UNIT-II&UNIT-III

1) What error will the following function give on compilation? [ ]

```
int fun(int,int);
main( )
{
int d;
d=fun(5,2);
printf("%d",d);
}
fun( int a, int b)
{       int a;
        a=20;
        return a;
}
```

A) Missing parenthesis in *return* statement B)The function should be defined as *int fun(int a, int b)*

C) Redeclaration of a D) None of the above

2) Point out the error, if any, in the following function.

```
void main( )
{
        int f(int);
        int b;
        b=f(20);
        printf("%d",b);
}
int f(int a)
{
        a>20? return (10): return (20);
}
```

Answer: *return* statement cannot be used as shown with the conditional operators. Instead the following statement can be used:

return (a>20? 10: 20);

3) What is the output for the given code:.

```
int f(int);
 main( )
{
        int b;
        b=f(30);
        printf("%d",b);
        getch();
}
int f(int a)
{
    return (a>20? 10 : 20);
}
```

Ans: **10**

4) Which of the following is the correct output for the program given below? [ ]

```
#include<stdio.h>
main( )
{
        int i=1;
        if(!i)
           printf("\nRecursive calls are painful\n");
        else
        {
             i=0;
             printf("\nRecursive calls are challenging\n");
              main( );
        }
}
```

A. Recursive calls are challenging
   Recursive calls are painful
B. Recursive calls are painful
   Recursive calls are challenging
C. Recursive calls are challenging
D. **This code prints Recursive calls are challenging (infinitely….)**

5) Which of the following is the correct output for the program given below? [ ]

```
void main( )
{
  int fun(int);
  int i=fun(10);
  printf("%d\n",--i);
  getch( );
}
int fun(int i)
{
  return(i++);
}
```

A) **9** B) 10 C) 11 D) 8

6) Which of the following is the correct output for the program given below? [ ]

```
void main()
{  int k=35;
   clrscr( );
    k=fun(k=fun(k=fun(k)));
   printf("k=%d",k);
   getch( );
}
int fun(int k)
{
    k++;
   return(k);
}
```

A) k=35 B) **k=38** C) k=37 D) k=39 E) None

7) Which of the following is the correct output for the program given below? [ ]

```
void fun( int);   /* Function Prototype */
void main()
{
   int a=3;
   clrscr();
   fun(a);
   getch();
}
void fun(int k)
```

```
{
  if(k>0)
  {
     fun(--k);
     printf("%d",k);
     fun(--k);
  }
}
```

A) 0 2 1 0 B) 1 1 2 0 C) 0 1 0 2 D) **0 1 2 0**

8) Which of the following is the correct output for the program given below? [ ]

```
#include<stdio.h>
int i;
int fun1(int);
int fun2(int);
void main()
{
  extern int j;
  int i=3;
  clrscr();
  fun1(i);
  printf("%d",i);
  fun2(i);
  printf("%d",i);
  getch();
}
int fun1(int j)
{
  printf("%d",++j);
  return 0;  }
int fun2(int i)
{
 printf("%d",++i);
 return 0;
}
int j=1;
```

A) **4 3 4 3** B) 3 4 4 3 C) 3 3 4 4 D) 3 4 3 4

9) Which of the following is the correct output for the program given below? [ ]

```
#include<stdio.h>
int fun( );
int i;
main( )
{
  clrscr( );
  while(i)
  {
    fun( );
    main( );
  }
  printf("Hello");
}
fun( )
{
  printf("Hi");
}
```

A) Hi B) **Hello** C) Infinite Loop D) No output

10) Which of the following is the correct output for the program given below?

```
#include<stdio.h>
main( )
{
 int i=0;
 clrscr();
 i++;
 if(i<=5)
 {
   printf("adds wings to your thoughts");
   exit( );
   main( );
 }
}
```

A) The code prints ‘adds wings to your thoughts’ five times b)Function *main()* cannot call itself

C) The code generates infinite loop. D) **The Code prints ‘adds wings to your thoughts’**

