

**SM2-21<sup>st</sup> C Programming Language**

**Tutorial 2**

**13 Sep 2017, Wednesday, LT24, 8am**

1. In the 2's complement notation with 8 bits,  $-127_{(10)}$  is represented by
  - A. 01111111
  - B. 10000001
  - C. 10000000
  - D. None of the above
2. In the 2's complement notation with 12 bits, the total number of representations is
  - A. 256
  - B. 4096
  - C. 32767
  - D. None of the above
3. For a floating point representation using 5 bits for mantissa with a representation of 10110, and 3 bits for exponent with a representation of 110, the decimal value of the floating point representation is
  - A. 0.625
  - B. -0.625
  - C. 0.15625
  - D. -0.15625
4. Which of the following denote primary data types in C program?
  - A. int
  - B. float
  - C. long
  - D. All the Above
5. The operation between **float** and **int** would give the result as
  - A. float
  - B. int
  - C. long
  - D. None of the Above
6. The function in a C program can be placed
  - A. before the main function
  - B. after the main function
  - C. Both A and B
  - D. None of the Above
7. Which of the following denote library functions in the C Programming Language?
  - A. scanf
  - B. printf
  - C. Both A and B
  - D. None of the Above

8. How many times is a **do while** loop guaranteed to execute?
  - A. 0
  - B. Infinitely
  - C. 1
  - D. None of the above
9. In which of the following loop construct the condition is tested after the first iteration?
  - A. while loop
  - B. do-while loop
  - C. Both A and B
  - D. None of the Above
10. Which of the following denote components of **for** loop?
  - A. initialization
  - B. condition
  - C. increment or decrement
  - D. All the Above
11. What is the final value of x when the code
  - int x;**
  - for (x=0; x<17; x++) { }**is run?
  - A. 16
  - B. 17
  - C. 18
  - D. None of the Above
12. Which of the following are related to the switch statement?
  - A. case
  - B. break
  - C. default
  - D. All the Above
13. What is the value of a false statement resulting in a C program?
  - A. 1
  - B. 0
  - C. -1
  - D. None of the Above
14. What is the keyword that is used to handle unhandled conditions in **switch-case**?
  - A. after
  - B. default
  - C. else
  - D. all

15. Which of the following function named as SM2 denote the representation of accepting an integer value and returning a float value?
- A. int SM2 (float a);
  - B. float SM2 (int a);
  - C. void SM2 (float a);
  - D. None of the Above

16. The address of variable **xyz** is obtained by using
- A. address (xyz);
  - B. xyz;
  - C. address (\*xyz);
  - D. &xyz;

17. The notation for preprocessor directive is
- A. \$
  - B. !
  - C. @
  - D. #

18. The range of unsigned integer (unsigned int) is {0, 1, 2, 3, ..., 65535} as used in compiler X. In the following code segment before **(x>y)** is executed, the data type of **x** will be promoted to unsigned integer. What will be printed on the screen if compiler X is used?

```
int main()
{
    unsigned int y = 12; int x = -2;

    if (x>y)
        printf ("x is greater");
    else
        printf ("y is greater");

    return 0;
}
```

- A. x is greater
- B. y is greater
- C. All the Above
- D. None of the Above

19. In the following code the numbers preceded with a digit 0 indicates that it is an octal number. What will be printed on the screen for the following program?

```
#include <stdio.h>
int main()
{
    int i=012, j=046, k=056;
```

```
printf("%d%d%d", i,j,k);
return 0;
}
```

- A. 012046056
- B. 124656
- C. 103846
- D. None of the Above

20. Given that the precedence of multiplication is higher than the precedence of subtraction so  $5-3 \times 4 = -7$ . What will be printed on the screen for the following program if the precedence of logical operator is higher than the precedence of relational operator?

```
main()
{
    int x=10, y=20, z;

    if (!y>=5)
        x=50;
        z=70;

    printf("x=%d z=%d", x, z);

    return 0;
}
```

- A. x=50 z=0
- B. x=10 z=70
- C. x=50 z=70
- D. None of the Above

21. What will be printed on the screen by the following C program?

```
#include<stdio.h>
int x =10;
main()
{
    do
    do
        printf("%d ",x);
    while(!-2);
    while(0);

    return 0;
}
```

- A. 0
- B. 0 0

- C. 10
- D. 10 10

22. What will be printed on the screen by the following C program?

```
#include <stdio.h>
main ()
{
    int a = 88;

    if (a>88) printf ("a>88 ");
    else if (a>44) printf ("a>44 ");
    else if (a>22) printf ("a>22 ");

    return 0;
}
```

- A. a>22
- B. a>44
- C. a>44 a>22
- D. a>88 a>44 a>22

23. What will be printed on the screen by the following C program?

```
#include <stdio.h>
void main()
{
    int x=113, y=113;

    if(++x==y)
        printf ("Yes ");
    else
        printf ("No");
}
```

- A. Yes
- B. No
- C. Yes No
- D. None of the above

24. Similar to the break instruction in the switch construct, the break instruction in for loop will immediately cause an exit from the for loop and will continue to execute the immediate instruction following the for loop. What will be printed on the screen by the following C program?

```
#include <stdio.h>

int main()
{
```

```
int i=113;

for(i=0;i=0;i--)
{
    printf("%d ",i);
    if (i==0) break;
}

return 0;
}
```

- A. 0
- B. 113
- C. Nothing will be printed
- D. There is no certain answer to this question.

25. Write the code segment to swap two integers without using third integer.

26. What are the memory representations with 32 bits for

```
int a = 7;
int a = -7;
```

27. Why do we use do-while loop in C?

28. What is the meaning of scope of a variable?

29. What is a pre-tested loop in C? Give example.

30. What is a nested loop in C? Give example

31. What will be the output of the following program?

```
#include<stdio.h>
int main()
{
    int a=2,b=7,c=10;
    c=a==b;
    printf("%d",c);
    return 0;
}
```

32. What will be the output of the following program?

```
#include<stdio.h>
int main()
{
    int a=0, b=10;

    if(a=0)
        printf("true");
    else
        printf("false");

    return 0;
}
```

33. What will be the output when you execute the following C code?

```
#include<stdio.h>
void main()
{
    int check=2;
    switch(check)
    {
        case 1: printf("1");
        case 2: printf("2");
        case 3: printf("3");
        default: printf("4");
    }
}
```

34. What will be the output of the following C code?

```
#include<stdio.h>
int main()
{
    int i=1;
    for(i=0;i=-1;i=1)
    {
        printf("%d ",i);
        if(i!=1) break;
    }
    return 0;
}
```

35. What will be the output of the following C code?

```
#include<stdio.h>
int main()
{
    int i;
    for(i=2;i<=8;i++);
    printf("%d",i);
    return 0;
}
```

36. How many times this loop will execute?

```
#include<stdio.h>
int main()
{
    char c=125;
    do
        printf("%d ",c);
        while(c++);
    return 0;
}
```