

Information Practice (Java)

CLASS : 11C

iiO Roll Number <input style="width: 100%; height: 20px;" type="text"/>	TEST PAPER TYPE <div style="border: 1px solid black; padding: 2px; display: inline-block; font-weight: bold; font-size: 1.2em;">J A P</div>
Student's Name <input style="width: 100%; height: 20px;" type="text"/>	

Duration : 60 Minutes

Total Questions : 40

Maximum Marks :100

I N S T R U C T I O N S

1. Write your 11 digit iiO Roll Number and your name on top of the question Paper in the given space.
2. Filling up improper Roll Number in the Answer sheet may lead to unavailability of Result.
4. Each question carries equal marking of 2.5 marks.
5. Mark your answers(A, B, C, D or E) on the Answer sheet with pencil only.
6. The question paper contains 4 pages.
7. Do not start attempting the test paper until you are asked to do so.

1. How will you compile the code contained in file called program1.java?

- (A) java program1
- (B) javac program1
- (C) java program1.java
- (D) javac program1.java
- (E) java program1 main

2. Which command in Java is used to execute the main() method of a class named program1.java?

- (A) java program1
- (B) javac program1
- (C) java program1.java
- (D) java program1.class
- (E) java program1.main()

3. Which of the following is the most restrictive access, if you want a class to have access to members of another class in the same package?

- (A) public
- (B) private
- (C) protected
- (D) transient
- (E) None of these

4. What is the output of the following program?

```
public class prog {
    public static void main (String args[]) {
        class example1 {
            public int i=3;
        }
        object o =(object) new example1();
        object1 object1= (object1) o;
        System.out.println("i="+object1.i);
    }
}
```

- (A) i= 3
- (B) compilation fails
- (C) a ClassCastException is thrown at line 6
- (D) a ClassCastException is thrown at line 7
- (E) None of these

5. Object oriented programming language is based on which of the following concept?

- (A) polymorphism
- (B) inheritance
- (C) encapsulation
- (D) All of these
- (E) None of these

6. What is the result of the following code?

```
boolean bool=true;
if(!bool=false) {System.out.println("a");}
else if (bool) {System.out.println("b");}
else if (!bool) {System.out.println("c");}
else {System.out.println("d");}
```

- (A) a (B) b
(C) c (D) d
(E) compilation error

7. What is the output of the following program?

```
int a=1, b=10;
do {if(a++>-b)
{continue;}}
while (a<5);
System.out.println("a=" +i+ "and b= "+b);
```

- (A) a=6 and b=5 (B) a=5 and b=5
(C) a=6 and b=5 (D) a=5 and b=6
(E) a=6 and b=6

8. What will be the output of the following program?

```
class class1{
public static void main(String args[]){
char ch1, ch2;
ch1=88;ch2='Y';
System.out.print("ch1 and ch2:");
System.out.println(ch1+" "+ch2);
}}
```

- (A) ch1 and ch2: X Y (B) ch1 and ch2: x Y
(C) ch1 and ch2: 88 Y (D) compilation error
(E) None of these

9. What is the range of byte datatype?

- (A) -128 to 127 (B) -32768 to 32767
(C) -128 to 128 (D) -127 to 128
(E) None of these

10. How many bits are present in long datatype?

- (A) 32 bits (B) 16 bits
(C) 8 bits (D) 64 bits
(E) None of these

11. Consider the following code:

```
public class A
{public static void main(String[] args){
int a, b, c; b=10; a=b=c=20;
System.out.println(a);
Which of the following is the correct output
of the preceding code?
```

- (A) 22 (B) 23
(C) 15 (D) 24
(E) None of these

12. Which of the following is the correct output of the preceding code?

```
int x=15; int y=8; int sum;
- -x;
++y;
sum=x+y;
System.out.println("sum="+sum);
```

- (A) The code will fail to compile, since the compiler will recognize that the variable c in the assignment statement a=b=c=20 has not been initialized.
(B) The code will fail to compile because the assignment operator a=b=c=20; is illegal.
(C) The code will compile correctly and will display 20 when run.
(D) The code will compile correctly and will display 10 when run.
(E) None of these

13. Which of the option is correct with respect to the following statements?

Statement A: The "=" operator compare two primitive data types or two objects references for equality.

Statement B: The result of the "=" operator will be true if the values of the two primitive data types are true.

