BESANT TECHNOLOGIES JAVA-BATCH 37– TECHNICAL ASSESSMENT 1

1. Which declaration of the main method below would allow a class to be started as a standalone program. Select the one correct answer.
   - A. public static int main(char args[])
   - B. public static void main(String args[])
   - C. public static void MAIN(String args[])
   - D. public static void main(String args)
   - E. public static void main(char args[])

2. What gets printed when the following code is compiled and run with the following command -
   java test
   Select the one correct answer.

```java
public class test {
    public static void main(String args[]) {
        Integer intObj=Integer.valueOf(args[args.length-1]);
        int i = intObj.intValue();

        if(args.length > 1)
            System.out.println(i);
        if(args.length > 0)
            System.out.println(i - 1);
        else
            System.out.println(i - 2);
    }
}
```

   - A. test
   - B. test -1
   - C. 0
   - D. 1
   - E. 2

3. How would the number 5 be represented in hex using up-to four characters.

4. Which of the following is not a Java keyword. Select the four correct answers.
   - A. extern
   - B. synchronized
   - C. volatile
   - D. transient
   - E. this

5. Is the following statement true or false. The constructor of a class must not have a return type.
   - A. true
   - B. false

6. What is the number of bytes used by Java primitive long. Select the one correct answer.
    - A. The number of bytes is compiler dependent.
    - B. 2
    - C. 4
    - D. 8
    - E. 64

7. Which of the following is correct? Select the two correct answers.
    - A. The native keyword indicates that the method is implemented in another language like C/C++.
    - B. The only statements that can appear before an import statement in a Java file are comments.
    - C. The method definitions inside interfaces are public and abstract. They cannot be private or protected.
    - D. A class constructor may have public or protected keyword before them, nothing else.

8. What is the result of evaluating the expression 14 ^ 23. Select the one correct answer.
    - A. 25
    - B. 37
    - C. 6
    - D. 31
    - E. 17
    - F. 9
    - G. 24

9. Which of the following are true. Select the one correct answers.
    - A. && operator is used for short-circuited logical AND.
    - B. ~ operator is the bit-wise XOR operator.
    - C. | operator is used to perform bitwise OR and also short-circuited logical OR.
    - D. The unsigned right shift operator in Java is >>.

10. Name the access modifier which when used with a method, makes it available to all the classes in the same package and to all the subclasses of the class.

11. Which of the following is true. Select the two correct answers.
    - A. A class that is abstract may not be instantiated.
    - B. The final keyword indicates that the body of a method is to be found elsewhere. The code is written in non-Java language, typically in C/C++.
    - C. A static variable indicates there is only one copy of that variable.
    - D. A method defined as private indicates that it is accessible to all other classes in the same package.

12. What all gets printed when the following program is compiled and run. Select the one correct answer.

```
public class test {
   public static void main(String args[]) {
      int i=0, j=2;
      do {
         i=++i;
         j--;
      } while(j>0);
```

```
        System.out.println(i);
    }
}
```

    A. 0
    B. 1
    C. 2
    D. The program does not compile because of statement "i=++i;"

13.   What all gets printed when the following gets compiled and run. Select the three correct answers.

```
public class test {
    public static void main(String args[]) {
        int i=1, j=1;
        try {
            i++;
            j--;
            if(i/j > 1)
                i++;
        }
        catch(ArithmeticException e) {
            System.out.println(0);
        }
        catch(ArrayIndexOutOfBoundsException e) {
            System.out.println(1);
        }
        catch(Exception e) {
            System.out.println(2);
        }
        finally {
            System.out.println(3);
        }
        System.out.println(4);
    }
}
```

    A. 0
    B. 1
    C. 2
    D. 3
    E. 4

14. What is the range of values that can be specified for an int. Select the one correct answer.
    A. The range of values is compiler dependent.
    B. -2^{31} to $2^{31} - 1$
    C. $-2^{31}-1$ to 2^{31}
    D. -2^{15} to $2^{15} - 1$
    E. $-2^{15}-1$ to 2^{15}

15. How can you ensure that the memory allocated by an object is freed. Select the one correct answer.
    A. By invoking the free method on the object.
    B. By calling system.gc() method.
    C. By setting all references to the object to new values (say null).
    D. Garbage collection cannot be forced. The programmer cannot force the JVM to free the memory used by an object.

