

Question	Option 1	Option 2	Option 3	Option 4	Correct
Iterator is having previous() method.State True or False.	TRUE	FALSE			2
Which of the Following attributes of page directive are invalid?	isScriptingEnabled	isELIgnored	language	session	1
What will be the output of following code?  class Super2 { public void display() { System.out.println("super class display method"); } public void exe() { System.out.println("super class exe method"); display(); public void display() { System.out.println("sub class display method"); } public static void main(String [] args) { InheritMethod o= new InheritMethod(); o.exe(); } }	super class exe method super class display method	super class exe method sub class display method	Compilation error	None	4
Please select the correct statement with respect to including Javascript in HTML pages.	JavaScript can be written inside the header	JavaScript can be written as an external file and imported to the page	all of the listed options	JavaScript can be written inside the page body	3

**1.** Which is true? (Choose all that apply.)

- A. "X extends Y" is correct if and only if X is a class and Y is an interface
- B. "X extends Y" is correct if and only if X is an interface and Y is a class
- C. "X extends Y" is correct if X and Y are either both classes or both interfaces
- D. "X extends Y" is correct for all combinations of X and Y being classes and/or interfaces

Answer:

- \* ✓C is correct.
- \* ✗ A is incorrect because classes implement interfaces, they don't extend them. B is incorrect because interfaces only "inherit from" other interfaces. D is incorrect based on the preceding rules.

**2.** Which method names follow the JavaBeans standard? (Choose all that apply.)

- A. addSize
- B. getCust
- C. deleteRep
- D. isColorado
- E. putDimensions

Answer:

- \* ✓B and D use the valid prefixes 'get' and 'is'.
- \* ✗ A is incorrect because 'add' can be used only with Listener methods. C and E are incorrect because 'delete' and 'put' are not standard JavaBeans name prefixes.

**3.** Given:

```
1. class Voop {  
2.     public static void main(String[] args) {  
3.         doStuff(1);  
4.         doStuff(1,2);  
5.     }  
6.     // insert code here  
7. }
```

Which, inserted independently at line 6, will compile? (Choose all that apply.)

- A. static void doStuff(int... doArgs) { }
- B. static void doStuff(int[] doArgs) { }
- C. static void doStuff(int doArgs...) { }
- D. static void doStuff(int... doArgs, int y) { }
- E. static void doStuff(int x, int... doArgs) { }

Answer:

- \* ✓A and E use valid var-args syntax.
- \* ✗ B and C are invalid var-arg syntax, and D is invalid because the var-arg must be the last of a method's arguments.

**4.** Given:

```
1. enum Animals {  
2.     DOG("woof"), CAT("meow"), FISH("bubble");  
3.     String sound;  
4.     Animals(String s) { sound = s; }  
5. }  
6. class TestEnum {  
7.     static Animals a;  
8.     public static void main(String [] args) {  
9.         System.out.println(a.DOG.sound + " " + a.FISH.sound);  
10.    }  
11. }
```

What is the result?

- A. woof bubble
- B. Multiple compilation errors
- C. Compilation fails due to an error on line 2
- D. Compilation fails due to an error on line 3

E. Compilation fails due to an error on line 4

F. Compilation fails due to an error on line 9

Answer:

- ✿ ✓ A is correct; enums can have constructors and variables.
- ✿ ✗ B, C, D, E, and F are incorrect; these lines all use correct syntax.

**5. Given two files:**

```
1. package pkgA;
2. public class Foo {
3.     int a = 5;
4.     protected int b = 6;
5.     public int c = 7;
6. }
7. package pkgB;
8. import pkgA.*;
9. public class Baz {
10.    public static void main(String[] args) {
11.        Foo f = new Foo();
12.        System.out.print(" " + f.a);
13.        System.out.print(" " + f.b);
14.        System.out.print(" " + f.c);
15.    }
16. }
```

What is the result? (Choose all that apply.)

- A. 5 6 7
- B. 5 followed by an exception
- C. Compilation fails with an error on line 7
- D. Compilation fails with an error on line 8
- E. Compilation fails with an error on line 9
- F. Compilation fails with an error on line 10

Answer:

- ✿ ✓ D and E are correct. Variable `a` has default access, so it cannot be accessed from outside the package. Variable `b` has protected access in `pkgA`.
- ✿ ✗ A, B, C, and F are incorrect based on the above information.

**6. Given:**

```
1. public class Electronic implements Device
2. { public void doIt() { } }
3. abstract class Phone1 extends Electronic { }
4.
5. abstract class Phone2 extends Electronic
6. { public void doIt(int x) { } }
7.
8. class Phone3 extends Electronic implements Device
9. { public void doStuff() { } }
```

What is the result? (Choose all that apply.)

- A. Compilation succeeds
- B. Compilation fails with an error on line 1
- C. Compilation fails with an error on line 3
- D. Compilation fails with an error on line 5
- E. Compilation fails with an error on line 7
- F. Compilation fails with an error on line 9

Answer:

- ✿ ✓ A is correct; all of these are legal declarations.
- ✿ ✗ B, C, D, E, and F are incorrect based on the above information.

**7. Given:**

```
4. class Announce {
```

```

5. public static void main(String[] args) {
6.     for(int x = 0; x < 3; x++) ;
7.     int #lb = 7;
8.     long [] x [5];
9.     Boolean []ba[];
10.    enum Traffic { RED, YELLOW, GREEN };
11. }
12. }
```

What is the result? (Choose all that apply.)

- A. Compilation succeeds
- B. Compilation fails with an error on line 6
- C. Compilation fails with an error on line 7
- D. Compilation fails with an error on line 8
- E. Compilation fails with an error on line 9
- F. Compilation fails with an error on line 10

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Answer:

- ✿ ✓C, D, and F are correct. Variable names cannot begin with a #, an array declaration can't include a size without an instantiation, and enums can't be declared within a method.
- ✿ ✗ A, B, and E are incorrect based on the above information.

### 8. Given:

```

3. public class TestDays {
4.     public enum Days { MON, TUE, WED };
5.     public static void main(String[] args) {
6.         for(Days d : Days.values() )
7.             ;
8.         Days [] d2 = Days.values();
9.         System.out.println(d2[2]);
10.    }
11. }
```

What is the result? (Choose all that apply.)

- A. TUE
- B. WED
- C. The output is unpredictable
- D. Compilation fails due to an error on line 4
- E. Compilation fails due to an error on line 6
- F. Compilation fails due to an error on line 8
- G. Compilation fails due to an error on line 9

Answer:

- ✿ ✓B is correct. Every `enum` comes with a `static values()` method that returns an array of the `enum`'s values, in the order in which they are declared in the `enum`.
- ✿ ✗ A, C, D, E, F, and G are incorrect based on the above information.

### 9. Given:

```

4. public class Frodo extends Hobbit {
5.     public static void main(String[] args) {
6.         Short myGold = 7;
7.         System.out.println(countGold(myGold, 6));
8.     }
9. }
10. class Hobbit {
11.     int countGold(int x, int y) { return x + y; }
12. }
```

What is the result?

- A. 13
- B. Compilation fails due to multiple errors
- C. Compilation fails due to an error on line 6

D. Compilation fails due to an error on line 7

E. Compilation fails due to an error on line 11

Answer:

✿ ✓D is correct. The `Short myGold` is autoboxed correctly, but the `countGold()` method cannot be invoked from a static context.

✿ ✗ A, B, C, and E are incorrect based on the above information.

10. Given:

```
public abstract interface Froblicate { public void twiddle(String s); }
```

Which is a correct class? (Choose all that apply.)

A. public abstract class Frob implements Froblicate {  
public abstract void twiddle(String s) {}  
}

B. public abstract class Frob implements Froblicate {}

C. public class Frob extends Froblicate {  
public void twiddle(Integer i) {}  
}

D. public class Frob implements Froblicate {  
public void twiddle(Integer i) {}  
}

E. public class Frob implements Froblicate {  
public void twiddle(String i) {}  
public void twiddle(Integer s) {}  
}

Answer:

✿ ✓B is correct, an `abstract` class need not implement any or all of an interface's methods.

E is correct, the class implements the interface method and additionally overloads the `twiddle()` method.

✿ ✗ A is incorrect because `abstract` methods have no body. C is incorrect because classes implement interfaces they don't extend them. D is incorrect because overloading a method is not implementing it.

11. Given:

```
class Top {  
public Top(String s) { System.out.print("B"); }  
}  
public class Bottom2 extends Top {  
public Bottom2(String s) { System.out.print("D"); }  
public static void main(String [] args) {  
new Bottom2("C");  
System.out.println(" ");  
} }
```

What is the result?

- A. BD
- B. DB
- C. BDC
- D. DBC

E. Compilation fails

Answer:

✿ ✓E is correct. The implied `super()` call in `Bottom2`'s constructor cannot be satisfied because there isn't a no-arg constructor in `Top`. A default, no-arg constructor is generated by the compiler only if the class has no constructor defined explicitly.

✿ ✗ A, B, C, and D are incorrect based on the above.