- (A) Statement A is correct.
(B) Statement B is correct.
(C) BothStatement A and B both are correct.
(D) Neither statement A nor statement B is correct.
(E) None of these

14. Which of the following operators is used to shift right zero fill assignment?

- (A) <<= (B) >>>=
(C) >>= (D) ^ =
(E) None of these

15. What is the value of (00101010) ^ (00001111)?

- (A) 101011 (B) 101001
(C) 100101 (D) 110101
(E) None of these

16. What is the result of the following code?

```
Int a=1, b=-1;
switch (a) {case 0, 1:j =1;case 2: j=2;
default; j=0;}
System.out.println("j="+j);
```

- (A) j= -1 (B) j=0
(C) j=1 (D) j=2
(E) compilation error

17. Which of the following code fragments, inserted independently at line 3, will allow the class to compile?

```
public class class1{
    static void print(int...x)
    {// insert code here}
}
```

- (A) `foreach(x) System.out.println(z);`
- (B) `for(int z:x) System.out.println(z);`
- (C) `while(x.hasNext()) System.out.println(x.next());`
- (D) `for(int i=0;i++) System.out.println(x[i]);`
- (E) None of these

18. What is the result of the following code?

```
public class delta {
    static boolean print(char c) {
        System.out.print( c);return true;}
    public static void main(String[] argv) {
        int i=0;
        for (print('A');
            print('B') && (i<2);
            print('C'))
        { i++; print('D');} } }
```

- (A) ABDCBDCB
- (B) ABCDABCD
- (C) compilation fails
- (D) an exception is thrown at runtime
- (E) None of these

19. Which of the option is correct with respect to the following statements?

Statement A: Switch statement can be nested.

Statement B: Use the do..while loop to execute the body of a while loop at least once, even if the conditional expression is false.

- (A) Statement A is correct.
- (B) Statement B is correct.
- (C) Both Statement A and B are correct.
- (D) Neither statement A nor statement B is correct.
- (E) None of these

20. What is the result of the following code?

```
public class Test {
    public enum Dogs {collie, harrier};
    public static void main(String [] args) {
        Dogs myDog = Dogs.collie;
        switch (myDog) {
            case collie:
                System.out.print("collie ");
            case harrier:
                System.out.print("harrier "); } } }
```

- (A) collie
- (B) harrier
- (C) compilation fails
- (D) collie harrier
- (E) an exception is thrown at runtime

21. Which of the following correct syntaxes is used to declare a class in java?

- (A) `Class class name{`
`// java statements}`
- (B) `class class_name(`
`// java statements)`
- (C) `class class_name{`
`// java statements}`
- (D) `Class class_name{`
`// java statements}`
- (E) None of these

22. Which of the option is correct with respect to the following statements?

Statement A: Protected members are accessible within the class package and by subclasses in package where this class is visible.

Statement B: The private members can be accessed within the class and by subclasses.

- (A) Statement A is correct.
- (B) Statement B is correct.
- (C) Statement A and B both are correct.
- (D) Neither statement A nor statement B is correct.
- (E) None of these

23. Danny has developed the following code:

```
public class foo
{
    public static void main (String[] args)
    {
        String s;
        System.out.println("s=" + s);
    }
}
```

When Danny tries to compile the above code, the code does not get compiled. What may be the cause of error?

- (A) semicolon error
- (B) variables might have not been initialized.
- (C) `nullPointerException` error
- (D) not a statement
- (E) None of these

24. Which one of the following syntaxes is correct for declaring the array in Java?

- (A) `int{} arrayname;`
- (B) `arrayname int[];`
- (C) `int[] arrayname;`
- (D) `arrayname int{};`
- (E) None of these

25. Which one of the following code correctly creates and initializes a static array of int elements?

- (A) `static final int[] a = {100,200};`
- (B) `static int[];`
`static{a=new int[2];a[0]=100;a[1]=200;}`
- (C) `static final int[]a=new int[2]{100,200};`
- (D) `static final int[]a;`
`static void init() { a=new int[3];a[0]=100;a[1]=200}`
- (E) None of these

26. What is the output of the following code?

```
public class Yikes {
    public static void go(Long n)
    {System.out.println("Long ");}
    public static void go(Short n)
    {System.out.println("Short ");}
    public static void go(int n)
    {System.out.println("int ");}
    public static void main(String [] args) {
        short y= 6;
        long z= 7;
        go(y);
        go(z);
    }
}
```