11) The keyword used to transfer control from a function back to the calling function is:[ ]

A) switch B) **return** C) goto D) exit

12) Write a recursive function *count( )* that prints numbers from 10 to 1

Answer:

```
#include<stdio.h>
#include<conio.h>
void count(int);
main( )
{
 int i=10;
 count(i);
 getch();
}
void count(int x)
{
   printf("%d\t",x);
   if(x!=1)
   count(--x);
}
```

13) Which of the following is the correct output for the program given below? [D]

```
#include<stdio.h>
int reverse(int);
void main( )
{
   int n=5;
   clrscr();
   reverse(n);
}
reverse(int n)
{
   if(n==0)
     return 0;
   else
     printf("%d",n);
   reverse(n--);
}
```

A) 5 4 3 2 1 B) 1 2 3 4 5 C) 5 4 3 2 1 0 D) **Program runs in an infinite loop**

State whether the following statements are *true/false.*

1. In C all functions except *main( )* can be called recursively. [True / **False**]
2. A function cannot be defined inside another function. [**True** / False]
3. Functions cannot return more than one value at a time. [**True** / False]
4. A function may have any number of return statements each returning different values. [**True** / False]
5. Functions cannot return a floating point number. [True / **False**]
6. In a function two return statements should never occur successively. [**True**/False]
7. In a function two return statements should never occur. [True/**False]**

I. Choose the correct alternative:

1. How many times the body of the following loop executed?
   x=5; y=50; while(y! = 0) {y/=x ;} [ ]
   a) 4 b) 1 **c) 3** d) 2
2. Which of the following statement is syntactically correct [ ]
   a) printf("%d", &a); b) scanf("%d", a); c) scanf("%d", #a); d) **scanf("%d", &a);**
3. Which of the following is the correct syntax of for loop [ ]
   a) for(i=o, i<10, i++) b) for(i=0; i++; i<=10)
   c) for(i=0; i<10; i++) d) for(i=0, i++, i<=10)
4. Which of the following loop executes the body of the loop at least once [ ]
   a) while b) for c) **do..while** d) all of the above
5. Which of the following is used inside a loop to terminate the current iteration and start with the next generation [ ]
   a) break **b) continue** c) goto d) return
6. Consider the following program segment.
   i=6720; j=4;
   while((i%j)==0)
   { i=i/j; j=j+1; }
   On termination j will have the value [ ]
   a) 4 b) 8 **c) 9** d) 6720
7. Which of the following is/are syntactically correct [ ]
   a) for( ) b) for(;) c) for(,) **d) for(;;)**
8. Which of the following is looping statement [ ]
   (A) **for** (B) if (C) switch (D) printf
9. If statement is [ ]
   a) **decision making statement** b) looping statement
   c) both a &b d) none

10. What is the output of the following code [ ]

```
#include<stdio.h>
main( )
{
int i=1,j=2;
switch(i)
{
case 1:   printf("GOOD");
          break;
case j:   printf("BAD");
          break;
}
}
```

a) GOOD b) BAD c) GOOD BAD d) **Compiler Error**

11. Find the output [ ]

```
void main()
{
char a[ ]="12345\0";
int i=strlen(a);
printf("here in 3 %d\n",++i); }
```

(A) here in 3 **(B) here in 3 6** (C) 6 (D) 3

12. Consider the following and find the output [ ]

```
main( )
{   int a=0;
    int b=30;
    char x=1;
    if (a,b,x)
    printf("Hello");
}
```

(A) compiler error (B) abxHello **(C) Hello** (D) None

13. getch( ) [ ]

a) reads a character and returns it b)reads a character and does not returns it

c) does not read any character d) reads a number

14. getche( ) [ ]

a) reads a character and returns it b) reads a character and does not returns it

c) does not read any character d) reads a number

15. int x,y =5;
    char z='a';
    x=y+z;
    the value of x is [ ]