12. Given:

```
class Clidder {  
private final void flipper() { System.out.println("Clidder"); }  
}
```

```
public class Clidlet extends Clidder {  
    public final void flipper() { System.out.println("Clidlet"); }  
    public static void main(String [] args) {  
        new Clidlet().flipper();  
    } }  
What is the result?
```

- A. Clidlet
- B. Clidder
- C. Clidder  
Clidlet
- D. Clidlet  
clidder
- E. Compilation fails

Answer:

✿ ✓ A is correct. Although a final method cannot be overridden, in this case, the method is private, and therefore hidden. The effect is that a new, accessible, method flipper is created. Therefore, no polymorphism occurs in this example, the method invoked is simply that of the child class, and no error occurs.

✿ ✗ B, C, D, and E are incorrect based on the preceding.

13. Which statement(s) are true? (Choose all that apply.)

- A. Cohesion is the OO principle most closely associated with hiding implementation details
- B. Cohesion is the OO principle most closely associated with making sure that classes know about other classes only through their APIs
- C. Cohesion is the OO principle most closely associated with making sure that a class is designed with a single, well-focused purpose
- D. Cohesion is the OO principle most closely associated with allowing a single object to be seen as having many types

Answer:

✿ ✓ Answer C is correct.

✿ ✗ A refers to encapsulation, B refers to coupling, and D refers to polymorphism.

14. Given the following,

```
1. class X { void do1() { } }  
2. class Y extends X { void do2() { } }  
3.  
4. class Chrome {  
5.     public static void main(String [] args) {  
6.         X x1 = new X();  
7.         X x2 = new Y();  
8.         Y y1 = new Y();  
9.         // insert code here  
10.    }  
11. }
```

Which, inserted at line 9, will compile? (Choose all that apply.)

- A. x2.do2();
- B. (Y)x2.do2();
- C. ((Y)x2).do2();
- D. None of the above statements will compile

Answer:

✿ ✓ C is correct. Before you can invoke Y's do2 method you have to cast x2 to be of type Y. Statement B looks like a proper cast but without the second set of parentheses, the compiler thinks it's an incomplete statement.

✿ ✗ A, B and D are incorrect based on the preceding.

**15. Given:**

1. ClassA has a ClassD
  2. Methods in ClassA use public methods in ClassB
  3. Methods in ClassC use public methods in ClassA
  4. Methods in ClassA use public variables in ClassB
- Which is most likely true? (Choose the most likely.)
- A. ClassD has low cohesion
  - B. ClassA has weak encapsulation
  - C. ClassB has weak encapsulation
  - D. ClassB has strong encapsulation
  - E. ClassC is tightly coupled to ClassA

Answer:

- ✿ ✓ C is correct. Generally speaking, public variables are a sign of weak encapsulation.
- ✿ ✗ A, B, D, and E are incorrect, because based on the information given, none of these statements can be supported.

**16. Given:**

```
3. class Dog {  
4.     public void bark() { System.out.print("woof "); }  
5. }  
6. class Hound extends Dog {  
7.     public void sniff() { System.out.print("sniff "); }  
8.     public void bark() { System.out.print("howl "); }  
9. }  
10. public class DogShow {  
11.     public static void main(String[] args) { new DogShow().go(); }  
12.     void go() {  
13.         new Hound().bark();  
14.         ((Dog) new Hound()).bark();  
15.         ((Dog) new Hound()).sniff();  
16.     }  
17. }
```

What is the result? (Choose all that apply.)

- A. howl howl sniff
- B. howl woof sniff
- C. howl howl followed by an exception
- D. howl woof followed by an exception
- E. Compilation fails with an error at line 14
- F. Compilation fails with an error at line 15

Answer:

- ✿ ✓ F is correct. Class Dog doesn't have a sniff method.
- ✿ ✗ A, B, C, D, and E are incorrect based on the above information.

**17. Given:**

```
3. public class Redwood extends Tree {  
4.     public static void main(String[] args) {  
5.         new Redwood().go();  
6.     }  
7.     void go() {  
8.         go2(new Tree(), new Redwood());  
9.         go2((Redwood) new Tree(), new Redwood());  
10.    }  
11.    void go2(Tree t1, Redwood r1) {  
12.        Redwood r2 = (Redwood)t1;  
13.        Tree t2 = (Tree)r1;  
14.    }  
15. }  
16. class Tree { }
```

What is the result? (Choose all that apply.)

- A. An exception is thrown at runtime

- B. The code compiles and runs with no output
- C. Compilation fails with an error at line 8
- D. Compilation fails with an error at line 9
- E. Compilation fails with an error at line 12
- F. Compilation fails with an error at line 13

Answer:

- ✿ ✓ **A** is correct, a ClassCastException will be thrown when the code attempts to downcast a Tree to a Redwood.
- ✿ ✗ **B, C, D, E, and F** are incorrect based on the above information.

#### **18. Given:**

```

3. public class Tenor extends Singer {
4.     public static String sing() { return "fa"; }
5.     public static void main(String[] args) {
6.         Tenor t = new Tenor();
7.         Singer s = new Tenor();
8.         System.out.println(t.sing() + " " + s.sing());
9.     }
10. }
11. class Singer { public static String sing() { return "la"; } }
```

What is the result?

- A. fa fa
- B. fa la
- C. la la
- D. Compilation fails
- E. An exception is thrown at runtime

Answer:

- ✿ ✗ **B** is correct. The code is correct, but polymorphism doesn't apply to static methods.
- ✿ ✗ **A, C, D, and E** are incorrect based on the above information.

#### **11. Given:**

```

3. class Alpha {
4.     static String s = " ";
5.     protected Alpha() { s += "alpha "; }
6. }
7. class SubAlpha extends Alpha {
8.     private SubAlpha() { s += "sub "; }
9. }
10. public class SubSubAlpha extends Alpha {
11.     private SubSubAlpha() { s += "subsub "; }
12.     public static void main(String[] args) {
13.         new SubSubAlpha();
14.         System.out.println(s);
15.     }
16. }
```

What is the result?

- A. subsub
- B. sub subsub
- C. alpha subsub
- D. alpha sub subsub
- E. Compilation fails
- F. An exception is thrown at runtime

Answer:

- ✿ ✗ **C** is correct. Watch out, SubSubAlpha extends Alpha! Since the code doesn't attempt to make a SubAlpha, the private constructor in SubAlpha is okay.
- ✿ ✗ **A, B, D, E, and F** are incorrect based on the above information.

#### **19. Given:**

```

3. class Building {
4.     Building() { System.out.print("b "); }
5.     Building(String name) {
6.         this(); System.out.print("bn " + name);
7.     }
8. }
9. public class House extends Building {
10.    House() { System.out.print("h "); }
11.   House(String name) {
12.       this(); System.out.print("hn " + name);
13.   }
14.   public static void main(String[] args) { new House("x"); }
15. }
```

What is the result?

- A. h hn x
- B. hn x h
- C. b h hn x
- D. b hn x h
- E. bn x h hn x
- F. b bn x h hn x
- G. bn x b h hn x
- H. Compilation fails

Answer:

- \* ✓C is correct. Remember that constructors call their superclass constructors, which execute first, and that constructors can be overloaded.
- \* ✗ A, B, D, E, F, G, and H are incorrect based on the above information.

## 20. Given:

```

3. class Mammal {
4.     String name = "furry ";
5.     String makeNoise() { return "generic noise"; }
6. }
7. class Zebra extends Mammal {
8.     String name = "stripes ";
9.     String makeNoise() { return "bray"; }
10. }
11. public class ZooKeeper {
12.     public static void main(String[] args) { new ZooKeeper().go(); }
13.     void go() {
14.         Mammal m = new Zebra();
15.         System.out.println(m.name + m.makeNoise());
16.     }
17. }
```

What is the result?

- A. furry bray
- B. stripes bray
- C. furry generic noise
- D. stripes generic noise
- E. Compilation fails
- F. An exception is thrown at runtime

Answer:

- \* ✓A is correct. Polymorphism is only for instance methods.
- \* ✗ B, C, D, E, and F are incorrect based on the above information.

## 21. You're designing a new online board game in which Floozels are a type of Jammers, Jammers can have Quizels, Quizels are a type of Klakker, and Floozels can have several Floozets. Which of the

following fragments represent this design? (Choose all that apply.)

- A. import java.util.\*;  
interface Klakker {}  
class Jammer { Set<Quizel> q; }  
class Quizel implements Klakker {}  
public class Floozel extends Jammer { List<Floozet> f; }  
interface Floozet {}
- B. import java.util.\*;  
class Klakker { Set<Quizel> q; }  
class Quizel extends Klakker {}  
class Jammer { List<Floozel> f; }  
class Floozet extends Floozel {}  
public class Floozel { Set<Klakker> k; }
- C. import java.util.\*;  
class Floozet {}  
class Quizel implements Klakker {}  
class Jammer { List<Quizel> q; }  
interface Klakker {}  
class Floozel extends Jammer { List<Floozet> f; }
- D. import java.util.\*;  
interface Jammer extends Quizel {}  
interface Klakker {}  
interface Quizel extends Klakker {}  
interface Floozel extends Jammer, Floozet {}  
interface Floozet {}

Answer:

✿ ✓ **A** and **C** are correct. The phrase "type of" indicates an "is-a" relationship (extends or implements), and the phrase "have" is of course a "has-a" relationship (usually instance variables).

