C programming Interview questions and answers

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C QUESTIONS AND ANSWERS
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C language quiz questions and answers with explanation

(1) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  int a=5;
  float b;
  printf("%d",sizeof(++a+b));
  printf(" %d",a);
  return 0;
}
```

(a)2 6
(b)4 6
(c)2 5
(d)4 5
(e)Compiler error

Output: (d)
Explanation:
++a +b
=6 + Garbage floating point number
=Garbage floating point number
//From the rule of automatic type conversion
Hence sizeof operator will return 4 because size of float data type in c is 4 byte.
Value of any variable doesn’t modify inside sizeof operator. Hence value of variable a will remain 5.

Properties of sizeof operator.
Operators tutorial

(2) What will be output if you will compile and execute the

following c code?

```
#include<stdio.h>
int main(){
  char *str;
  scanf("%[^\n]",str);
  printf("%s",str);
  return 0;
}
```

(a)It will accept a word as a string from user.
(b)It will accept a sentence as a string from user.
(c)It will accept a paragraph as a string from user.
(d)Compiler error
(e)None of above

Output: (b)
Explanation:
Task of % [^\t] is to take the stream of characters until it doesn't receive new line character '\t' i.e. enter button of your keyboard.
General meaning of %[^ p]
String tutorial.

(3) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  int array[3]={5};
  int i;
  for(i=0;i<=2;i++)
    printf("%d ",array[i]);
  return 0;
}
```

(a)5 garbage garbage
(b)5 0 0
(c)5 null null
(d)Compiler error
(e)None of above

Output: (b)
Explanation:
Storage class of an array which initializes the element of the array at the time of declaration is static. Default initial value of static integer is zero.
Properties of static storage class.
How to read complex array.

(4) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
void call(int,int,int);
int main(){
  int a=10;
  call(a,a++,++a);
```

C TUTORIAL

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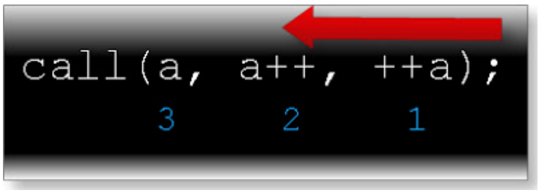
```
  return 0;
}

void call(int x,int y,int z){
  printf("%d %d %d",x,y,z);
}
```

(a)10 10 12
(b)12 11 11
(c)12 12 12
(d)10 11 12
(e)Compiler error

Output: (b)
Explanation:
Default parameter passing scheme of c is cdecl i.e. argument of function will pass from right to left direction.



```
call(a, a++, ++a);
```

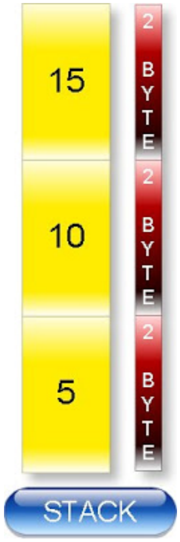
First ++a will pass and a=11
Then a++ will pass and a=11
Then a will pass and a=12
What is pascal and cedecl parameter passing scheme?
Concept of variable numbers of argument.

(5) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  int x=5,y=10,z=15;
  printf("%d %d %d");
  return 0;
}
```

(a)Garbage Garbage Garbage
(b)5 10 15
(c)15 10 5
(d)Compiler error
(e)Run time error

Output: (c)
Explanation:
Auto variables are stored in stack as shown in following figure.



Stack follow LIFO data structure i.e. last come and first out. First %d will print then content of two continuous bytes from the top of the stack and so on.

Memory map tutorial.

More questions based on memory map.

(6) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  register int i,x;
  scanf("%d",&i);
  x=++i + ++i + ++i;
  printf("%d",x);
  return 0;
}
```

(a)17
(b)18
(c)21
(d)22
(e)Compiler error

Output: (e)
Explanation:
In c register variable stores in CPU it doesn’t store in RAM. So register variable have not any memory address. So it is illegal to write &a.

Complete tutorial of storage class with examples.

Properties of register storage class.

(7) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  int a=5;
  int b=10;
  {
    int a=2;
    a++;
    b++;
  }
  printf("%d %d",a,b);
  return 0;
}
```

(a)5 10
(b)6 11
(c)5 11
(d)6 10
(e)Compiler error

Output: (c)
Explanation:
Default storage class of local variable is auto. Scope and visibility of auto variable is within the block in which it has declared. In c, if there are two variables of the same name then we can access only local variable. Hence inside the inner block variable a is local variable which has declared and defined inside that block. When control comes out of the inner block local variable a became dead.
Complete tutorial of storage class with examples.
What is auto storage class?

