**If Then Else  
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**1. The output of the code below is**

#include <stdio.h>

void main()

{

int x = 5;

if (x < 1)

printf("hello");

if (x == 5)

printf("hi");

else

printf("no");

}

a) hi

b) hello

c) no

d) none of the mentioned  
  
**Answer) a)hi.**

**2. The output of the code below is**

#include <stdio.h>

int x;

void main()

{

if (x)

printf("hi");

else

printf("how are u");

}

a) hi

b) how are you

c) compile time error

d) none of the mentioned

**Now, a globally declared variable is initialised to 0 if it is not explicitly initialized.**

Now, if(x) this if block will execute if x has non zero value. Since, it is not the case, it will execute the corresponding else block.

**Hence, answer) is d) how are you**

**3. Comment on the following code below**

#include <stdio.h>

void main()

{

int x = 5;

if (true);

printf("hello");

}

a) It will display hello

b) It will throw an error

c) Nothing will be displayed

d) Compiler dependent

**Answer) a) It will display hello**

**4. The output of the code below is**

#include <stdio.h>

void main()

{

int x = 0;

if (x == 0)

printf("hi");

else

printf("how are u");

printf("hello");

}

a) hi

b) how are you

c) hello

d) hihello

Answer) hihello

Now, printf("hello"); is outside of else block’s scope.

**5. The output of the code below is**

#include <stdio.h>

void main()

{

int x = 5;

if (x < 1);

printf("Hello");

}

a) Nothing

b) Run time error

c) Hello

d) Varies

**Answer) c) Hello.**

The printf("Hello") statement is not in the if’s scope.

**6. The output of the code below is(when 1 is entered)**

#include <stdio.h>

void main()

{

double ch;

printf("enter a value btw 1 to 2:");

scanf("%lf", &ch);

switch (ch)

{

case 1:

printf("1");

break;

case 2:

printf("2");

break;

}

}

a) Compile time error

b) 1

c) 2

d) Varies

**Answer) a) Compile time error.**  
The compiler will say **“ switch quantity not an integer”**

In switch, the expression must be of "an [integral type](http://msdn.microsoft.com/en-us/library/cc953fe1(v=vs.80).aspx) or of a class type for which there is an unambiguous conversion to integral type"

**7. The output of the code below is(When 1 is entered)**

#include <stdio.h>

void main()

{

char \*ch;

printf("enter a value btw 1 to 3:");

scanf("%s", ch);

switch (ch)

{

case "1":

printf("1");

break;

case "2":

printf("2");

break;

}

}

a) 1

b) 2

c) Compile time error

d) No Compile time error  
  
**Answer) c) Compile Time error.**

**The compiler will say the following things:**

error: switch quantity not an integer

error: case label does not reduce to an integer constant

error: case label does not reduce to an integer constant

**8. When 1 is entered, The output of the code below is?**

#include <stdio.h>

void main()

{

int ch;

printf("enter a value btw 1 to 2:");

scanf("%d", &ch);

switch (ch)

{

case 1:

printf("1\n");

default:

printf("2\n");

}

}

a) 1

b) 2

c) 1 2

d) Run time error

**Answer) c) 1 2**

**Break statement is not there.**

**9. When 2 is entered, The output of the code below is?**

#include <stdio.h>

void main()

{

int ch;

printf("enter a value btw 1 to 2:");

scanf("%d", &ch);

switch (ch)

{

case 1:

printf("1\n");

break;

printf("Hi");

default:

printf("2\n");

}

}

a) 1

b) Hi 2

c) Run time error

d) 2

**Answer)d) 2**

**10. When 1 is entered, The output of the code below is?**

#include <stdio.h>

void main()

{

int ch;

printf("enter a value btw 1 to 2:");

scanf("%d", &ch);

switch (ch, ch + 1)

{

case 1:

printf("1\n");

break;

case 2:

printf("2");

break;

}

}

a) 1

b) 2

c) 3

d) Run time error  
  
switch (ch, ch + 1)

Here, comma does not work as a separator. Rather, it works as an operator which chooses the rightmost operand. Now, it will basically act like switch(2)  
  
Hence, 2 is printed.