✿ ✗ **B** and **D** are incorrect based on the above information.

## 22. Given:

```
3. class A {}  
4. class B extends A {}  
5. public class ComingThru {  
6.     static String s = "-";  
7.     public static void main(String[] args) {  
8.         A[] aa = new A[2];  
9.         B[] ba = new B[2];  
10.        sifter(aa);  
11.        sifter(ba);  
12.        sifter(7);  
13.        System.out.println(s);  
14.    }  
15.    static void sifter(A[]... a2) { s += "1"; }  
16.    static void sifter(B[]... b1) { s += "2"; }  
17.    static void sifter(B[] b1) { s += "3"; }  
18.    static void sifter(Object o) { s += "4"; }  
19. }
```

What is the result?

- A. -124
- B. -134
- C. -424
- D. -434
- E. -444
- F. Compilation fails

Answer:

✿ ✓ **D** is correct. In general, overloaded var-args methods are chosen last. Remember that arrays are objects. Finally, an int can be boxed to an Integer and then "widened" to an Object.

✿ ✗ **A, B, C, E, and F** are incorrect based on the above information.

**23. Given:**

```
class CardBoard {  
    Short story = 200;  
    CardBoard go(CardBoard cb) {  
        cb = null;  
        return cb;  
    }  
    public static void main(String[] args) {  
        CardBoard c1 = new CardBoard();  
        CardBoard c2 = new CardBoard();  
        CardBoard c3 = c1.go(c2);  
        c1 = null;  
        // do Stuff  
    } }  
When // doStuff is reached, how many objects are eligible for GC?
```

- A. 0
- B. 1
- C. 2
- D. Compilation fails
- E. It is not possible to know
- F. An exception is thrown at runtime

Answer:

- ✿ ✅C is correct. Only one `CardBoard` object (`c1`) is eligible, but it has an associated `Short` wrapper object that is also eligible.
- ✿ ✗ A, B, D, E, and F are incorrect based on the above.

**24. Given:**

```
class Alien {  
    String invade(short ships) { return "a few"; }  
    String invade(short... ships) { return "many"; }  
}  
class Defender {  
    public static void main(String [] args) {  
        System.out.println(new Alien().invade(7));  
    } }  
What is the result?
```

- A. many
- B. a few
- C. Compilation fails
- D. The output is not predictable
- E. An exception is thrown at runtime

Answer:

- ✿ ✅C is correct, compilation fails. The var-args declaration is fine, but `invade` takes a `short`, so the argument 7 needs to be cast to a `short`. With the cast, the answer is B, 'a few'.
- ✿ ✗ A, B, D, and E are incorrect based on the above.

**25. Given:**

```
1. class Dims {  
2.     public static void main(String[] args) {  
3.         int[][] a = {{1,2},{3,4}};  
4.         int[] b = (int[]) a[1];  
5.         Object o1 = a;  
6.         int[][] a2 = (int[][] ) o1;  
7.         int[] b2 = (int[]) o1;  
8.         System.out.println(b[1]);  
9.     } }
```

What is the result?

- A. 2
- B. 4
- C. An exception is thrown at runtime
- D. Compilation fails due to an error on line 4

- E. Compilation fails due to an error on line 5  
 F. Compilation fails due to an error on line 6  
 G. Compilation fails due to an error on line 7

Answer:

- ✿ ✓C is correct. A `ClassCastException` is thrown at line 7 because `o1` refers to an `int[][]` not an `int[]`. If line 7 was removed, the output would be 4.
- ✿ ✗ A, B, D, E, F, and G are incorrect based on the above.

### 25. Given:

```
class Mixer {
Mixer() { }
Mixer(Mixer m) { m1 = m; }
Mixer m1;
public static void main(String[] args) {
Mixer m2 = new Mixer();
Mixer m3 = new Mixer(m2); m3.go();
Mixer m4 = m3.m1; m4.go();
Mixer m5 = m2.m1; m5.go();
}
void go() { System.out.print("hi "); }
```

What is the result?

- A. hi  
 B. hi hi  
 C. hi hi hi  
 D. Compilation fails  
 E. hi, followed by an exception  
 F. hi hi, followed by an exception

Answer:

- ✿ ✗F is correct. The `m2` object's `m1` instance variable is never initialized, so when `m5` tries to use it a `NullPointerException` is thrown.
- ✿ ✗ A, B, C, D, and E are incorrect based on the above.

### 26. Given:

```
class Fizz {
int x = 5;
public static void main(String[] args) {
final Fizz f1 = new Fizz();
Fizz f2 = new Fizz();
Fizz f3 = FizzSwitch(f1,f2);
System.out.println((f1 == f3) + " " + (f1.x == f3.x));
}
static Fizz FizzSwitch(Fizz x, Fizz y) {
final Fizz z = x;
z.x = 6;
return z;
} }
```

What is the result?

- A. true true  
 B. false true  
 C. true false  
 D. false false  
 E. Compilation fails  
 F. An exception is thrown at runtime

Answer:

- ✿ ✓A is correct. The references `f1`, `z`, and `f3` all refer to the same instance of `Fizz`. The `final` modifier assures that a reference variable cannot be referred to a different object, but `final` doesn't keep the object's state from changing.
- ✿ ✗ B, C, D, E, and F are incorrect based on the above.

**27. Given:**

```
class Bird {  
    System.out.print("b1 ");}  
public Bird() { System.out.print("b2 ");}  
}  
class Raptor extends Bird {  
    static { System.out.print("r1 ");}  
public Raptor() { System.out.print("r2 ");}  
    System.out.print("r3 ");}  
static { System.out.print("r4 ");}  
}  
class Hawk extends Raptor {  
public static void main(String[] args) {  
System.out.print("pre ");  
new Hawk();  
System.out.println("hawk ");  
}  
}
```

What is the result?

- A. pre b1 b2 r3 r2 hawk
- B. pre b2 b1 r2 r3 hawk
- C. pre b2 b1 r2 r3 hawk r1 r4
- D. r1 r4 pre b1 b2 r3 r2 hawk
- E. r1 r4 pre b2 b1 r2 r3 hawk
- F. pre r1 r4 b1 b2 r3 r2 hawk
- G. pre r1 r4 b2 b1 r2 r3 hawk
- H. The order of output cannot be predicted
- I. Compilation fails

Answer:

- ✿ ✓ D is correct. Static init blocks are executed at class loading time, instance init blocks run right after the call to super() in a constructor. When multiple init blocks of a single type occur in a class, they run in order, from the top down.
- ✿ ✗ A, B, C, E, F, G, H, and I are incorrect based on the above. Note: you'll probably never see this many choices on the real exam!

**28. Given:**

```
3. public class Bridge {  
4.     public enum Suits {  
5.         CLUBS(20), DIAMONDS(20), HEARTS(30), SPADES(30),  
6.         NOTRUMP(40);  
7.         public int getValue(int bid) {  
8.             return ((bid-1)*30)+40; } };  
9.         Suits(int points) { this.points = points; }  
10.        private int points;  
11.        public int getValue(int bid) { return points * bid; }  
12.    }  
13.    public static void main(String[] args) {  
14.        System.out.println(Suits.NOTRUMP.getValue(3));  
15.        System.out.println(Suits.SPADES + " " + Suits.SPADES.points());  
16.        System.out.println(Suits.values());  
17.    }  
18. }
```

Which are true? (Choose all that apply.)

- A. The output could contain 30
- B. The output could contain @bf73fa
- C. The output could contain DIAMONDS
- D. Compilation fails due to an error on line 6
- E. Compilation fails due to an error on line 7
- F. Compilation fails due to an error on line 8
- G. Compilation fails due to an error on line 9
- H. Compilation fails due to an error within lines 12 to 14

Answer:

✿ ✓ **A** and **B** are correct. The code compiles and runs without exception. The `values()` method returns an array reference, not the contents of the enum, so DIAMONDS is never printed.

✿ ✗ **C, D, E, F, G, and H** are incorrect based on the above.

**29. Given:**

```
3. public class Ouch {  
4.     static int ouch = 7;  
5.     public static void main(String[] args) {  
6.         new Ouch().go(ouch);  
7.         System.out.print(" " + ouch);  
8.     }  
9.     void go(int ouch) {  
10.        ouch++;  
11.        for(int ouch = 3; ouch < 6; ouch++)  
12.        ;  
13.        System.out.print(" " + ouch);  
14.    }  
15. }
```

What is the result?

- A. 5 7
- B. 5 8
- C. 8 7
- D. 8 8

E. Compilation fails

F. An exception is thrown at runtime

Answer:

✿ ✓ **E** is correct. The parameter declared on line 9 is valid (although ugly), but the variable name `ouch` cannot be declared again on line 11 in the same scope as the declaration on line 9.

✿ ✗ **A, B, C, D, and F** are incorrect based on the above.

**30. Given:**

```
3. public class Bertha {  
4.     static String s = "";  
5.     public static void main(String[] args) {  
6.         int x = 4; Boolean y = true; short[] sa = {1,2,3};  
7.         doStuff(x, y);  
8.         doStuff(x);  
9.         doStuff(sa, sa);  
10.        System.out.println(s);  
11.    }  
12.    static void doStuff(Object o) { s += "1"; }  
13.    static void doStuff(Object... o) { s += "2"; }  
14.    static void doStuff(Integer... i) { s += "3"; }  
15.    static void doStuff(Long L) { s += "4"; }  
16. }
```

What is the result?