(8) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  float f=3.4e39;
  printf("%f",f);
  return 0;
}
```

(a)3.4e39
(b)3.40000…
(c)+INF
(d)Compiler error
(e)Run time error

Output: (c)
Explanation:
If you will assign value beyond the range of float data type to the float variable it will not show any compiler error. It will store infinity.
Data type tutorial with examples.
Concept of float data type.

(9) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  enum color{
    RED,GREEN=-20,BLUE,YELLOW
  };
  enum color x;
  x=YELLOW;
  printf("%d",x);
  return 0;
}
```

(a)-22
(b)-18
(c)1
(d)Compiler error
(e)None of above

Output: (b)
Explanation:
Default value of enum constant = value of previous enum constant +1
Default value of first enum constant=0
Hence:
BLUE=GREEN+1=-20+1=-19
YELLOW=BLUE+1=-19+1=-18
Complete tutorial of enum data type with examples.

(10) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  asm{
    mov bx,8;
    mov cx,10
    add bx,cx;
  }
  printf("%d",_BX);
  return 0;
}
```

(a)18
(b)8
(c)0
(d)Compiler error
(e)None of above

Output: (a)
Explanation:
asm keyword is used to write assembly language program in c. mov command stores the constants in the register bx, cx etc. add command stores the content of register and stores in first register i.e. in bx.
How to write assembly language program by c?
Advance c tutorial.

(11) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  enum xxx{
     a,b,c=32767,d,e
  };
  printf("%d",b);
  return 0;
}
```

(a)0
(b)1
(c)32766
(d)Compiler error
(e)None of above

Output: (d)
Explanation:
Size of enum constant is size of sign int. Since value of c=32767. Hence value of d will be 32767+1=32768 which is beyond the range of enum constant.
Tutorial of data type with examples.

(12) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  signed int a=-1;
  unsigned int b=-1;
  if(a==b)
    printf("%d %d",a,b);
  else
    printf("Not equal");
  return 0;
}
```

(a)-1 -1
(b)-1 32767
(c)-1 -32768
(d)Not equal
(e)Compiler error

Output: (a)
Explanation:

What is automatic type conversion?

(13) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  float f=5.5f;
  float x;
  x=f%2;
  printf("%f",x);
  return 0;
}
```

(a)1.500000
(b)1.000000
(c)5.500000
(d)Compiler error
(e)None of above

Output: (d)
Explanation:
Modular division is not allowed with floating number.
Properties of modular division.
Operators tutorial with examples.

(14) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  int a=-20;
  int b=-3;
  printf("%d",a%b);
  return 0;
}
```

(a)2
(b)-2
(c)18
(d)-18
(e)Compiler error

Output: (b)
Explanation:
Sign of resultant of modular division depends upon only the sign of first operand.
Properties of modular division.
Operator’s tutorial with examples.

(15) What will be output if you will compile and execute the following c code?

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

(a)1 1
(b)2 2
(c)1 2
(d)2 1
(e)None of above

Output: (c)

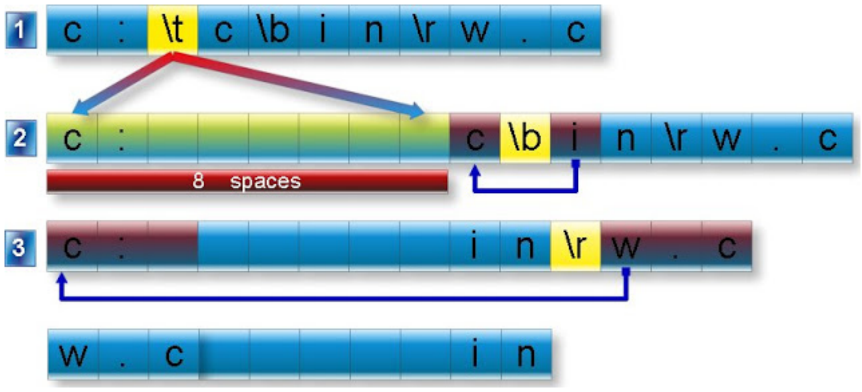
Size of char data type is one byte while size of character constant is two byte.
Why character constant is of two byte in c?

(16) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  char *url="c:\tc\bin\rw.c";
  printf("%s",url);
  return 0;
}
```

(a)c:\tc\bin\rw.c
(b)c:/tc/bin/rw.c
(c)c: c inw.c
(d)c:cinw.c
(e)w.c in

Output: (e)
Explanation:
1. \t is tab character which moves the cursor 8 space right.
2. \b is back space character which moves the cursor one space back.
3. \r is carriage return character which moves the cursor beginning of the line.



