

PROGRAMING IN C

1. (UGC net August 2016 PP2 No 12) The following 'C' statement :

```
int * f[ ]( );
```

declares :

- (A) A function returning a pointer to an array of integers.
- (B) Array of functions returning pointers to integers.
- (C) A function returning an array of pointers to integers.
- (D) An illegal statement.

Answer: B

2. (UGCNET-Dec2015-II-16) A three dimensional array in 'C' is declared as int A[x][y][z]. Here, the address of an item at the location A[p][q][r] can be computed as follows (where w is the word length of an integer):

- (A) $&A[0][0][0]+w(y*z*q+z*p+r)$
- (B) $&A[0][0][0]+w(y*z*p+z*q+r)$
- (C) $&A[0][0][0]+w(x*y*p+z*q+r)$
- (D) $&A[0][0][0]+w(x*y*q+z*p+r)$

Answer: B

3. (UGCNET-June2015-II-11) What is the output of the following program ?

(Assume that the appropriate pre-processor directives are included and there is no syntax error)

```
main()
```

```
{
```

```
    char S[ ] = "ABCDEFGH";
```

```
    printf ("%C", * (& S[3]));
```

```
    printf ("%s", S+4);
```

```
    printf ("%u", S);
```

```
    /* Base address of S is 1000 */
```

```
    }  
    (A) ABCDEFGH1000                      (B) CDEFGH1000
```

```
    (C) DDEFGHH1000                      (D) DEFGH1000
```

Answer: D

4. (UGC net dec 14 PP2 No 12) What does the following expression means ?

```
char *(*(* a[N]) ( ) ) ( );
```

- (A) a pointer to a function returning array of n pointers to function returning character pointers.
- (B) a function return array of N pointers to functions returning pointers to characters
- (C) an array of n pointers to function returning pointers to characters
- (D) an array of n pointers to function returning pointers to functions returning pointers to characters.

Answer: A,B,C,D

5. (UGCNET-June2014-II-43) While (87) printf("computer");

The above C statement will

- (A) print "computer" 87 times
- (B) print "computer" 0 times

- (C) print "computer" 1 times
- (D) print "computer" infinite times

Answer: D

6. (UGCNET-Dec2013-II-17) Which of the following has compilation error in C ?

- (A) int n = 32;
- (B) char ch = 65;
- (C) float f= (float) 3.2;
- (D) none of the above

Answer: D

7. (UGCNET-Sep2013-II-33) What is the size of the following Union ? Assume that the size of int = 2, size of float = 4, size of char = 1

```
union tag {  
    int a;  
    float b;  
    char c;  
};  
(A) 2    (B) 4  
(C) 1    (D) 7
```

Answer: B

8. (UGCNET-Sep2013-II-34) What is the output of the following program segment?

```
sum(n)  
{  
    if ( n < 1 ) return n;  
    else return (n + sum(n-1));  
}  
main()  
{  
    printf(“%d”, sum(5));  
}
```

- (A) 10 (B) 16
- (C) 15 (D) 14

Answer: C

9. Assume that x and y are non-zero positive integers. What does the following program segment perform?

```
while (x!=0)  
{  
    if (x>y)  
        x = x-y  
    else  
        y=y-x;  
    printf(“%d”,x);  
(A) Computes LCM of two numbers  
(B) Computes GCD of two numbers
```

- (C) Divides large number with small number
- (D) Subtracts smaller number from large number

Answer: B

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10. (UGCNET-Sep2013-II-36) Consider the following program segment:

```
d=0;
for(i=1; i<31, ++i)
for(j=1; j<31, ++j)
for(k=1; k<31, ++k)
if ((i+j+k)%3 == 0);
d = d + 1;
printf("%d", d);
```

The output will be

- (A) 9000
- (B) 3000
- (C) 90
- (D) 2700

Answer: Marks given to all

11. (UGCNET-June2013-II-9) How many times the word 'print' shall be printed by the following program segment?

```
for(i=1, i<=2, i++)
for(j=1, j<=2, j++)
for(k=1, k<=2, k++)
printf("print/n")
```

- (A) 1
- (B) 3
- (C) 6
- (D) 8

Answer: D

12. (UGCNET-Dec2012-II-7) The 'C' language is

- (A) Context free language
- (B) Context sensitive language
- (C) Regular language
- (D) None of the above

