FULL STACK DEVELOPMENT – WORKSHEET 1

All questions are multiple choice.

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

A. 32 and 64 B. 32 and 32 C. 64 and 64 D. 64 and 32

Ans. A

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

A. Byte to int B. Int to long C. Long to int D. Short to int
Ans. B and D

Explain:- In Automatic Type conversion, a lower data type is promoted to a higher type present in the expression. Higher type is never promoted to lower type automatically to prevent data loss.

byte has 8 bits

short has 2 byte

int has 4 byte

long has 8 byte

Byte< short < int < long.

Q3.Find the output of the following code. int Integer = 24; char String = 'l'; System.out.print(Integer); System.out.print(String);

A. Compile error B. Throws exception C. l D. 24 l

Ans D

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); } }

A. 50 B. 10 WORKSHEET C. Compile error D. Exception

Ans:- C

Explaination:- compilation error because of type promotion in expression all operand are promoted to higher range type available in expression and then operation is done here

variable x is promoted to int type that's why it is not possible to store in short .to storing purpose casting is required.

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); } }

A. **-127 B. 127 C. 129 D. 2**

Ans A

Byte range is from -127 to 128

b=127

b++= 128

after 128 it will back to -127 again..

b++= -127

As b++ is b+=1 and += is implicit cast, means it cast the result from integer to byte automatically. Now 129(32 bit , as it was integer) is converted into 8 bit (byte can store 8 bit).

129 -> 10000001 , As we know that byte are signed and left most digit represent the sign (0 means positive and 1 means negative), here the left most value is 1 (in 10000001) so negative of it will be the answer , to find the negative we do 2's complement and add 1 to it

10000001 -----> 01111110 (2's complement) +1 ---> 01111111 = 127

and as we already know the left most bit was 1 so it is -127

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. B

Explain:- The syntax for declaring and creating an array variable in java is:
dataType[] arrayRefVar = new dataType[arraySize];

Thus, option (A) and option (C) is syntactically wrong as parentheses(**( )**) is used instead of square brackets(**[ ]**).
Option (D) is incorrect as the size of the array is missing.

Q7. Find the output of the following program.

public class Solution{

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

A. 120 200 016 B. 120 200 14 C. 120 200 16 D. None

Ans. B

Explain:- In the value 016, 0 is representing that the whole no.(016) is Octal no. not an integer so the compiler will convert it into its corresponding integer value which is: $0*8^2+1*8^1+6*8^0=14$

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. A

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

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

A. 0 B. 1 C. 2 D. 3

Ans:-B

Explain:- when i = 0;
a[i] = a[(a[i]+3)%a.length] //a.length =5;
a[0] = a[(a[0]+3)%5];
a[0] = a[(0+3)%5] ; // 3
a[0] = a[3] = 1
when i = 1;
a[1]=a[(a[1]+3)%5];
a[1]=a[(2+3)%5];
a[1]=a[0];

a[1]=1;

Therefore a[1] is equal to 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:- B

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:-B

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. B

Explain:- static is a keyword used near the class but not inside the method which holds the state during the method calls also

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:-B

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.A

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. B

Explain:- substring() method has two variants and returns a new string that is a substring of this string. The substring begins with the character at the specified index and extends to the end of this string or upto endIndex - 1 if second argument is given.
Syntax: Here is the syntax of this method:
public String substring(int beginIndex)
or
public String substring(int beginIndex, int endIndex)
Parameters: Here is the detail of parameters:
beginIndex -- the begin index, inclusive.
endIndex -- the end index, exclusive

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:- D

    Explain :- indexOf() returns the value of index if it is present .Otherwise it returns -1;

Q17. Identify the output of the following program.

 Public class Test{

Public static void main(String argos[]){

String str1 = "one"; String str2 = "two";

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

    A. one B. two C. onetwo D. twoone

Ans:-C

Explain:- Concat() method appends one String to the end of another. The method returns a String with the value of the String passed into the method appended to the end of the String which is used to invoke this method.

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:- B

Explain:- Object will be created each time whenever we use new keyword. So, 2 objects will be created simply for the first two line and matter is with remaining two bottom line. String c="FlipRobo" creates an object and store it in String pool, next time when we are writing String d=" FlipRobo " it will first check in String pool whether object already exists or not. Since, it is existing, no new object will be created. Hence reference "d" points to existing object " FlipRobo ". So ultimately 3 object will be created at the end.

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. B

   Explain:- Identifier should only start with alpha character or with special characters such as _ and $.

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:-A

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.A

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

A. int B. void C. double D. None

Ans. B

Explain:-Void does not return any value, where as data type like int , float , double, string returns a single value.

Q23.Output of Math.floor(3.6)?

A. 3 B. 3.0 C. 4 D. 4.0

Ans. A

Explain:- The method floor gives the largest integer that is less than or equal to the argument.

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

A. public B. protected C. private D. static

Ans. D

Explain:- It's actually pretty simple to understand – Everything that is marked static belongs to the class only, for example static method cannot be inherited in the sub class because they belong to the class in which they have been declared. Refer static keyword.
Lets back to the point, since each constructor is being called by its subclass during creation of the object of its subclass, so if you mark constructor as static the subclass will not be able to access the constructor of its parent class because it is

marked static and thus belong to the class only. This will violate the whole purpose of inheritance concept and that is reason why a constructor cannot be static.

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. B

Q.27 Find the output of the following code.

Public class Solution{

Public static void main(String args[]){

ilnt i; for(i = 1; i < 6; i++){ if(i > 3)

continue;

}

System.out.println(i);

} }

A. 3 B. 4 C. 5 D. 6

Ans. D

Q28.Exception created by try block is caught in which block A. catch B. throw C. final D. none

Ans. A

Q29.Which of the following exception is thrown when divided by zero statement is executed? A. NullPointerException B. NumberFormatException C. ArithmeticException D. None

Ans C

Q30.Where is System class defined? A. java.lang.package B. java.util.package C. java.io.package D. None

Ans.A