Complete string tutorial with examples.
Properties of escape characters.

(17) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  goto abc;
  printf("main");
  return 0;
}

void dispaly(){
  abc:
    printf("display");
}
```

(a)main
(b)display
(c)maindisplay
(d)displaymain
(e)Compiler error

Output: (e)
Explanation:
Label of goto cannot be in other function because control cannot move from one function to another function directly otherwise it will show compiler error: unreachable label
What is goto keyword.
Complete function tutorial with examples.

(18) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  int i=3;
  if(3==i)
    printf("%d",i<<2<<1);
  else
    printf("Not equal");
}
```

(a)1
(b)48
(c)24
(d)Not equal
(e)Compiler error

Output: (c)
Explanation:
Associative of bitwise left shifting operator is left to right.
In the following expression:
i<<2<<1
There are two bitwise operators. From rule of associative leftmost operator will execute first.
i <<><<>
After execution of leftmost bitwise left shifting operator:
so i=i*pow(2,2)
=3*
What is associative?
What is precedence?
Tutorial of bitwise operators.

(19) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  int x=2,y=3;
  if(x+y<=5)
    printf("True");
  else
    printf("False");
}
```

(a)True
(b)False
(c)Compiler error: Lvalued required
(d)Compiler error: Invalid expression
(e)None of above

Output: (a)
Explanation:
Expression x+y<=5
=> 2+3 <=5
=> 5<=5 is true because 5 is either greater than 5 or equal to 5.
Operator tutorial with examples.

(20) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  const int i=5;
  i++;
  printf("%d",i);
  return 0;
}
```

(a)5
(b)6
(c)0
(d)Compiler error
(e)None of above

Output: (d)
Explanation:
We cannot modify the const variable by using increment operator.
Properties of const keyword.
Properties of volatile keyword.
Data type tutorial with examples.

(21) What will be output if you will compile and execute the following c code?

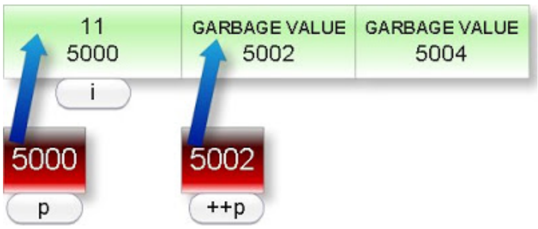
```
#include<stdio.h>

int main(){
  int i=11;
  int const * p=&i;
  p++;
  printf("%d",*p);
  return 0;
}
```

(a)11
(b) 12
(c)Garbage value

(d)Compiler error
(e)None of above

Output: (c)
Explanation:
In the following line:
int const * p=&i;
*p i.e. content of p is constant pointer p is not constant pointer. So we can modify the pointer p. After incrementing the pointer it will point next memory location and its content will any garbage value.



Note: We have assumed arbitrary memory address.

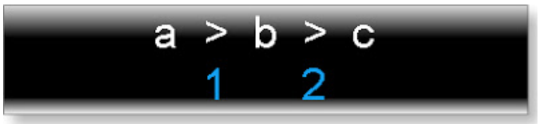
To make pointer p as constant pointer write:
int const * const p=&i;
Properties of const keyword.
Properties of volatile keyword.

(22) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  int a=15,b=10,c=5;
  if(a>b>c )
    printf("Trre");
  else
    printf("False");
  return 0;
}
```

(a)True
(b)False
(c)Run time error
(d)Compiler error
(e)None of above

Output: (b)
Explanation:
Relation operator in c always returns 1 when condition is true and 0 when condition is false. So in the following expression
a > b > c
Associative of relational operators are left to right order of execution will be following manner:



Hence in this expression first solve bolded condition: a > b > c
Since condition a>b is true so result will be 1. Now expression became:
1 > c
Since this condition is false so result will be 0. Thus else part will execute.
What is associative?
What is precedence?

(23) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  float f;
  f=3/2;
  printf("%f",f);
  return 0;
}
```

(a)1.5
(b)1.500000
(c)1.000000
(d)Compiler error
(e)None of above

Output: (c)
Explanation:
In the following expression:
f=3/2 both 3 and 2 are integer constant hence its result will also be an integer constant i.e. 1.
Properties of floating type numbers.