16. What gets printed when the following code is compiled and run. Select the one correct answer.

```java
public class test {
    public static void main(String args[]) {
    int i = 1;
    do {
        i--;
    } while (i > 2);
    System.out.println(i);
    }
}
```

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

17. Which of the following are legal identifier names in Java. Select the two correct answers.
    A. %abcd
    B. $abcd
    C. 1abcd
    D. package
    E. _a_long_name

18. Which of the following statements related to Garbage Collection are correct. Select the two correct answers.
    A. It is possible for a program to free memory at a given time.
    B. Garbage Collection feature of Java ensures that the program never runs out of memory.
    C. It is possible for a program to make an object available for Garbage Collection.
    D. The finalize method of an object is invoked before garbage collection is performed on the object.

19. If a base class has a method defined as
    void method() { }
    Which of the following are legal prototypes in a derived class of this class. Select the two correct answers.
    A. void method() { }
    B. int method() { return 0;}
    C. void method(int i) { }
    D. private void method() { }

20. Which of the following are true about interfaces. Select the two correct answers.
    A. Methods declared in interfaces are implicitly private.
    B. Variables declared in interfaces are implicitly public, static, and final.
    C. An interface can extend any number of interfaces.
    D. The keyword implements indicate that an interface inherits from another.

21. Assume that class A extends class B, which extends class C. Also all the three classes
    implement the method test(). How can a method in a class A invoke the test() method
    defined in class C (without creating a new instance of class C). Select the one correct
    answer.
    A. test();
    B. super.test();
    C. super.super.test();
    D. ::test();
    E. C.test();
    F. It is not possible to invoke test() method defined in C from a method in A.

22. What is the return type of method round(double d) defined in Math class.

23.   What gets written on the screen when the following program is compiled and
    run. Select the one right answer.


```
public class test {
    public static void main(String args[]) {
    int i;
    float  f = 2.3f;
    double d = 2.7;
    i = ((int)Math.ceil(f)) * ((int)Math.round(d));

    System.out.println(i);
    }
}
```


    A. 4
    B. 5
    C. 6
    D. 6.1
    E. 9

24. Select the one correct answer. Which method defined in Integer class can be used to
    convert an Integer object to primitive int type.
    A. valueOf
    B. intValue
    C. getInt
    D. getInteger

25. Which of the following are correct. Select the one correct answer.
    A. An import statement, if defined, must always be the first non-comment
        statement of the file.
    B. private members are accessible to all classes in the same package.
    C. An abstract class can be declared as final.
    D. Local variables cannot be declared as static.

26. Name the keyword that makes a variable belong to a class, rather than being defined
    for each instance of the class. Select the one correct answer.
    A. static
    B. final
    C. abstract
    D. native
    E. volatile
    F. transient

27. The method existing in the following program is

```
public class Parent {
 public void doSomething() {}
 }
 public class Child extends Parent {
 private void doSomething() {} // illegal
 }
 public class UseBoth {
 public void doOtherThing() {
 Parent p1 = new Parent();
 Parent p2 = new Child();
 p1.doSomething();
 p2.doSomething();
 }

 }
```

    A. Overrriding method
    B. Overloading method
    C. Constructor

28. Which of the following lines will compile without warning or error.

1) float f=1.3;
2) char c="a";
3) byte b=257;
4) boolean b=null;
5) int i=10;

29. What will happen if you try to compile and run the following code


```
public class MyClass {
public static void main(String arguments[]) {
amethod(arguments);
}

Public void amethod(String[] arguments) {
System.out.println(arguments);
System.out.println(arguments[1]);
}
}
```
1) error Can't make static reference to void amethod.