    %d----- x=102
    %c----- x=f

    a) f b) a **c) 102** d) 97

16. for (i=0; i<=5; i++) [ ]
    printf("%d",i);
    output is
    a) 5 6 7 8 9 b) 5 6 7 8 9 10 **c) 0 1 2 3 4 5** d) none

17. for (i=5; i<10; i++) [ ]
    printf("%d",i);
    output is
    a) 5 6 7 8 9 b) 5 6 7 8 9 10 c) 1 2 3 4 5 d) none

18. i =0; [ ]
    do
    { printf("%d",i);
    while(i!=0);
    } output is
    a) 1 b) 0 c) 5 **d) syntax error**

19. i =0 [ ]
    while (i !=0)
    { printf("%d", i);
    } output is
    a) 1 b)0 c) 5 **d) none**

20. scanf("%2d %5d", &x1, &x2);
    if we enter the values 21509 50 for x1 and x2 the value of x1 and x2 will be [ ]
    a) 21509 50 **b) 21 509** c) 215 09 d) none

21. The entry controlled loop are : [ ]
    a) while and do while b) only while **c) while and for** d) do while

22. conditional statement is same as [ ]
    a) if-else statement b) switch statement c) both a & b d) none

23. Identify correct statement given float x; [ ]
    a) scanf("%g", &x); b) scanf("%f", &x); c) scanf("%d",&x); **d) a and b**

24. int i =16; [ ]
    printf(("%o",i); what is the output?
    a) 10 **b) 20** c) 14 d) none

25. main ( ) [ ]

```
{
printf("%c", 'A'+1);
}
```

what is the output of this code?

a) A b) a c) b **d) B**

26. main ( ) [ ]

```
{   printf( "%d", 'A'+1)
}
```

What is the output of this code?

a) 65 **b) 66** c)A d) B

27. Minimum number of times do while loop is executed is [ ]

a) 0 **b) 1** c) 10 d) none

28. The minimum number of times while loop is executed [ ]

a) 0 b) 2 c) 1 d) none

29. Which of the following is exit controlled loop? [ ]

a) while **b) do while** c) for d) a and c

30. Which is the selective control statement? [ ]

a) while b) do while c) if-else **d) switch**

31. Which is the loop construct? [ ]

a) while b) do while **c) a and b** d) switch

32. continue statement is used in [ ]

a) decision making statement **b) loop** c) a & b d) none

33. i =1 [ ]

```
if ( i )
printf("correct");
else
print ("not correct");
```

What will be the output?

a) "correct" b) "not correct" c) no output d) none

34. Which of the following is infinite loop? [ ]

a) for (i=0; ; j); b) for (i=0; i<10;); c) for (; ;); **d) a,b and c**

35. Which assignment will lead to 10 in i? [ ]

```
j=10;
```

a) i=++j; **b) i=j++;** c) i=j+1; d) both a and c

36. int a[5]={1,2,3}; The value of a [4] will be [ ]

a) 2 b) 3 c) garbage value **d) 0**

37. int a[ ]={'a','b','c','d'} size of array a is [ ]

a) 4 b)5 c) cannot be determined d)error

38. When a string is read using getchar( ) function it [ ]

a) should be explicitly terminated with '\0' b)is automatically terminated with '\0'

c) need not be terminated with '\0' d) none

39. int a[10] The size of this array is [ ]

a) 20 bytes b) 10 bytes c) 22 bytes d) none

40. char s[20] ="welcome";

char p[ ]= "world";

strcat(s,p);

what will be the value of s ? [ ]

a) welcome world b) world welcome c) error due to insufficient size d) welcome

41. char S[20] ="welcome";

char P[ ] ="world";

strncat(S,P,3);

what will be the value of S? [ ]

a) welcome wor b) world welcome c) error due to insufficient size d) none

42. int a[3] [2] = { {1,2}, {5},{7}}; [ ]