- (A) int Long
- (B) Short Long
- (C) Compilation fails
- (D) an exception is thrown at runtime
- (E) None of these

27. Which one of the following is true about constructor function?

- (A) It has the same name as the class in which it resides
- (B) It initializes an object
- (C) It has the same name as the class in which it resides with a tilde sign
- (D) Both A and B
- (E) None of these

28. Which one of the following is true when a method is declared as static?

- (A) It is called only static method
- (B) It can refer to this or super class
- (C) It can call any method
- (D) Both A and B
- (E) None of these

29. Statement A: There are two types of nested classes namely static and non-static. Statement B: One cannot define a class inside another class.

- (A) Statement A is Correct
- (B) Statement B is Correct
- (C) Both Statement A and B are Correct
- (D) Neither statement A nor statement B is Correct
- (E) None of these

30. The following class is declared and a class Circle extends and fully implements the Shape class. Which one of the following is correct implementation of object of Shape class?

1. `public abstract class Shape {`
2. `int x;`
3. `int y;`
4. `public abstract void draw();`
5. `public void setAnchor(int x, int y) {`
6. `this.x = x;`
7. `this.y = y;`
8. `}`
9. `}`

- (A) `Shape s=new Shape();`
`s.setAnchor(10,10);`
`s.draw();`
- (B) `Circle c=new Shape();`
`c.setAnchor(10,10);`
`c.draw();`
- (C) `Shape s=new Circle();`
`s.setAnchor(10,10);`
`s.draw();`
- (D) `Shape s=new Circle();`
`s-> setAnchor(10,10);`
`s-> draw();`
- (E) None of these

31. All classes extend the _____ class either directly or indirectly.

- (A) Object
- (B) Math class
- (C) IO class
- (D) Wrapper class
- (E) None of these

32. Identify the return type of the hashCode() method in the Object class.

- (A) boolean
- (B) long
- (C) int
- (D) String
- (E) None of these

33. What exception can the clone() method of the Object class throw?

- (A) NotCloneableException
- (B) CloneNotSupportedException
- (C) IllegalCloneException
- (D) NoClonesAllowedException
- (E) None of these

34. Which one of the following are wrapper classes?

- (A) java.lang.Void
- (B) java.lang.Boolean
- (C) java.lang.Long
- (D) All of these
- (E) None of these

35. Which code fragment, inserted independently at line 3, generate the output 4247?

1. `public class class1 {`
2. `public static void main(String [] args) {`
3. `//insert code here`
4. `System.out.println(s);`
5. `}`
6. `}`

- (A) `String s= "123456789"`
`S. = (s-"123").replace(1,3,"24") - "89";`
- (B) `StringBuffer s= new`
`StringBuffer("123456789");`
`S.delete(0,3) replace(1,3,"24").Delete(4,6)`
- (C) `StringBuffer s= new`
`StringBuffer("123456789");`
`S.substring(3,6).delete(1,3).insert(1,"24")`
- (D) `StringBuilder s \= new`
`StringBuilder("123456789");`
`S.substring(3,6)delete(1,2).insert(1,"24")`
- (E) None of these

36. Which of the following are types of inner classes?

- (A) Member classes
- (B) Local classes
- (C) Anonymous classes
- (D) All of these
- (E) None of these

37. If a class includes an interface but it does not fully implement the methods defined by that interface then the class must be declared as_____.

- (A) super
- (B) friend
- (C) abstract
- (D) subclass
- (E) None of these

38. Which one of the following is the valid declarations within an interface definition?

- (A) `void method1();`
- (B) `public final double method1();`
- (C) `static void method1(double d1);`
- (D) `protected void method1(double d1);`
- (E) None of these

39. Which one of the following modifiers is valid on line 2?

- ```
Public interface inter1{
/* insert code */ int a=10;
}
```
- (A) static
  - (B) native
  - (C) private
  - (D) protected
  - (E) abstract

**40. Select the correct syntax for defining and instantiating an anonymous class that implements an interface specified by <interface name>.**

- (A) `super <interface name> () {<member declarations> }`
- (B) `new <interface name> () {<member declarations> }`
- (C) `<interface name> () {<member declarations> }`
- (D) `class <interface name> () {<member declarations> }`
- (E) None of these