- A. 212
- B. 232
- C. 234
- D. 312
- E. 332
- F. 334

G. Compilation fails

Answer:

✿ ✓ **A** is correct. It's legal to autobox and then widen. The first call to `doStuff()` boxes the `int` to an `Integer` then passes two objects. The second call cannot widen and then box (making the `Long` method unusable), so it boxes the `int` to an `Integer`. As always, a

var-args method will be chosen only if no non-var-arg method is possible. The third call is passing two objects—they are of type 'short array.'

\*✓ **B, C, D, E, F, and G** are incorrect based on the above.

**31. Given:**

```
3. class Dozens {  
4.     int[] dz = {1,2,3,4,5,6,7,8,9,10,11,12};  
5. }  
6. public class Eggs {  
7.     public static void main(String[] args) {  
8.         Dozens [] da = new Dozens[3];  
9.         da[0] = new Dozens();  
10.        Dozens d = new Dozens();  
11.        da[1] = d;  
12.        d = null;  
13.        da[1] = null;  
14.        // do stuff  
15.    }  
16. }
```

Which two are true about the objects created within `main()`, and eligible for garbage collection when line 14 is reached?

- A. Three objects were created
- B. Four objects were created
- C. Five objects were created
- D. Zero objects are eligible for GC
- E. One object is eligible for GC
- F. Two objects are eligible for GC
- G. Three objects are eligible for GC

Answer:

\*✓ **C** and **F** are correct. `da` refers to an object of type "Dozens array," and each Dozens object that is created comes with its own "int array" object. When line 14 is reached, only the second Dozens object (and its "int array" object) are not reachable.

\*✓ **A, B, D, E, and G** are incorrect based on the above.

**32. Given:**

```
3. class Beta {}  
4. class Alpha {}  
5. static Beta b1;  
6. Beta b2;  
7. }  
8. public class Tester {  
9.     public static void main(String[] args) {  
10.         Beta b1 = new Beta(); Beta b2 = new Beta();  
11.         Alpha a1 = new Alpha(); Alpha a2 = new Alpha();  
12.         a1.b1 = b1;  
13.         a1.b2 = b1;  
14.         a2.b2 = b2;  
15.         a1 = null; b1 = null; b2 = null;  
16.         // do stuff  
17.     }  
18. }
```

When line 16 is reached, how many objects will be eligible for garbage collection?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4
- F. 5

Answer:

\*✓ **B** is correct. It should be clear that there is still a reference to the object referred to by `a2`, and that there is still a reference to the object referred to by `a2.b2`. What might be less clear is that you can still access the other Beta object through the static variable

a2.b1—because it's static.

★ ✅ A, C, D, E, and F are incorrect based on the above.

**33. Given:**

```
3. class Box {  
4.     int size;  
5.     Box(int s) { size = s; }  
6. }  
7. public class Laser {  
8.     public static void main(String[] args) {  
9.         Box b1 = new Box(5);  
10.        Box[] ba = go(b1, new Box(6));  
11.        ba[0] = b1;  
12.        for(Box b : ba) System.out.print(b.size + " ");  
13.    }  
14.    static Box[] go(Box b1, Box b2) {  
15.        b1.size = 4;  
16.        Box[] ma = {b2, b1};  
17.        return ma;  
18.    }  
19. }
```

What is the result?

- A. 4 4
- B. 5 4
- C. 6 4
- D. 4 5
- E. 5 5

F. Compilation fails

Answer:

★ ✅ A is correct. Although `main()`'s `b1` is a different reference variable than `go()`'s `b1`, they refer to the same `Box` object.

★ ✅ B, C, D, E, and F are incorrect based on the above.

**34. Given:**

```
3. public class Dark {  
4.     int x = 3;  
5.     public static void main(String[] args) {  
6.         new Dark().go1();  
7.     }  
8.     void go1() {  
9.         int x;  
10.        go2(++x);  
11.    }  
12.    void go2(int y) {  
13.        int x = ++y;  
14.        System.out.println(x);  
15.    }  
16. }
```

What is the result?

- A. 2
- B. 3
- C. 4
- D. 5

E. Compilation fails

F. An exception is thrown at runtime

Answer:

★ ✅ E is correct. In `go1()` the local variable `x` is not initialized.

★ ✅ A, B, C, D, and F are incorrect based on the above.

**35. Given:**

```
class Hexy {  
    public static void main(String[] args) {  
        Integer i = 42;  
        String s = (i<40)?"life":(i>50)?"universe":"everything";  
        System.out.println(s);  
    }  
}
```

What is the result?

- A. null
- B. life
- C. universe
- D. everything
- E. Compilation fails
- F. An exception is thrown at runtime

Answer:

⌚ ✓D is correct. This is a ternary nested in a ternary with a little unboxing thrown in.

Both of the ternary expressions are `false`.

⌚ A, B, C, E, and F are incorrect based on the above.

**36. Given:**

```
1. class Comp2 {  
2.     public static void main(String[] args) {  
3.         float f1 = 2.3f;  
4.         float[][] f2 = {{42.0f}, {1.7f, 2.3f}, {2.6f, 2.7f}};  
5.         float[] f3 = {2.7f};  
6.         Long x = 42L;  
7.         // insert code here  
8.         System.out.println("true");  
9.     }  
10. }
```

F1. if(`f1 == f2`)  
F2. if(`f1 == f2[2][1]`)  
F3. if(`x == f2[0][0]`)  
F4. if(`f1 == f2[1,1]`)  
F5. if(`f3 == f2[2]`)

What is true?

- A. One of them will compile, only one will be `true`
- B. Two of them will compile, only one will be `true`
- C. Two of them will compile, two will be `true`
- D. Three of them will compile, only one will be `true`
- E. Three of them will compile, exactly two will be `true`
- F. Three of them will compile, exactly three will be `true`

Answer:

⌚ ✓D is correct. Fragments F2, F3, and F5 will compile, and only F3 is `true`.

⌚ A, B, C, E, and F are incorrect. F1 is incorrect because you can't compare a primitive to an array. F4 is incorrect syntax to access an element of a two-dimensional array.

**37. Given:**

```
class Fork {  
    public static void main(String[] args) {  
        if(args.length == 1 || args[1].equals("test")) {  
            System.out.println("test case");  
        } else {  
            System.out.println("production " + args[0]);  
        }  
    }  
}
```

}

And the command-line invocation:

```
java Fork live2
```

What is the result?

- A. test case
- B. production live2
- C. test case live2
- D. Compilation fails
- E. An exception is thrown at runtime

Answer:

⌚ ✓E is correct. Because the short circuit (||) is not used, both operands are evaluated. Since args[1] is past the args array bounds, an `ArrayIndexOutOfBoundsException` is thrown.

⌚ A, B, C, and D are incorrect based on the above.

**38.** Given:

```
class Feline {  
    public static void main(String[] args) {  
        Long x = 42L;  
        Long y = 44L;  
        System.out.print(" " + 7 + 2 + " ");  
        System.out.print(foo() + x + 5 + " ");  
        System.out.println(x + y + foo());  
    }  
    static String foo() { return "foo"; }  
}
```

What is the result?

- A. 9 foo47 86foo
- B. 9 foo47 4244foo
- C. 9 foo425 86foo
- D. 9 foo425 4244foo
- E. 72 foo47 86foo
- F. 72 foo47 4244foo
- G. 72 foo425 86foo
- H. 72 foo425 4244foo

I. Compilation fails

Answer:

⌚ ✓G is correct. Concatenation runs from left to right, and if either operand is a `String`, the operands are concatenated. If both operands are numbers they are added together.  
Unboxing works in conjunction with concatenation.

⌚ A, B, C, D, E, F, H, and I are incorrect based on the above.

**39.** Place the fragments into the code to produce the output 33. Note, you must use each fragment exactly once.

CODE:

```
class Incr {  
    public static void main(String[] args) {  
        Integer x = 7;  
        int y = 2;  
        x ____;  
        ____ ____;  
        ____ ____;  
        System.out.println(x);  
    }  
}
```

FRAGMENTS:

```
y y y y  
y x x  
-= *= *= *=
```

Answer:

```

class Incr {
    public static void main(String[] args) {
        Integer x = 7;
        int y = 2;
        x *= x;
        y *= y;
        y *= y;
        x -= y;
        System.out.println(x);
    }
}

```

Yeah, we know it's kind of puzzle-y, but you might encounter something like it on the real exam.

**40. Given:**

```

3. public class Twisty {
4.     { index = 1; }
5.     int index;
6.     public static void main(String[] args) {
7.         new Twisty().go();
8.     }
9.     void go() {
10.         int [][] dd = {{9,8,7}, {6,5,4}, {3,2,1,0}};
11.         System.out.println(dd[index++][index++]);
12.     }
13. }

```

What is the result? (Choose all that apply.)

- A. 1
- B. 2
- C. 4
- D. 6
- E. 8
- F. Compilation fails
- G. An exception is thrown at runtime

Answer:

⌚ ✓C is correct. Multidimensional arrays' dimensions can be inconsistent, the code uses an initialization block, and the increment operators are both post-increment operators.