The value a[1][1] is

a) 1 b) 5 c) 2 **d) 0**

43. char str1[ ] = "computer ";

char str2 [ ] = "science";

char str3[50];

str3=str1+ str2; value of str3 is [ ]

a) computer b) science c) 2 **d) invalid statement**

By the given data solve 44 & 45

Car str1[ ] ="knr";

Cahr str2[ ] ="red";

44. i = strcmp(strl, str2); The value of i is [ ]

a) 0 *b)* 1 **c) -1** d) none

45. i = strcmp(str2. strl); The value of i is [ ]

a) 0 **b)1** c) -1 d) none

46. char S1[ ]= "COMPUTER";

char S2[ ] = "Computer";

i =strcmp(Sl, S2);

The value of i is [ ]

a) 0 b) 1 **c) -1** d) none

47. charS1[ ]= "COMPUTER";
    char S2[ ] = "Computer";
    i = strcmpi(Sl, S2);
    The value of i is [ ]
    a) 0 b) 1 c) -1 d) none

48. char Sl[= "Computer";
    char S2[ ]= "Compass";
    i = strcmp(Sl, S2); The value of i is [ ]
    a) 0 **b) 20** c) 20 d) none

49. A character array CSE can be initialized as ; [ ]
    a) char S[ ] ="CSE" b) char S[ ] = {C, S, E}
    c) char S[ ]= { 'C,'S ‘,'E ', ‘\0’} **d) both a and c are correct**

50. char S[6] = "Hello";
    for (i = 0; S[i]! = ‘\0’, i++);
    printf ("%d", i);
    The output will be [ ]
    a) 01234 b) 0 1 2 3 4 5 6 c) 5 d) none

51. By default, storage class for any variables declared in a block is [ ]
    a) auto b) extern c) register d) static

52. Before an auto variable is initialized, it will have [ ]
    a) 0 **b) garbage value** c) no value d) none

53. Automatic variables are stored in [ ]
    a) memory b) register c) cache d) none

54. For faster access of variables, they must be declared as [ ]
    a) register b) auto c) static d) extern

55. If no registers are available for storage, register variables are same as [ ]
    a) auto. b) static c) extern d) none

56. External variables can be accessed by [ ]
    a) only in which they are declared b)all the functions declared in the program
    c) functions which are defined after the declaration of external variable d)none

57. Storage class controls [ ]
    a) life time of variable b) scope of variable c) storage of variable **d) all the above**

58. The initial value of any static variable is : [ ]
    a) 0 **b) 1** c) depends on external initialization d) none

59. Which storage class refers to global variables? [ ]
    a) auto b) static **c) extern** d) registers

60. void main ( )

{ ……

……..

}

int a;

demo1( ) { }

demo2( ) { }

To which function a is accessible? [ ]

a) only to demo 1( ) b) only to demo2( )

c) only to main( ) **d) to both demo 1( ) and demo2( )**

61. void main ( )

```
{
    if ( )
    {
        int i,j=10;
        printf("%3d",j );
        printf ("%3d%3d", i,j);
    }
}
```

The output will be [ ]

a) 5 10 5 b) 5 10 10 **c) error** d) none

62. void main( )

{ Demo( ); Demo( ); }

Demo( )

{ static int i; printf(“%3d",i); i++; }

The output will be [ ]

a) 01 b) 00 c) 1 2 d) none

63. Which of the following is correct return statement? [ ]

a) return(2 + 10); b) return(a); c) return(a, b); **d) a and b**

64. A static variable is one which [ ]

a) retains its value throughout the life of program b) is same as automatic variable

c) cannot be initialized d) none

65. Static variables are stored in [ ]

a) memory b) register c) both a and b d) none

66. Array is collection of items of [ ]

a) different data types **b) same data type** c) both a and b d) none

67. Array elements are stored in [ ]

a) contiguous memory locations b) non contiguous memory locations

c) both a and b d) none

68. int a[3]= { 10, 15, 20}, x;

x = a++;

The value of x is [ ]

a) 10 b) 15 **c) error** d) 20

69. int a[ ]= { 1,2, 3};

a[-l]= 10;

