

Q1. What is the size of float and double in java?

Ans. The size of float is 32 bit while the size of double is 64 bit.

Q2. Automatic type conversion is possible in which of the possible cases?

Ans. A. Byte to int.

B. Int to long.

D. Short to int.

These three options are correct as conversion of smaller data type to bigger is implicit that is done by JVM automatically.

Q3. Find the output of the following code.

```
int Integer = 24;
```

```
char String = 'I';
```

```
System.out.print(Integer);
```

```
System.out.print(String);
```

Ans. OUTPUT:- **24 I**, as int datatype is used here to print integer type value and char datatype is used to print a character, Hence there will be no error

Q4. Find the output of the following program.

```
public class Solution{
```

```
public static void main(String[] args){
```

```
short x = 10;
```

```
x = x * 5;
```

```
System.out.print(x);
```

```
}
```

```
}
```

Ans. Here, we will get compile error as the value "5" is int type and our variable x is short type hence it will give an type mismatch error. Even if we perform arithmetic operations on two short values and saving it to one save value we will get the same error, example:-

```
short x=10;
```

```
short y=5;
```

```
x=x*y;
```

This will also give us the same error even though both the variables are short type because all values are converted to int type before an arithmetic operation and because we are storing this int value in short variable x we will get the compile error.

to solve this we can use, `x=(short)(x*y);` this will tell the JVM that the answer of this operation will be short type and hence the problem is solved.

Q5.Find the output of the following program.

```
public class Solution{
```

```
public static void main(String[] args){
```

```
byte x = 127;
```

```
x++;
```

```
x++;
```

```
System.out.print(x);
```

```
}
```

```
}
```

Ans. The answer for this question is -127 as our datatype here is byte and there is a cyclic in nature means when the value of byte exceeds its limit it gets back in a cycle, The range of byte is -128 to 127. explanation on the answer:-

here, byte x=127;

x++=-128;

and, x++=-127;

Hence the value of x will be -127 because of the cyclic property of the byte datatype.

Q6. Select the valid statement.

A. char[] ch = new char(5)

B. char[] ch = new char[5]

C. char[] ch = new char()

D. char[] ch = new char[]

Ans. Statement B that is char[] ch = new char[5] is correct as this is the only correct way to write the array.

array should be written as,

datatype[] arrayrefvar= new arrayrefvar[size of array];

in option A and C we have () paranthesis instead of []
and in option D the size of the array is not mentioned.

Q7. Find the output of the following program.

```
public class Solution{  
  
    public static void main(String[] args){  
  
        int[] x = {120, 200, 016};  
  
        for(int i = 0; i < x.length; i++){  
  
            System.out.print(x[i] + " ");  
  
        }  
  
    }  
  
}
```

Ans. The output will be 120 200 14, this is because the value 016 is an octal number system value here '0' represents that the value is of octal number system.

when we convert 016 to decimal we will get 14.

conversion,

$$(0*8^2) + (1*8^1) + (6*8^0) = 14$$

Q8. When an array is passed to a method, what does the method receive?

A. The reference of the array

B. A copy of the array

C. Length of the array

D. Copy of first element

Ans. option A that is The reference of the array is passed to a method.

Q9. Find the value of a[1] after execution of the following program.

```
int[] a = {0,2,4,1,3};  
for(int i = 0; i < a.length; i++){  
    a[i] = a[(a[i] + 3) % a.length];  
}
```

Ans. **a[1] = 1**, here we are using for loop and with that we are giving array indexes new values,

solution of the loop equation,

i=1,

a[0]=a[(a[0] + 3) % a.length]

=a[(0+3) % 5]

=a[3%5]

=a[3]=1

hence, **a[0]=1**

i=1,

a[1]=a[(a[1] + 3) % a.length]

=a[(2 + 3)% 5]

=a[0]=1

hence, ***a[1]=1***

i=2,

$$\begin{aligned} a[2] &= a[(a[2] + 3) \% 5] \\ &= a[(4+3) \% 5] \\ &= a[2] = 4 \end{aligned}$$

hence, ***a[2]=4***

i=3,

$$\begin{aligned} a[3] &= a[(a[3] + 3) \% 5] \\ &= a[(4)\%5] \\ &= a[4] = 3 \end{aligned}$$

hence, ***a[3]=3***

i=4,

$$\begin{aligned} a[4] &= a[(a[4] + 3) \% 5] \\ &= a[(6)\%5] \\ &= a[1] = 1 \end{aligned}$$

hence, ***a[4]=1***

new array,

a = [1,1,4,3,1]

Q10. When is the object created with a new keyword?

A. At run time

- B. At compile time**
- C. Depends on the code**
- D. None**

Ans. option A that is at run time the object is created with the new keyword.

Q11. Identify the corrected definition of a package.

- A. A package is a collection of editing tools**
- B. A package is a collection of classes**
- C. A package is a collection of classes and interfaces**
- D. A package is a collection of interfaces**

Ans. option C that is A package is a collection of classes and interfaces.

Q12. Identify the keyword among the following that makes a variable belong to a class, rather than being defined for each instance of the class.