2) error method main not correct
3) error array must include parameter
4) amethod must be declared with String

30)
A byte can be of what size
1) -128 to 127
2) (-2 power 8)-1 to 2 power 8
3) -255 to 256
4)depends on the particular implementation of the Java Virtual machine

31)
What will be printed out if this code is run with the following command line?
java myprog good morning
public class myprog{
public static void main(String argv[])
{
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System.out.println(argv[2])
}
}
1) myprog
2) good
3) morning
4) Exception raised: "java.lang.ArrayIndexOutOfBoundsException: 2"

32) Which of the following are keywords or reserved words in Java?
1) if
2) then
3) goto
4) while
5) case

33) Which of the following are legal identifiers
1) 2variable
2) variable2
3) _whatavariable
4) _3_
5) $anothervar
6) #myvar

34) What will happen when you compile and run the following code?
public class MyClass{
static int i;
public static void main(String argv[]){
System.out.println(i);
}
}
1) Error Variable i may not have been initialized
2) null
3) 1
4) 0

35)
Which of the following lines of code will compile without error
1)
int i=0;
if(i) {
System.out.println("Hello");
}
2)
boolean b=true;
boolean b2=true;
if(b==b2) {
System.out.println("So true");
}
3)
int i=1;
int j=2;
if(i==1|| j==2)
System.out.println("OK");
4)
int i=1;
int j=2;
if(i==1 &| j==2)
System.out.println("OK");

36)
Which of the following statements are true?
1) Methods cannot be overriden to be more private
2) Static methods cannot be overloaded
3) Private methods cannot be overloaded
4) An overloaded method cannot throw exceptions not checked in the base class

37)
Given the following code what will be output?
public class Pass{
static int j=20;
public static void main(String argv[]){
int i=10;
Pass p = new Pass();
p.amethod(i);
System.out.println(i);
System.out.println(j);
}
public void amethod(int x){
x=x*2;
j=j*2;
}
}
1) Error: amethod parameter does not match variable
2) 20 and 40
3) 10 and 40
4) 10, and 20

38)
What will the following code print out?

```java
public class Oct{
public static void main(String argv[]){
Oct o = new Oct();
o.amethod();
}
public void amethod(){
int oi= 012;
System.out.println(oi);
}
}
```

1)12
2)012
3)10
4)10.0

39)
What will happen when you try compiling and running this code?

```java
public class Ref{
public static void main(String argv[]){
Ref r = new Ref();
r.amethod(r);
}
public void amethod(Ref r){
int i=99;
multi(r);
System.out.println(i);
}
public void multi(Ref r){
r.i = r.i*2;
}
}
```

1) Error at compile time
2) An output of 99
3) An output of 198
4) An error at runtime

40) All methods are only for declaration and not for definition in interface .

A) TRUE   B) FALSE

41) Boolean type can be converted to type of :

A. Char

B. Integer

C. Any type

D. Boolean

E. None of the above

41) Java Virtual Machine includes

A. JRE

B. jdk

C. Both

42) Classes are the collection of

A. Objects

B. Methods

C. Variables

D. all the above

43) Which of the following statements is not true for Constructor?

A. In public ,no return function

B. Can be invoked explicitly

C. Method name and class name are same.

45) Multiple Inheritance in java uses :

A. Class format   (B) Interface format   (C) Cannot be supported

46) What is the need for main() method in java?

A. Creates instance

B. Provides entry level to the program

C. It has its return type

47) The idea of using the non –private properties of the parent class for a child class is used in the concept of

A. Inheritance

B. Polymorphism

C. abstraction

D. Interface

E. None of the above

48) Access Specificiers used in java

A. private

B. protected

C. public

D. All the above

49) How arguments are passed

A. By parameter

B. By value

C. By passing value to the parameter in a method

50) If same method name is used for several classes, it is said to be

 A. Overloaded (B) Override   (C) Constructor