Answer: A

13. (UGCNET-June2012-II-38) `printf("%c", 100);`

- (A) prints 100
- (B) prints ASCII equivalent of 100
- (C) prints garbage
- (D) none of the above

Answer: B

14. (UGCNET-June2010-II-11) The statement

```
printf("%d", 10 ? 0 : 5 : 1 : 12);
```

will print

- (A) 10
- (B) 0
- (C) 12

(D) 1

Answer: D

15. (UGCNET-June2010-II-12) What will be the output of the following c-code?

```
void main ( )  
{  
    char *P = "ayqm" ;  
    char c;  
    c = ++*p ;  
    printf ("%c", c);  
}
```

(A) a

(B) c

(C) b

(D) q

Answer: C

16. (UGCNET-dec2009-ii-12) What would be the output of the following program, if run from the command line as “myprog 1 2 3”?

```
main (int argc, char * argv[ ])  
{ int i ;  
i = argv[1] + argv[2] + argv[3] ;  
    printf (“% d”, i) ;  
}
```

(A) 123

(B) 6

(C) Error

(D) “123”

Answer: C

17. (UGCNET-june2009-ii-16) Which of the following does not represent a valid storage class in 'c'?

(A) automatic

(B) static

(C) union

(D) extern

Answer: C

18. (UGCNET-dec2008-ii-26) The output of the program code

```
main()  
{  
    int x=0;  
    while (x<=10)  
    for(;;)  
        if(++x%10==0)  
            break;  
    printf(“x=%d”,x);  
}
```

- ```
}
is :
(A) x=1
(B) compilation error
(C) x=20
(D) none of the above
```

Answer: C

19. What is the effect of the following C code?  
for(int i=1; i≤5; i=i+½)  
printf(“%d,”,i);  
(A) It prints 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, and stops  
(B) It prints 1, 2, 3, 4, 5, and stops  
(C) It prints 1, 2, 3, 4, 5, and repeats forever  
(D) It prints 1, 1, 1, 1, 1, and repeats forever

Answer: D

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20. (UGC NET 2008 PP No 12) Consider the following declaration in C:  
char a[];  
char \*p;  
Which of the following statement is not a valid statement?

- (A) p=a;  
(B) p=a+2;  
(C) a=p;  
(D) p=&a[2];

Answer: C

21. (UGCNET-june2008-ii-13) Consider the following C code:  
{ int a=5, b=9;  
float r;  
r=b/a; }  
What is the value of r ?

- (A) 1.8  
(B) 1.0  
(C) 2.0  
(D) 0.0

Answer: B

22. (UGC net paper-ii-december-2007 PP2 No 11) What cannot replace ‘?’ in the following C code to print all odd numbers less than 100?

- ```
for(i=1;?;i+2)  
printf(“%d\n”,i);  
(A) i≤100      (B) i≤101  
(C) i<100      (D) i<101
```

Answer: B

23. (UGC net Paper II December 2007 No 13) Which of the following is a valid C code to print character 'A' to 'C' ?

- (A) `x='A';`
`switch(x)`
`{case 'A':printf("%d\n", x);`
`....`
`case 'C':printf("%d\n", x);`
`}`
- (B) `x='A';`
`switch(x)`
`{case 'A'<=x <='C' : printf("%d\n", x);}`
- (C) `x='A';`
`switch(x)`
`{`
`case 'A' : printf("%d\n", x);`
`break;`
`case 'B' : printf("%d\n", x);`
`break;`
`case 'C' : printf("%d\n", x);`
`break;`
`}`
- (D) `x='A';`
`switch(x)`
`{`
`case 'A':printf("%d\n", x);`
`case 'B':printf("%d\n", x);`
`case 'C':printf("%d\n", x);`
`}`

Answer: correct answer not given

24. (UGCNET-june2007-11) The following loop in 'C':

- ```
int i=0;
While(i++<0)i--;
```
- (A) will terminate  
(B) will go into an infinite loop  
(C) will give compilation error  
(D) will never be executed

Answer: B

25. (UGCNET-june2007-12) In case of right shift bitwise operator in 'C' language, after shifting n bits, the left most n bits:

- (A) are always filled with zeroes  
(B) are always filled with ones  
(C) are filled with zeroes or ones and is machine dependent  
(D) none of the above