⌚ A, B, D, E, F, and G are incorrect based on the above.

**41. Given:**

```

3. public class McGee {
4.     public static void main(String[] args) {
5.         Days d1 = Days.TH;
6.         Days d2 = Days.M;
7.         for(Days d: Days.values()) {
8.             if(d.equals(Days.F)) break;
9.             d2 = d;
10.        }
11.        System.out.println((d1 == d2)?"same old" : "newly new");
12.    }
13.    enum Days {M, T, W, TH, F, SA, SU};
14. }

```

What is the result?

- A. same old
- B. newly new
- C. Compilation fails due to multiple errors
- D. Compilation fails due only to an error on line 7
- E. Compilation fails due only to an error on line 8
- F. Compilation fails due only to an error on line 11
- G. Compilation fails due only to an error on line 13

Answer:

⌚ ✓A is correct. All of this syntax is correct. The for-each iterates through the enum using the `values()` method to return an array. Enums can be compared using either `equals()`

or ==. Enums can be used in a ternary operator's Boolean test.

Ⓐ Ⓑ, Ⓒ, Ⓓ, Ⓔ, and Ⓕ are incorrect based on the above.

**42. Given:**

```
4. public class SpecialOps {  
5. public static void main(String[] args) {  
6. String s = "";  
7. Boolean b1 = true;  
8. Boolean b2 = false;  
9. if((b2 == false) | (21%5) > 2) s += "x";  
10. if(b1 || (b2 == true)) s += "y";  
11. if(b2 == true) s += "z";  
12. System.out.println(s);  
13. }  
14. }
```

Which are true? (Choose all that apply.)

- A. Compilation fails
- B. x will be included in the output
- C. y will be included in the output
- D. z will be included in the output
- E. An exception is thrown at runtime

Answer:

⌚ ✓C is correct. First of all, boxing takes care of the Boolean. Line 9 uses the modulus operator, which returns the remainder of the division, which in this case is 1. Also, line 9 sets b2 to false, and it doesn't test b2's value. Line 10 sets b2 to true, and it doesn't test its value; however, the short circuit operator keeps the expression b2 = true from being executed.

Ⓐ Ⓑ, Ⓒ, Ⓓ, and Ⓔ are incorrect based on the above.

**43. Given:**

```
3. public class Spock {  
4. public static void main(String[] args) {  
5. int mask = 0;  
6. int count = 0;  
7. if( ((5<7) || (++count < 10)) | mask++ < 10 ) mask = mask + 1;  
8. if( (6 > 8) ^ false) mask = mask + 10;  
9. if( !(mask > 1) && ++count > 1) mask = mask + 100;  
10. System.out.println(mask + " " + count);  
11. }  
12. }
```

Which two answers are true about the value of mask and the value of count at line 10?

(Choose two.)

- A. mask is 0
- B. mask is 1
- C. mask is 2
- D. mask is 10
- E. mask is greater than 10
- F. count is 0
- G. count is greater than 0

Answer:

⌚ ✓C and F are correct. At line 7 the || keeps count from being incremented, but the | allows mask to be incremented. At line 8 the ^ returns true only if exactly one operand is true. At line 9 mask is 2 and the && keeps count from being incremented.

Ⓐ Ⓑ, Ⓒ, Ⓓ, Ⓔ, and Ⓕ are incorrect based on the above.

**44. Given:**

```
3. interface Vessel { }  
4. interface Toy { }  
5. class Boat implements Vessel { }  
6. class Speedboat extends Boat implements Toy { }  
7. public class Tree { }
```

```

8. public static void main(String[] args) {
9.     String s = "0";
10.    Boat b = new Boat();
11.    Boat b2 = new Speedboat();
12.    Speedboat s2 = new Speedboat();
13.    if((b instanceof Vessel) && (b2 instanceof Toy)) s += "1";
14.    if((s2 instanceof Vessel) && (s2 instanceof Toy)) s += "2";
15.    System.out.println(s);
16. }
17. }
```

What is the result?

- A. 0
- B. 01
- C. 02
- D. 012
- E. Compilation fails
- F. An exception is thrown at runtime

Answer:

④ ✓D is correct. First, remember that `instanceof` can look up through multiple levels of an inheritance tree. Also remember that `instanceof` is commonly used before attempting a downcast, so in this case, after line 15, it would be possible to say `Speedboat s3 = (Speedboat)b2;`.

④ A, B, C, E, and F are incorrect based on the above.

#### 45. Given two files:

```

1. class One {
2.     public static void main(String[] args) {
3.         int assert = 0;
4.     }
5. }
1. class Two {
2.     public static void main(String[] args) {
3.         assert(false);
4.     }
5. }
```

And the four command-line invocations:

```

javac -source 1.3 One.java
javac -source 1.4 One.java
javac -source 1.3 Two.java
javac -source 1.4 Two.java
```

What is the result? (Choose all that apply.)

- A. Only one compilation will succeed
- B. Exactly two compilations will succeed
- C. Exactly three compilations will succeed
- D. All four compilations will succeed
- E. No compiler warnings will be produced
- F. At least one compiler warning will be produced

Answer:

④ ✓B and F are correct. Class One will compile (and issue a warning) using the 1.3 flag, and class Two will compile using the 1.4 flag.

④ A, C, D, and E are incorrect based on the above.

#### 46. Given:

```

class Plane {
    static String s = "-";
    public static void main(String[] args) {
        new Plane().s1();
        System.out.println(s);
    }
    void s1() {
```

```

try { s2(); }
catch (Exception e) { s += "c"; }
}
void s2() throws Exception {
s3(); s += "2";
s3(); s += "2b";
}
void s3() throws Exception {
throw new Exception();
} }

```

What is the result?

- A. -
- B. -c
- C. -c2
- D. -2c
- E. -c22b
- F. -2c2b
- G. -2c2bc

H. Compilation fails

Answer:

Ⓐ ✓B is correct. Once `s3()` throws the exception to `s2()`, `s2()` throws it to `s1()`, and no more of `s2()`'s code will be executed.

Ⓑ A, C, D, E, F, G, and H are incorrect based on the above.

**47.** Given:

```
try { int x = Integer.parseInt("two"); }
```

Which could be used to create an appropriate `catch` block? (Choose all that apply.)

- A. ClassCastException
- B. IllegalStateException
- C. NumberFormatException
- D. IllegalArgumentException
- E. ExceptionInInitializerError
- F. ArrayIndexOutOfBoundsException

Answer:

Ⓐ ✓C and D are correct. `Integer.parseInt` can throw a `NumberFormatException`, and `IllegalArgumentException` is its superclass (i.e., a broader exception).

Ⓑ A, B, E, and F are not in `NumberFormatException`'s class hierarchy.

**48.** Which are true? (Choose all that apply.)

- A. It is appropriate to use assertions to validate arguments to methods marked `public`
- B. It is appropriate to catch and handle assertion errors
- C. It is NOT appropriate to use assertions to validate command-line arguments
- D. It is appropriate to use assertions to generate alerts when you reach code that should not be reachable
- E. It is NOT appropriate for assertions to change a program's state

Answer:

Ⓐ ✓C, D, and E are correct statements.

Ⓑ A is incorrect. It is acceptable to use assertions to test the arguments of `private` methods.

Ⓑ B is incorrect. While assertion errors can be caught, Sun discourages you from doing so.

**49.** Given:

```

1. class Loopy {
2. public static void main(String[] args) {
3. int[] x = {7,6,5,4,3,2,1};
4. // insert code here
5. System.out.print(y + " ");
6. }
7. } }

```

Which, inserted independently at line 4, compiles? (Choose all that apply.)

- A. `for(int y : x) {`
- B. `for(x : int y) {`
- C. `int y = 0; for(y : x) {`
- D. `for(int y=0, z=0; z<x.length; z++) { y = x[z];`
- E. `for(int y=0, int z=0; z<x.length; z++) { y = x[z];`
- F. `int y = 0; for(int z=0; z<x.length; z++) { y = x[z];`

Answer:

Ⓐ ✓A, D, and F are correct. A is an example of the enhanced `for` loop. D and F are examples of the basic `for` loop.

Ⓑ Ⓣ B is incorrect because its operands are swapped. C is incorrect because the enhanced `for` must declare its first operand. E is incorrect syntax to declare two variables in a `for` statement.

**50.** Given:

```
class Emu {
    static String s = "-";
    public static void main(String[] args) {
        try {
            throw new Exception();
        } catch (Exception e) {
            try {
                try { throw new Exception(); }
                catch (Exception ex) { s += "ic "; }
            throw new Exception();
            } catch (Exception x) { s += "mc "; }
        finally { s += "mf "; }
    } finally { s += "of "; }
        System.out.println(s);
    }
}
```

What is the result?

- A. -ic of
- B. -mf of
- C. -mc mf
- D. -ic mf of
- E. -ic mc mf of
- F. -ic mc of mf
- G. Compilation fails

Answer:

Ⓐ ✓E is correct. There is no problem nesting `try / catch` blocks. As is normal, when an exception is thrown, the code in the `catch` block runs, then the code in the `finally` block runs.