(24) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  int a=sizeof(a);
  a=modify(a);
  printf("%d",a);
  return 0;
}

int modify(int x){
  int y=3;
  _AX=x+y;
  return;
}
```

(a)2
(b)3
(c)5
(d)Garbage value
(e)None of above

Output: (c)

Explanation:
_AX is register pseudo variable. It stores return type of function.

What is register pseudo variable?
What is global identifier?

(25) What will be output if you will compile and execute the following c code?

```
#define PRINT printf("c");printf("c++");
int main(){
  float a=5.5;
  if(a==5.5)
    PRINT
  else
    printf("Not equal");
  return 0;
}
```

(a)c c++
(b)Not equal
(c)c
c++
(d)Compiler error
(e)None of above

Output: (d)
Explanation:
First see intermediate file:

```
try.c 1:
try.c 2: int main(){
try.c 3: float a=5.5;
try.c 4: if(a==5.5)
try.c 5: printf("c");printf("c++");
try.c 6: else
try.c 7: printf("Not equal");
try.c 8: }
try.c 9: return 0;
try.c 10:
```

If there are more than one statement in if block then it is necessary to write inside the { } otherwise it will show compiler error: misplaced else

More questions on preprocessors.
Preprocessor tutorial with examples.

(26) What will be output if you will compile and execute the following c code?

```
#include<stdio.h>
int main(){
  int array[2][2][3]={0,1,2,3,4,5,6,7,8,9,10,11};
  printf("%d",array[1][0][2]);
  return 0;
}
```

(a)4

(b) 5
(c) 6
(d) 7
(e) 8

Output: 8

Explanation:

array[1][0][2] means 1*(2*3)+0*(3)+3=9th element of array starting from zero i.e. 8.

Questions on two dimension array.

Complete tutorial of array.

G+1 +2 Recommend this on Google

53 comments:

Anonymous 9/1/10, 12:30 PM

very good set of questions...it made me realize that i still need to study c alot..

Reply

Anonymous 9/12/10, 12:35 PM

Good questions. The blog is very knowledgeable. Please post explanations for preprocessor questions. Thank you.

Reply

Anonymous 9/15/10, 12:18 PM

I THINK THESE ARE VERY EFFECTIVE

Reply

Chandra 9/28/10, 10:55 PM

superb questions........

Reply

Anonymous 11/14/10, 9:51 PM

Good questions....I think i need 2 work hard.....

Reply

Anonymous 11/15/10, 8:08 PM

great questions......thanks for designing this blog for learners like us......it is helping a lot...

Reply

Anonymous 11/18/10, 3:31 PM

commendable job done by you guyz... it helps in winning a quiz also.... all tx to you...keep up the gr8 work....

Reply

Anonymous 12/14/10, 5:34 PM

thanx...

Reply

nagarjuna 12/26/10, 1:30 PM

superb questions

Reply

ankit 1/14/11, 7:09 PM

Good questions on c...

Reply

sanaullah 1/21/11, 11:54 PM

wonderful effort...but need to take some cautions..while printing the outputs..

otherwise...its a nice work done..keep it up...
:)

Reply

Anonymous 3/5/11, 12:53 PM

excellent question nd i feel tht still i need more to learn

Reply

yogesh 3/9/11, 10:27 AM

this is good for knowladge...............................thanks

Reply

Anonymous 3/10/11, 9:09 PM

good work

Reply

think postive 6/10/11, 12:10 PM

gud................i lyk it

Reply

Unknown 6/26/11, 6:03 PM

the output wat i'm gettng is same as..12 11 11

Reply

Anonymous 7/1/11, 11:02 PM

these helps us a lot ...good work.......im very thankful to this blog

Reply

Anonymous 7/27/11, 7:09 PM

very good questions.. it will help me to improve my knowledge in c.. thank you...

Reply

Prashant Garg 7/28/11, 10:53 PM

better collection of question,,,,,,and answer method of these question is also very good.
it is best one website for enhance ur c skill........

Reply

Anonymous 8/8/11, 12:16 AM

very good question.....still i think u need to work hard....as this was below my level...appu(GATE TOPPER 2010 FROM CS)

Reply

Anonymous 8/21/11, 7:28 PM

excellent programming practice
rajni gupta

Reply

Anonymous 8/22/11, 12:44 PM

nice... its useful for who are all preparing for interviews... thanks a lot...

Reply

Anonymous 8/28/11, 10:51 PM

good questions

Reply

Anonymous 9/11/11, 8:19 PM

nic questions...

Reply

Anonymous 10/30/11, 12:57 PM

thnk u soo much it helps me 2 knw more abt c lang.

Reply

Anonymous 11/16/11, 5:14 PM

very very good questions
Thanks a lot

Reply

Anonymous 12/1/11, 7:48 PM

good collection of questions

Reply

Anonymous 12/16/11, 11:53 PM

nice set of questions.specially the escape chracter question(c:\\.....) was superb.
if possible send some more questions to my mail.
bbsm420024@gmail.com

Reply

Anonymous 12/18/11, 8:32 PM

superb collection still post som new ones

Reply

Anonymous 12/29/11, 10:10 PM

good collection of questions with nice explanation...keep it up....

Reply

Anonymous 2/7/12, 11:32 AM

thank u very much giving us a helping hand

Reply

Anonymous 2/22/12, 8:09 PM

NICE ,IT IS VERY USEFULL

Reply

Annonymus 2/25/12, 7:55 AM

hey can any one tell me why the output of the following program is 1000