- A. final**
- B. static**
- C. volatile**
- D. abstract**

Ans. option B static

Q13. Identify what can directly access and change the value of the variable res.

Package com.mypackage;

```
Public class Solution{  
Private int res = 100;  
}
```

- A. Any class**
- B. Only Solution class**
- C. Any class that extends Solution**
- D. None**

Ans. option B that is only solution class, as this variable is private and declared in class solution it can only be visible in that class only and the changes in it can be made in that class only.

Q14.In which of the following is the toString() method defined?

- A. java.lang.Object**
- B. java.lang.String**
- C. java.lang.util**
- D. None**

Ans. option A that is java.lang.object

Q15.Identify the output of the following program.

```
String str = "abcde";  
System.out.println(str.substring(1, 3));
```

- A. abc**
- B. bc**

C. bcd

D. cd

Ans. Ourput:- "bc", as the substring will contain the values of index 1 and before index 3 and it will not include index 3 but everything from index 1 and index before index 3.

Q16. Identify the output of the following program.

```
String str = "Hellow";
```

```
System.out.println(str.indexOf('t'));
```

A. 0

B. 1

C. true

D. -1

Ans. Option D that is -1 is the answer as the 't' is not present in our string.

Q17.

Identify the output of the following program.

```
Public class Test{
```

```
Public static void main(String args[]){
```

```
String str1 = "one";
```

```
String str2 = "two";
```

```
System.out.println(str1.concat(str2));
```

```
}
```

```
}
```

A. one

B. two

C. onetwo

D. twoone

Ans. Options C that is "onetwo" is the correct answer, as there is not a change in the original string as string is immutable in nature.

Q18. How many objects will be created in the following?

```
String a = new String("FlipRobo");
```

```
String b = new String("FlipRobo");
```

```
String c = "FlipRobo";
```

```
String d = "FlipRobo";
```

A. 2

B. 3

C. 4

D. None

Ans. 3 objects are created in this scenario as the first two statements create two different objects in the heap memory

and when we create a string object using the string keyword only then the object is stored in the string constant pool and in the string constant pool the object is checked either it is created before or not if it already exists in

the string constant pool then no new object will be created.

Q19.Find the output of the following code.

```
int ++a = 100;
```

```
System.out.println(++a);
```

A. 101

B. Compile error as ++a is not valid identifier

C. 100

D. None

Ans. Output will be option B that is it is compile error as ++a is not valid identifier, as we can not do both at the same place and same time that is declaring the variable and its datatype and giving it an operator at the same time and place.

Q20.Find the output of the following code.

```
if(1 + 1 + 1 + 1 + 1 == 5){
```

```
System.out.print("TRUE");
```

```
}
```

```
else{
```

```
System.out.print("FALSE");
```

```
}
```

A. TRUE

B. FALSE

C. Compile error

D. None

Ans. Option A that is TRUE will be the output, as the condition of if is true the code inside the if statement will execute.

Q21.Find the output of the following code.

```
Public class Solution{
```

```
Public static void main(String args[]){
```

```
Int x = 5;
```

```
x * = (3 + 7);
```

```
System.out.println(x);
```

A. 50

B. 22

C. 10

D. None

Ans. 50 will be the output, as the $x*=(3+7)$ means

$$x=x*(3+7)$$
$$=5*(10)$$
$$x = 50.$$

Q22.Identify the return type of a method that does not return any value.

A. int

B. void

C. double

D. None

Ans. option B that is void, as void does not return any value whereas datatypes such as int double float ,ect can return value.

Q23. Output of Math.floor(3.6)?

A. 3

B. 3.0

C. 4

D. 4.0

Ans. output will be 3.0 as the floor() function always returns the largest round off value that is less than or can be equal to the original value.

Q24. Identify the modifier which cannot be used for constructor.

A. public

B. protected

C. private

D. static

Ans. static modifier cannot be used for the constructor.

Q25. What are the variables declared in a class for the use of all methods of the class called?

A. Object

B. Instance variables

C. Reference variable

D. None

Ans. option B that is instance variables.

Q26. Find the output of the following code.

```
Public class Solution{  
    Public static void main(String args[]){  
        Int i;  
        for(i = 1; i < 6; i++){  
            if(i > 3) continue;  
        }  
        System.out.println(i);  
    }  
}
```

A. 3

B. 4

C. 5

D. 6

Ans. option D that is 6 is the correct answer.

Q27. Identify the infinite loop.

- A. for(;;)**
- B. for(int i = 0; i < 1; i--)**
- C. for(int i = 0; ;i++)**
- D. All of the above**

Ans. option D that is All of the above.

Q28.Exception created by try block is caught in which block

- A. catch**
- B. throw**
- C. final**
- D. none**

Ans. option A that is catch block is used to caught the exception created by try block.

Q29.Which of the following exception is thrown when divided by zero statement is executed?

- A. NullPointerException**
- B. NumberFormatException**
- C. ArithmeticException**
- D. None**

Ans. option C that is ArithmeticException is thrown when divided by zero statement is executed.

Q30.Where is System class defined?

A. java.lang.package

B. java.util.package

C. java.io.package

D. None

Ans. option A that is java.lang.package.