Ⓑ Ⓣ A, B, C, D, and F are incorrect based on the above.

**51.** Given:

```
3. class SubException extends Exception { }
4. class SubSubException extends SubException { }
5.
6. public class CC { void doStuff() throws SubException { } }
7.
8. class CC2 extends CC { void doStuff() throws SubSubException { } }
9.
10. class CC3 extends CC { void doStuff() throws Exception { } }
11.
12. class CC4 extends CC { void doStuff(int x) throws Exception { } }
13.
14. class CC5 extends CC { void doStuff() { } }
```

What is the result? (Choose all that apply.)

- A. Compilation succeeds
- B. Compilation fails due to an error on line 8

- C. Compilation fails due to an error on line 10
- D. Compilation fails due to an error on line 12
- E. Compilation fails due to an error on line 14

Answer:

Ⓐ ✓C is correct. An overriding method cannot throw a broader exception than the method it's overriding. Class CC4's method is an overload, not an override.

Ⓑ Ⓣ A, B, D, and E are incorrect based on the above.

### 52. Given:

```

3. public class Ebb {
4. static int x = 7;
5. public static void main(String[] args) {
6. String s = "";
7. for(int y = 0; y < 3; y++) {
8. x++;
9. switch(x) {
10. case 8: s += "8 ";
11. case 9: s += "9 ";
12. case 10: { s+= "10 "; break; }
13. default: s += "d ";
14. case 13: s+= "13 ";
15. }
16. }
17. System.out.println(s);
18. }
19. static { x++; }
20. }
```

What is the result?

- A. 9 10 d
- B. 8 9 10 d
- C. 9 10 10 d
- D. 9 10 10 d 13
- E. 8 9 10 10 d 13
- F. 8 9 10 9 10 10 d 13

G. Compilation fails

Answer:

Ⓐ ✓D is correct. Did you catch the static initializer block? Remember that switches work on "fall-thru" logic, and that fall-thru logic also applies to the default case, which is used when no other case matches.

Ⓑ Ⓣ A, B, C, E, F, and G are incorrect based on the above.

### 53. Given:

```

3. class Infinity { }
4. public class Beyond extends Infinity {
5. static Integer i;
6. public static void main(String[] args) {
7. int sw = (int)(Math.random() * 3);
8. switch(sw) {
9. case 0: { for(int x = 10; x > 5; x++)
10. if(x > 10000000) x = 10;
11. break; }
12. case 1: { int y = 7 * i; break; }
13. case 2: { Infinity inf = new Beyond();
14. Beyond b = (Beyond)inf; }
15. }
16. }
17. }
```

And given that line 7 will assign the value 0, 1, or 2 to `sw`, which are true? (Choose all that apply.)

- A. Compilation fails
- B. A ClassCastException might be thrown
- C. A StackOverflowError might be thrown
- D. A NullPointerException might be thrown

- E. An IllegalStateException might be thrown
- F. The program might hang without ever completing
- G. The program will always complete without exception

Answer:

Ⓐ ✓D and F are correct. Because `i` was not initialized, case 1 will throw an NPE. Case 0 will initiate an endless loop, not a stack overflow. Case 2's downcast will *not* cause an exception.

Ⓑ Ⓣ A, B, C, E, and G are incorrect based on the above.

#### 54. Given:

```

3. public class Circles {
4. public static void main(String[] args) {
5. int[] ia = {1,3,5,7,9};
6. for(int x : ia) {
7. for(int j = 0; j < 3; j++) {
8. if(x > 4 && x < 8) continue;
9. System.out.print(" " + x);
10. if(j == 1) break;
11. continue;
12. }
13. continue;
14. }
15. }
16. }

```

What is the result?

- A. 1 3 9
- B. 5 5 7 7
- C. 1 3 3 9 9
- D. 1 1 3 3 9 9
- E. 1 1 1 3 3 3 9 9 9

F. Compilation fails

Answer:

Ⓐ ✓D is correct. The basic rule for unlabeled continue statements is that the current iteration stops early and execution jumps to the next iteration. The last two continue statements are redundant!

Ⓑ Ⓣ A, B, C, E, and F are incorrect based on the above.

#### 55. Given:

```

3. public class OverAndOver {
4. static String s = "";
5. public static void main(String[] args) {
6. try {
7. s += "1";
8. throw new Exception();
9. } catch (Exception e) { s += "2";
10. } finally { s += "3"; doStuff(); s += "4";
11. }
12. System.out.println(s);
13. }
14. static void doStuff() { int x = 0; int y = 7/x; }
15. }

```

What is the result?

- A. 12
- B. 13
- C. 123
- D. 1234

E. Compilation fails

F. 123 followed by an exception

G. 1234 followed by an exception

H. An exception is thrown with no other output

Answer:

- ⌚ ✓H is correct. It's true that the value of `String s` is 123 at the time that the divide-byzero exception is thrown, but `finally()` is *not* guaranteed to complete, and in this case `finally()` never completes, so the `System.out.println` (S.O.P.) never executes.  
 ☺ A, B, C, D, E, F, and G are incorrect based on the above.

### 56. Given:

```

3. public class Wind {
4. public static void main(String[] args) {
5.     foreach:
6.         for(int j=0; j<5; j++) {
7.             for(int k=0; k< 3; k++) {
8.                 System.out.print(" " + j);
9.                 if(j==3 && k==1) break foreach;
10.                if(j==0 || j==2) break;
11.            }
12.        }
13.    }
14. }
```

What is the result?

- A. 0 1 2 3
- B. 1 1 1 3 3
- C. 0 1 1 1 2 3 3
- D. 1 1 1 3 3 4 4 4
- E. 0 1 1 1 2 3 3 4 4 4
- F. Compilation fails

Answer:

- ⌚ ✓C is correct. A `break` breaks out of the current innermost loop and continues. A labeled `break` breaks out of and terminates the current loops.

☺ A, B, D, E, and F are incorrect based on the above.

### 57. Given:

```

3. public class Gotcha {
4. public static void main(String[] args) {
5.     // insert code here
6.
7. }
8. void go() {
9.     go();
10. }
11. }
```

And given the following three code fragments:

- I. `new Gotcha().go();`
- II. `try { new Gotcha().go(); }  
catch (Error e) { System.out.println("ouch"); }`
- III. `try { new Gotcha().go(); }  
catch (Exception e) { System.out.println("ouch"); }`

When fragments I - III are added, independently, at line 5, which are true? (Choose all that apply.)

- A. Some will not compile
- B. They will all compile
- C. All will complete normally
- D. None will complete normally
- E. Only one will complete normally
- F. Two of them will complete normally

Answer:

- ⌚ ✓B and E are correct. First off, `go()` is a badly designed recursive method, guaranteed to cause a `StackOverflowError`. Since `Exception` is not a superclass of `Error`, catching an `Exception` will not help handle an `Error`, so fragment III will not complete normally.

Only fragment II will catch the `Error`.

☺ \_\_\_\_\_ A, C, D, and F are incorrect based on the above.

**58.** Given:

```
3. public class Clumsy {  
4. public static void main(String[] args) {  
5. int j = 7;  
6. assert(++j > 7);  
7. assert(++j > 8): "hi";  
8. assert(j > 10): j=12;  
9. assert(j==12): doStuff();  
10. assert(j==12): new Clumsy();  
11. }  
12. static void doStuff() { }  
13. }
```

Which are true? (Choose all that apply.)

- A. Compilation succeeds
- B. Compilation fails due to an error on line 6
- C. Compilation fails due to an error on line 7
- D. Compilation fails due to an error on line 8
- E. Compilation fails due to an error on line 9
- F. Compilation fails due to an error on line 10

Answer:

⌚ ✓E is correct. When an `assert` statement has two expressions, the second expression must return a value. The only two-expression `assert` statement that doesn't return a value is on line 9.

⌚ A, B, C, D, and F are incorrect based on the above.

**59.** Given:

```
1. public class Frisbee {  
2. // insert code here  
3. int x = 0;  
4. System.out.println(7/x);  
5. }  
6. }
```

And given the following four code fragments:

- I. `public static void main(String[] args) { }`
- II. `public static void main(String[] args) throws Exception { }`
- III. `public static void main(String[] args) throws IOException { }`
- IV. `public static void main(String[] args) throws RuntimeException { }`

If the four fragments are inserted independently at line 4, which are true? (Choose all that apply.)

- A. All four will compile and execute without exception
- B. All four will compile and execute and throw an exception
- C. Some, but not all, will compile and execute without exception
- D. Some, but not all, will compile and execute and throw an exception
- E. When considering fragments II, III, and IV, of those that will compile, adding a try/catch block around line 6 will cause compilation to fail

Answer:

⌚ ✓D is correct. This is kind of sneaky, but remember that we're trying to toughen you up for the real exam. If you're going to throw an `IOException`, you have to import the `java.io` package or declare the exception with a fully qualified name.

⌚ E is incorrect because it's okay to both handle and declare an exception. A, B, and C are incorrect based on the above.