Answer: C

26. What is the output of the following 'C' program?

```
main()
{printf("%x",-1>>4);}
```

- (A) ffff
- (B) 0fff
- (C) 0000
- (D) fff0

Answer: A

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```
27. int arr[] = { 1, 2, 3, 4 }
int count;
incr() {return ++count;}
main()
{
 arr[count++]=incr();
 printf("arr[count]=%d\n", arr[count]);
}
```

The value printed by the above program is:

- (A) 1
- (B) 2
- (C) 3
- (D) 4

Answer: B

28. What is the output of the following program segment ?

```
main()
{
 int count, digit=0;
 count=1;
 while(digit<=9){
 printf("%d\n",++count); ++digit;}
}
```

- (A) 10
- (B) 9
- (C) 12
- (D) 11

Answer: D

29. If the following loop is implemented

```
{
 int num=0;
 do{--num; printf("%d", num); num++;}
 while(num>=0)
}
```

- (A) the loop will run infinitely many times
- (B) the program will not enter the loop

- (C) there will be compilation error reported
- (D) a run time error will be reported

Answer: C

11. What is the output of the following C program main()  
{ printf(“%d%d%d”, sizeof(3.14f), sizeof(3.14), sizeof(3.141)); }
- (A) 4 4 4
  - (B) 4 8 8
  - (C) 8 4 8
  - (D) 8 8 8

Answer: B

11. After 3 calls of the c function bug() below, the values of i and j will be:

```
int j = 1;
bug()
{ Static int i = 0; int j = 0;
 i++; j++;
 return (i) ; }
```

- (A) i=0, j=0
- (B) i=3, j=3
- (C) i=3, j=0
- (D) i=3, j=1

Answer: D

12. Find the output of the following “C” code:

```
Main ()
{ int x = 20, y = 35;
 x = y++ + x++;
 y = ++y + ++x;
 printf (“%d, %d\n”, x, y);
}
```

- (A) 55, 93
- (B) 53, 97
- (C) 56, 95
- (D) 57, 94

Answer: D

13. What is the value of the arithmetic expression (Written in C)

```
2*3/4-3/4* 2
```

- (A) 0
- (B) 1
- (C) 1.5
- (D) None of the above

Answer: B

12. The following statement in ‘C’

```
int(*f())[];
```

declares

- (A) a function returning a pointer to an array of integers.
- (B) a function returning an array of pointers to integers.
- (C) array of functions returning pointers to integers.
- (D) an illegal statement.

Answer: A

15. What is the value returned by the function f given below when n = 100 ?

```
int f(int n)
{ if (n==0) then return n;
 else
 return n + f(n-2);
```



- }  
(A) 2550                      (B) 2556  
(C) 5220                      (D) 5520

Answer: A

11. Given  $i=0, j=1, k=-1$   
 $x=0.5, y=0.0$   
What is the output of the following expression in C language?  
 $x * y < i + j \parallel k$   
(A) -1      (B) 0  
(C) 1      (D) 2

Answer: C

32. Arrays in C language can have ..... with reference to memory representation.  
(A) n-subscripts  
(B) two-subscripts  
(C) only one subscript  
(D) three subscripts only

Answer: C

**Explanation:**

Arrays in C can have only one subscript, but arrays can have arrays as elements, thus supporting multi-dimensional arrays. This is an example of orthogonality

51. Trace the error:  
void main( )  
{  
int \*b, &a;  
\*b = 20  
printf(“%d, %d”, a, \*b)  
}  
(A) No error  
(B) Logical error  
(C) Syntax error  
(D) Semantic error

Answer: C

50. What will be the output of the following segment of the program?  
main( )  
{  
char \*s = “hello world”;  
int i = 7;  
printf(“%, \*s”, i, s);  
}  
(A) Syntax error  
(B) hello w  
(C) hello  
(D) o world

Answer: Marks given to all

51. Trace the error:  
void main( )

```
{
int *b, &a;
*b = 20
printf(“%d, %d”, a, *b)
}
```

- (A) No error
- (B) Logical error
- (C) Syntax error
- (D) Semantic error

Answer: C

11. What will be the output of the following ‘C’ code ?