Is this valid statement? [ ]

a) not a valid statement b) may not be a valid statement

c) it is a valid statement d) none of the above

70. A character array ends with [ ]

a) '\0' b) '#' c) '@' d) blank space

71. char S[10] = "program";

S[4] = '\0';

puts(S);

The output will be [ ]

a) pro **b) prog** c) program d) gram

72. void main( )

{

int j = 5, k, i;

k = i +j;

printf("%d", k);

}

The output will be [ ]

a) compiler error b) run time error c) 15 **d) none**

73. The parameters used in function call are known as [ ]

a) formal parameters **b) actual parameters** c) user defined parameters d) all the above

74. void main( )

{

auto int a = 50;

register char b = 'a';

b = b + 5;

printf("% c", b); }

The output will be [ ]

a) f b) a c) error d) none

75. Which of the following statements are true for Function [ ]

a) reduces the space occupied but increases computation time

b) increases space occupied and decreases computation time

c) reduces space as well as computation time

d) none of the above

76. A for loop with no test condition is called as _____**infinite**_____ loop

77. ___**for**_____ loop in C is both counter controlled and pretest loop

78. In menu driven programs _____**while**_____ loop statement is used

79. **_do-while_** is very similar to the while loop except that the test occurs at the end of the loop body

80. The while loop repeats a statement until the test at the top proves **__false_**

81. The **__goto_** statement transfers control to a statement within its body

82. The **___goto___**is a unconditional branching statement used to transfer control of the program from one statement to another

83. What is the index value of the first element in an array?

The first index value of an array in C is 0.

84. What is the difference between a for statement and a while statement?

A for statement contains initializing and increment expressions as parts of the command

85. What is the difference between a while statement and a do...while statement?

A do...while contains the while statement at the end and always executes the loop at least once.

86. Is it true that a while statement can be used and still get the same results as coding a for statement?

Yes, a while statement can accomplish the same task as a for statement, but you need to do two additional things. You must initialize any variables before starting the while command, and you need to increment any variables as a part of the while loop.

87. What must you remember when nesting statements?

You can't overlap the loops. The nested loop must be entirely inside the outer loop

88. Can a while statement be nested in a do...while statement?

Yes, a while statement can be nested in a do...while loop. You can nest any command within any other command.

89. What are the four parts of a for statement?

The four parts of a for statement are the initializer, the condition, the increment, and the statement(s).

90. What are the two parts of a while statement?

The two parts of a while statement are the condition and the statement(s).

91. What are the two parts of a do...while statement?

The two parts of a do...while statement are the condition and the statement(s).

92. What is the difference between puts( ) and printf( )?

There are two differences between puts( ) and printf( ):

printf( ) can print variable parameters.

puts( ) automatically adds a newline character to the end of the string it prints.

93. What header file should you include when you use printf( )?

You should include the STDIO.H header file when using printf().

94. What do the following escape sequences do?

a. \\ b. \b c. \n d. \t e. \a

a. \\ prints a backslash.

b. \b prints a backspace.

c. \n prints a newline.

d. \t prints a tab.

e. \a (for "alert") sounds the beep.

95. What conversion specifiers should be used to print the following?

a. A character string

b. A signed decimal integer

c. A decimal floating-point number

a. %s is used for a character string.

b. %d is used for a signed decimal integer.

c. %f is used for a decimal floating-point number.

96. Which of C's data types can be used in an array?

All of them, but one at a time. A given array can contain only a single data type.

97. If an array is declared with 10 elements, what is the subscript of the first element?

0. Regardless of the size of an array, all C arrays start with subscript 0.

98. In a one-dimensional array declared with *n* elements, what is the subscript of the last element?

***n*-1**

99. What happens if your program tries to access an array element with an out-of-range subscript?

The program compiles and runs but produces unpredictable results.

100. How do you declare a multidimensional array?

In the declaration statement, follow the array name with one set of brackets for each dimension. Each set of brackets contains the number of elements in the corresponding dimension.