**60.** Given:

```
2. class MyException extends Exception { }  
3. class Tire {  
4. void doStuff() { }  
5. }  
6. public class Retread extends Tire {  
7. public static void main(String[] args) {  
8. new Retread().doStuff();  
9. }  
10. // insert code here
```

```
11. System.out.println(7/0);  
12. }  
13. }
```

And given the following four code fragments:

```
I. void doStuff() {  
II. void doStuff() throws MyException {  
III. void doStuff() throws RuntimeException {  
IV. void doStuff() throws ArithmeticException {
```

When fragments I - IV are added, independently, at line 10, which are true? (Choose all that apply.)

- A. None will compile
- B. They will all compile
- C. Some, but not all, will compile
- D. All of those that compile will throw an exception at runtime
- E. None of those that compile will throw an exception at runtime
- F. Only some of those that compile will throw an exception at runtime

Answer:

⌚ ✓C and D are correct. An overriding method cannot throw checked exceptions that are broader than those thrown by the overridden method. However an overriding method *can* throw RuntimeExceptions not thrown by the overridden method.

⌚ A, B, E, and F are incorrect based on the above.

## 61. Given:

```
import java.util.regex.*;  
class Regex2 {  
public static void main(String[] args) {  
Pattern p = Pattern.compile(args[0]);  
Matcher m = p.matcher(args[1]);  
boolean b = false;  
while(b = m.find()) {  
System.out.print(m.start() + m.group());  
}  
}  
}
```

And the command line:

```
java Regex2 "\d*" ab34ef
```

What is the result?

- A. 234
- B. 334
- C. 2334
- D. 0123456
- E. 01234456
- F. 12334567

G. Compilation fails

Answer:

⌚ ✓E is correct. The \d is looking for digits. The \* is a quantifier that looks for 0 to many occurrences of the pattern that precedes it. Because we specified \*, the group() method returns empty Strings until consecutive digits are found, so the only time group() returns a value is when it returns 34 when the matcher finds digits starting in position 2. The start() method returns the starting position of the previous match because, again, we said find 0 to many occurrences.

⌚ A, B, C, D, F, and G are incorrect based on the above.

## 62. Given:

```
import java.io.*;  
class Player {  
Player() { System.out.print("p"); }  
}  
class CardPlayer extends Player implements Serializable {  
CardPlayer() { System.out.print("c"); }  
}
```

```

public static void main(String[] args) {
CardPlayer c1 = new CardPlayer();
try {
FileOutputStream fos = new FileOutputStream("play.txt");
ObjectOutputStream os = new ObjectOutputStream(fos);
os.writeObject(c1);
os.close();
FileInputStream fis = new FileInputStream("play.txt");
ObjectInputStream is = new ObjectInputStream(fis);
CardPlayer c2 = (CardPlayer) is.readObject();
is.close();
} catch (Exception x) { }
}
}

```

What is the result?

- A. pc
- B. pcc
- C. pcp
- D. pcpc
- E. Compilation fails
- F. An exception is thrown at runtime

Answer:

Ⓐ ✓C is correct. It's okay for a class to implement Serializable even if its superclass doesn't. However, when you deserialize such an object, the non-serializable superclass must run its constructor. Remember, constructors don't run on serialized classes that implement Serializable.

∅ A, B, D, E, and F are incorrect based on the above.

**63.** Given:

```

class TKO {
public static void main(String[] args) {
String s = "-";
Integer x = 343;
long L343 = 343L;
if(x.equals(L343)) s += ".e1 ";
if(x.equals(343)) s += ".e2 ";
Short s1 = (short)((new Short((short)343)) / (new Short((short)49)));
if(s1 == 7) s += "=s ";
if(s1 < new Integer(7+1)) s += "fly ";
System.out.println(s);
}
}

```

Which of the following will be included in the output String s? (Choose all that apply.)

- A. .e1
- B. .e2
- C. =s
- D. fly
- E. None of the above
- F. Compilation fails
- G. An exception is thrown at runtime

Answer:

Ⓐ ✓B, C, and D are correct. Remember, that the `equals()` method for the integer wrappers will only return `true` if the two primitive types and the two values are equal. With C, it's okay to unbox and use `==`. For D, it's okay to create a wrapper object with an expression, and unbox it for comparison with a primitive.

∅ A, E, F, and G are incorrect based on the above. (Remember that A is using the `equals()` method to try to compare two different types.)

**64.** Given:

```

import java.io.*;
class Keyboard { }
public class Computer implements Serializable {

```

```

private Keyboard k = new Keyboard();
public static void main(String[] args) {
Computer c = new Computer();
c.storeIt(c);
}
void storeIt(Computer c) {
try {
ObjectOutputStream os = new ObjectOutputStream(
new FileOutputStream("myFile"));
os.writeObject(c);
os.close();
System.out.println("done");
} catch (Exception x) {System.out.println("exc"); }
}
}

```

What is the result? (Choose all that apply.)

- A. exc
- B. done
- C. Compilation fails
- D. Exactly one object is serialized
- E. Exactly two objects are serialized

Answer:

Ⓐ ✓A is correct. An instance of type Computer Has-a Keyboard. Because Keyboard doesn't implement Serializable, any attempt to serialize an instance of Computer will cause an exception to be thrown.

Ⓑ, Ⓑ, Ⓒ, and Ⓓ are incorrect based on the above. If Keyboard did implement Serializable then two objects would have been serialized.

**65.** Using the fewest fragments possible (and filling the fewest slots possible), complete the code below so that the class builds a directory named "dir3" and creates a file named "file3" inside "dir3". Note you can use each fragment either zero or one times.

Code:

```

import java.io._____
class Maker {
public static void main(String[] args) {
_____
_____
_____
_____
_____
_____
_____
_____
}}
```

Fragments:

```

File; FileDescriptor; FileWriter; Directory;
try { .createNewDir(); File dir File
{ } (Exception x) ("dir3"); file
file .createNewFile(); = new File = new File
dir (dir, "file3"); (dir, file); .createFile();
} catch ("dir3", "file3"); .mkdir(); File file
```

Answer:

```

import java.io.File;
class Maker {
public static void main(String[] args) {
try {
File dir = new File("dir3");
dir.mkdir();
File file = new File(dir, "file3");
file.createNewFile();
} catch (Exception x) { }
}}
```

Notes: The new File statements don't make actual files or directories, just objects. You need the mkdir() and createNewFile() methods to actually create the directory and the file.

**66.** Given that 1119280000000L is roughly the number of milliseconds from Jan. 1, 1970, to June 20, 2005, and that you want to print that date in German, using the `LONG` style such that "June" will be displayed as "Juni", complete the code using the fragments below. Note: you can use each fragment either zero or one times, and you might not need to fill all of the slots.

Code:

```
import java._____
import java._____
class DateTwo {
    public static void main(String[] args) {
        Date d = new Date(1119280000000L);
        DateFormat df = _____
            , _____ );
        System.out.println(_____
    }
}
```

Fragments:

```
io.*; new DateFormat( Locale.LONG
nio.*; DateFormat.getInstance( Locale.GERMANY
util.*; DateFormat.getDateInstance( DateFormat.LONG
text.*; util.regex; DateFormat.GERMANY
date.*; df.format(d)); d.format(df));
```

Answer:

```
import java.util.*;
import java.text.*;
class DateTwo {
    public static void main(String[] args) {
        Date d = new Date(1119280000000L);
        DateFormat df = DateFormat.getDateInstance(
            DateFormat.LONG, Locale.GERMANY);
        System.out.println(df.format(d));
    }
}
```

Notes: Remember that you must build `DateFormat` objects using static methods. Also remember that you must specify a `Locale` for a `DateFormat` object at the time of instantiation. The `getInstance()` method does not take a `Locale`.

**67. Given:**

```
import java.io.*;
class Directories {
    static String [] dirs = {"dir1", "dir2"};
    public static void main(String [] args) {
        for (String d : dirs) {
            // insert code 1 here
            File file = new File(path, args[0]);
            // insert code 2 here
        }
    }
}
```

and that the invocation

```
java Directories file2.txt
```

is issued from a directory that has two subdirectories, "dir1" and "dir2", and that "dir1" has a file "file1.txt" and "dir2" has a file "file2.txt", and the output is "false true", which set(s) of code fragments must be inserted? (Choose all that apply.)

- A. String path = d;  
System.out.print(file.exists() + " ");
- B. String path = d;  
System.out.print(file.isFile() + " ");
- C. String path = File.separator + d;  
System.out.print(file.exists() + " ");
- D. String path = File.separator + d;  
System.out.print(file.isFile() + " ");

Answer:

Ⓐ ✓A and B are correct. Because you are invoking the program from the directory whose

direct subdirectories are to be searched, you don't start your path with a `File.separator` character. The `exists()` method tests for either files or directories; the `isFile()` method tests only for files. Since we're looking for a file, both methods work.

④ C and D are incorrect based on the above.

### 68. Given:

```
import java.io.*;
public class TestSer {
public static void main(String[] args) {
SpecialSerial s = new SpecialSerial();
try {
ObjectOutputStream os = new ObjectOutputStream(
new FileOutputStream("myFile"));
os.writeObject(s); os.close();
System.out.print(s.z + " ");
ObjectInputStream is = new ObjectInputStream(
new FileInputStream("myFile"));
SpecialSerial s2 = (SpecialSerial)is.readObject();
is.close();
System.out.println(s2.y + " " + s2.z);
} catch (Exception x) {System.out.println("exc"); }
}
}
class SpecialSerial implements Serializable {
transient int y = 7;
static int z = 9;
}
```

Which are true? (Choose all that apply.)

