
cout<<Guessme<<endl;
}
```

6. Correct the errors in the given program segments. [2]

```
#include<iostream.h>
void main( )
{
char ch;
putchar("Enter the character");
getS(ch);
}
```

7. Write a C++ program that reads two strings and copies the smaller string into the bigger string. [3]

8. Write a program to input the character till the user wants. The program performs the following operation: [4]

- Counts the number of blank spaces
- Counts the number of digits
- Counts the number of lowercase alphabets.

9. Using manipulators, write a c++ program to display the following output according to the column number. (Using loop and manipulator) [2]

2
4
6
8
10