```
main ()
{ int x = 128;
 printf (“\n%d”, 1 + x++);
}
```

- (A) 128 (B) 129
- (C) 130 (D) 131

Answer: B

15. The function sprint() works like printf(), but operates on:

- (A) Data in a file
- (B) stderr
- (C) stdin
- (D) string

Answer: D

12. The bitwise OR of 35 with 7 in C will be:

- (A) 35 (B) 7
- (C) 42 (D) 39

Answer: D

15. Main()

```
{ char *str=“abcde”;
 printf(“%c”, *str);
 printf(“%c”, *str++);
 printf(“%c”, *(str++));
 printf(“%s”, str);}
```

The output of the above ‘C’ code will be:

- (A) a a c b c d e
- (B) a a c c c d e
- (C) a a b c d e
- (D) None of these

Answer: C

52. Match the following:

**List - I**

- a. calloc( )
- b. free( )
- c. malloc( )
- d. realloc( )

**List - II**

- i. Frees previously allocated space
- ii. Modifies previously allocated space
- iii. Allocates space for array
- iv. Allocates requested size of space

**Codes:**

- a b c d
- (A) iii i iv ii
  - (B) iii ii i iv
  - (C) iii iv i ii
  - (D) iv ii iii i

**Answer: A**

24. The ..... memory allocation function modifies the previous allocated space.
- (A) calloc( )
  - (B) free( )
  - (C) malloc( )
  - (D) realloc( )

**Answer: D**

11. Given  $i = 0, j = 1, k = -1$   
 $x = 0.5, y = 0.0$   
What is the output of given 'C' expression ?  
 $x * 3 \& \& 3 \parallel j \mid k$
- (A) -1
  - (B) 0
  - (C) 1
  - (D) 2

**Answer: C**

14. When an array is passed as parameter to a function, which of the following statements is correct ?
- (A) The function can change values in the original array.
  - (B) In C, parameters are passed by value, the function cannot change the original value in the array.
  - (C) It results in compilation error when the function tries to access the elements in the array.
  - (D) Results in a run time error when the function tries to access the elements in the array.

**Answer: A**

6. When the following code is executed what will be the value of x and y?
- ```
int x = 1, y=0;
y = x++;
```
- (A) 2, 1
 - (B) 2, 2
 - (C) 1, 1
 - (D) 1, 2

Answer: A

11. How many of the following declarations are correct?
- ```
int z = 7.0;
double void = 0.000;
short array [2] = {0, 1, 2};
char c = "\n";
```
- (A) None

- (B) One is correct
- (C) Two are correct
- (D) All four are correct

Answer: C

12. The value of the following expression  $(13/4*3)\%5+1$  is

- (A) 5.75
- (B) 2.95
- (C) 1.4875
- (D) 5

Answer: A

21. Assume that the program 'P' is implementing parameter passing with 'call by reference'. What will be printed by following print statements in P?

Program P()

```
{
 x = 10;
 y = 3;
 funb (y, x, x)
 print x;
 print y;
}
```

```
funb (x, y, z)
{
 y = y + 4;
 z = x + y + z;
}
```

- (A) 10, 7
- (B) 31, 3
- (C) 10, 3
- (D) 31, 7

Answer: B

53. What is the output of the following program?

```
#include<stdio.h>
main()
{
 int a, b = 0;
 static int c[10] = { 1, 2, 3, 4, 5, 6, 7, 8, 9, 0};
 for (a=0; a<10;++a);
 if ((c[a]%2) == 0) b+=c[a];
 printf(“%d”,b);
}
```

- (A) 15
- (B) 25
- (C) 45
- (D) 20

Answer: D

52. Consider the program below in a hypothetical programming language which allows global variables and a choice of static or dynamic scoping

```
int i;
```

```
program Main()
{
 i=10;
 call f();
}
procedure f()
{
 int i=20;
 call g();
}
procedure g()
{
 print i;
}
```

Let x be the value printed under static scoping and y be the value printed under dynamic scoping.

Then x and y are

- (A) x=10, y=20
- (B) x=20, y=10
- (C) x=20, y=20
- (D) x=10, y=10

Answer: D

32. Arrays in C language can have ..... with reference to memory representation.

- (A) n-subscripts
- (B) two-subscripts
- (C) only one subscript
- (D) three subscripts only

Answer: C