**11. What is the output of this C code?**

#include <stdio.h>

int main()

{

int x = 1;

if (x > 0)

printf("inside if\n");

else if (x > 0)

printf("inside elseif\n");

}

a) inside if

b) inside elseif

c) inside if

inside elseif

d) compile time error

View Answer

Now, the if block will be executed. And inside if will be printed. Now, since, if block is executed, the corresponding else if block cannot be executed.

(No, that wont generate any compilation error. Even if the if block and else if block have the same condition.)

**Hence, answer is a) inside if.**

1. **What is the output of this C code?**

#include <stdio.h>

int main()

{

int x = 0;

if (x++)

printf("true\n");

else if (x == 1)

printf("false\n");

}

a) true

b) false

c) compile time error

d) undefined behaviour

**Answer)**

Now, if(x++) here, x is incremented in a post increment manner. So, x’s new incremented value will be reflected in memory or cache. Now, true will be printed. Now, since, if block is executed, the corresponding else if block will not be executed even if the condition matches.

**13. What is the output of this C code?**

#include <stdio.h>

int main()

{

int x = 0;

if (x == 1)

if (x == 0)

printf("inside if\n");

else

printf("inside else if\n");

else

printf("inside else\n");

}

a) inside if

b) inside else if

c) inside else

d) compile time error

**Answer) c) inside else.**

**14. What is the output of this C code?**

#include <stdio.h>

int main()

{

int x = 0;

if (x == 0)

printf("true, ");

else if (x = 10)

printf("false, ");

printf("%d\n", x);

}

a) false, 0

b) true, 0

c) true, 10

d) compile time error

**Answer) b)true. 0**

Now, if the else if block was executed even for condition checking, x’s value would be 10. But, Since, if block is executed, else if block wont get executed. Not even, for condition checking.

**15. What is the output of this C code?**

#include <stdio.h>

int main()

{

int x = 0;

if (x == 1)

if (x >= 0)

printf("true\n");

else

printf("false\n");

}

a) true

b) false

c) Depends on the compiler

d) No print statement

View Answer

**Answer) d) No print statement.**

**16. if (a == 1||b == 2){} can be written as:**

a) if (a == 1)

if (b == 2){}

b) if (a == 1){}

if (b == 2){}

c) if (a == 1){}

else if (b == 2){}

d) none of the mentioned

**Answer) d) none of the mentioned.**

**17. Which of the following is an invalid if-else statement?**

a) if (if (a == 1)){}

b) if (func1 (a)){}

c) if (a){}

d) if ((char) a){}

**Answer) a)**

**18. What is the output of this C code?**

#include <stdio.h>

int main()

{

int a = 1;

if (a--)

printf("True");

if (a++)

printf("False");

}

a) True

b) False

c) True False

d) No Output

Answer) a) true.

Now, in both cases, post increment operators perform.

**19. Comment on the output of this C code?**

#include <stdio.h>

int main()

{

int a = 1;

if (a)

printf("All is Well ");

printf("I am Well\n");

else

printf("I am not a River\n");

}

a) Output will be All is Well I am Well

b) Output will be I am Well I am not a River

c) Output will be I am Well

d) Compile time errors during compilation

**Answer) d) Compile time errors during compilation.**

Why?

Because, printf("I am Well\n"); This is outside of if block’s scope. Now, that printf statement makes the else block unlinked with with the if block. So, no corresponding if block is found for the else block.

**20. What is the output of this C code?**

#include <stdio.h>

int main()

{

if (printf("%d", printf(")))

printf("We are Happy");

else if (printf("1"))

printf("We are Sad");

}

a) 0We are Happy

b) 1We are Happy

c) 1We are Sad

d) compile time error

**Answer) is d) compile time error.**