```
#include
int main()
{
int i;
i=f();
printf("%d",i);
}
int f()
{
_AX=1000;
}
```

Reply

Replies

Anonymous 6/1/13, 4:06 PM

this AX is name for Accumulator.. generally used in turbo C if you compile this code in GCC compiler.. it will be simple error. but in turbo C case. the Accumulator has 1000 in it.. and that value will be taken by i, the variable who called it. and answer will be 1000.

Reply

Anonymous 3/13/12, 2:01 AM

very nice questions.. i need to work hard

Reply

Anonymous 3/13/12, 2:05 AM

_AX is register pseudo variable. It stores return type of function.therefore in function f()AX returns value 1000,which in return store in i

Reply

Nasreen Farook 8/17/12, 6:49 PM

Good questions.Try to post more questions.Good job

Reply

mkv 12/4/12, 11:31 PM

very good set of question with nice explanation!

Reply

mkv 12/4/12, 11:37 PM

What will be output if you will compile and execute the following c code?

```
#include
#include
int main()
{
char str[]="India\0BX\0";
printf("%s",str);
return 0;
}
```

Reply

dharmendra 4/23/13, 2:38 PM

very useful questions....good work

Reply

Shashank Jain 6/1/13, 3:14 PM

There is error in 11th Question. answer will be "1" not compile error. you are printing b not d.. check it once more !!

Reply

Anonymous 7/15/13, 1:37 PM

thank you it was really useful

Reply

Rohan Rawlani 7/20/13, 12:51 PM

good selection of questions..
it will probably cover the whole c language.

Reply

LAVISH PATODI 8/3/13, 1:44 AM

nice questions.,
good work buddy,., !!

Reply

Anonymous 8/6/13, 4:03 PM

nice question,specially the explanation given is very easy and understandable,do post some more

Reply

Anonymous 10/3/13, 8:40 PM

good questions

Reply

Anonymous 10/3/13, 8:42 PM

plzz give more questions with answers

Reply

Anusha Kabbur 10/22/13, 11:57 AM

so..nicely written thank u..so much

Reply

Replies

Anonymous 3/17/14, 11:14 AM

ITS NOT USEFUL FOR US
THANKING YOU!
YOUR FAITHFULLY
MT. NICHOLAS

Reply

mangala 11/10/13, 7:14 PM

nice to solve, it recollects our knowledge

Reply

Anonymous 12/25/13, 12:23 PM

good work guys.......keep it up :)

Reply

DIPU KUMAR 1/25/14, 3:15 AM

knowledgeable and very short programs which will increase capacity of C language programming...
thank u

Reply

Anonymous 3/17/14, 11:13 AM

ITS NOT USEFUL FOR US
THANKING YOU!
YOUR FAITHFULLY
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