- A. Compilation fails
- B. The output is 10 0 9
- C. The output is 10 0 10
- D. The output is 10 7 9
- E. The output is 10 7 10
- F. In order to alter the standard deserialization process you would implement the `readObject()` method in `SpecialSerial`
- G. In order to alter the standard deserialization process you would implement the `defaultReadObject()` method in `SpecialSerial`

Answer:

① ✓C and F are correct. C is correct because `static` and `transient` variables are not serialized when an object is serialized. F is a valid statement.

④ A, B, D, and E are incorrect based on the above. G is incorrect because you don't implement the `defaultReadObject()` method, you call it from within the `readObject()` method, along with any custom read operations your class needs.

### 69. Given:

```
3. public class Theory {
4. public static void main(String[] args) {
5. String s1 = "abc";
6. String s2 = s1;
7. s1 += "d";
8. System.out.println(s1 + " " + s2 + " " + (s1==s2));
9.
10. StringBuffer sb1 = new StringBuffer("abc");
11. StringBuffer sb2 = sb1;
12. sb1.append("d");
13. System.out.println(sb1 + " " + sb2 + " " + (sb1==sb2));
14. }
15. }
```

Which are true? (Choose all that apply.)

- A. Compilation fails
- B. The first line of output is abc abc true
- C. The first line of output is abc abc false

- D. The first line of output is abcd abc false  
 E. The second line of output is abcd abc false  
 F. The second line of output is abcd abcd true  
 G. The second line of output is abcd abcd false

Answer:

⌚ ✓D and F are correct. While String objects are immutable, references to Strings are mutable.

The code `s1 += "d";` creates a new String object. StringBuffer objects are mutable, so the `append()` is changing the single StringBuffer object to which both StringBuffer references refer.

⌚⌚ A, B, C, E, and G are incorrect based on the above.

### 70. Given:

```
3. import java.io.*;
4. public class ReadingFor {
5. public static void main(String[] args) {
6. String s;
7. try {
8. FileReader fr = new FileReader("myfile.txt");
9. BufferedReader br = new BufferedReader(fr);
10. while((s = br.readLine()) != null)
11. System.out.println(s);
12. br.flush();
13. } catch (IOException e) { System.out.println("io error"); }
14. }
15. }
```

And given that myfile.txt contains the following two lines of data:

ab  
cd

What is the result?

- A. ab  
 B. abcd  
 C. ab  
 cd  
 D. a  
 b  
 c  
 d

E. Compilation fails

Answer:

⌚ ✓E is correct. You need to call `flush()` only when you're writing data. Readers don't have `flush()` methods. If not for the call to `flush()`, answer C would be correct.

⌚⌚ A, B, C, and D are incorrect based on the above.

### 71. Given:

```
3. import java.io.*;
4. public class Talker {
5. public static void main(String[] args) {
6. Console c = System.console();
7. String u = c.readLine("%s", "username: ");
8. System.out.println("hello " + u);
9. String pw;
10. if(c != null && (pw = c.readPassword("%s", "password: ")) != null)
11. // check for valid password
12. }
13. }
```

If line 6 creates a valid Console object, and if the user enters *fred* as a username and *1234* as a password, what is the result? (Choose all that apply.)

- A. username:  
 password:  
 B. username: fred  
 password:  
 C. username: fred

password: 1234

- D. Compilation fails
- E. An exception is thrown at runtime

Answer:

Ⓐ ✓D is correct. The `readPassword()` method returns a `char[]`. If a `char[]` were used, answer B would be correct.

Ⓑ A, B, C, and E are incorrect based on the above.

**72. Given:**

```
3. import java.io.*;  
4. class Vehicle {}  
5. class Wheels {}  
6. class Car extends Vehicle implements Serializable {}  
7. class Ford extends Car {}  
8. class Dodge extends Car {}  
9. Wheels w = new Wheels();  
10. }
```

Instances of which class(es) can be serialized? (Choose all that apply.)

- A. Car
- B. Ford
- C. Dodge
- D. Wheels
- E. Vehicle

Answer:

Ⓐ ✓A and B are correct. Dodge instances cannot be serialized because they "have" an instance of Wheels, which is not serializable. Vehicle instances cannot be serialized even though the subclass Car can be.

Ⓑ C, D, and E are incorrect based on the above.

**73. Given:**

```
3. import java.text.*;  
4. public class Slice {  
5. public static void main(String[] args) {  
6. String s = "987.123456";  
7. double d = 987.123456d;  
8. NumberFormat nf = NumberFormat.getInstance();  
9. nf.setMaximumFractionDigits(5);  
10. System.out.println(nf.format(d) + " ");  
11. try {  
12. System.out.println(nf.parse(s));  
13. } catch (Exception e) { System.out.println("got exc"); }  
14. }  
15. }
```

Which are true? (Choose all that apply.)

- A. The output is 987.12345 987.12345
- B. The output is 987.12346 987.12345
- C. The output is 987.12345 987.123456
- D. The output is 987.12346 987.123456
- E. The try/catch block is unnecessary
- F. The code compiles and runs without exception
- G. The invocation of `parse()` must be placed within a try/catch block

Answer:

Ⓐ ✓D, F, and G are correct. The `setMaximumFractionDigits()` applies to the formatting but not the parsing. The try/catch block is placed appropriately. This one might scare you into thinking that you'll need to memorize more than you really do. If you can remember that you're formatting the number and parsing the string you should be fine for the exam.

Ⓑ A, B, C, and E are incorrect based on the above.

**74. Given:**

```
3. import java.util.regex.*;
```

```

4. public class Archie {
5.     public static void main(String[] args) {
6.         Pattern p = Pattern.compile(args[0]);
7.         Matcher m = p.matcher(args[1]);
8.         int count = 0;
9.         while(m.find())
10.             count++;
11.         System.out.print(count);
12.     }
13. }

```

And given the command line invocation:

```
java Archie "\d+" ab2c4d67
```

What is the result?

- A. 0
- B. 3
- C. 4
- D. 8
- E. 9

F. Compilation fails

Answer:

Ⓐ ✓B is correct. The "\d" metacharacter looks for digits, and the + quantifier says look for "one or more" occurrences. The `find()` method will find three sets of one or more consecutive digits: 2, 4, and 67.

Ⓑ A, C, D, E, and F are incorrect based on the above.

**75.** Given:

```

3. import java.util.*;
4. public class Looking {
5.     public static void main(String[] args) {
6.         String input = "1 2 a 3 45 6";
7.         Scanner sc = new Scanner(input);
8.         int x = 0;
9.         do {
10.             x = sc.nextInt();
11.             System.out.print(x + " ");
12.         } while (x!=0);
13.     }
14. }

```

What is the result?

- A. 1 2
- B. 1 2 3 45 6
- C. 1 2 3 4 5 6
- D. 1 2 a 3 45 6

E. Compilation fails

F. 1 2 followed by an exception

Answer:

Ⓐ ✓F is correct. The `nextXxx()` methods are typically invoked after a call to a `hasNextXxx()`, which determines whether the next token is of the correct type.

Ⓑ A, B, C, D, and E are incorrect based on the above.

**76.** Given:

```

public static void main(String[] args) {
// INSERT DECLARATION HERE
for (int i = 0; i <= 10; i++) {
List<Integer> row = new ArrayList<Integer>();
for (int j = 0; j <= 10; j++)
row.add(i * j);
table.add(row);
}
for (List<Integer> row : table)
System.out.println(row);
}

```

}

Which statements could be inserted at // INSERT DECLARATION HERE to allow this code to compile and run? (Choose all that apply.)

- A. List<List<Integer>> table = new List<List<Integer>>();
- B. List<List<Integer>> table = new ArrayList<List<Integer>>();
- C. List<List<Integer>> table = new ArrayList<ArrayList<Integer>>();
- D. List<List, Integer> table = new List<List, Integer>();
- E. List<List, Integer> table = new ArrayList<List, Integer>();
- F. List<List, Integer> table = new ArrayList<ArrayList, Integer>();
- G. None of the above

Answer:

⌚ ✓B is correct.

⌚ A is incorrect because List is an interface, so you can't say new List() regardless of any generic types. D, E, and F are incorrect because List only takes one type parameter (a Map would take two, not a List). C is tempting, but incorrect. The type argument <List<Integer>> must be the same for both sides of the assignment, even though the constructor new ArrayList() on the right side is a subtype of the declared type List on the left.

**77.** Which statements are true about comparing two instances of the same class, given that the equals() and hashCode() methods have been properly overridden? (Choose all that apply.)

- A. If the equals() method returns true, the hashCode() comparison == might return false
- B. If the equals() method returns false, the hashCode() comparison == might return true
- C. If the hashCode() comparison == returns true, the equals() method must return true
- D. If the hashCode() comparison == returns true, the equals() method might return true
- E. If the hashCode() comparison != returns true, the equals() method might return true

Answer:

⌚ ✓B and D. B is true because often two dissimilar objects can return the same hashcode value. D is true because if the hashCode() comparison returns ==, the two objects might or might not be equal.

⌚ A, C, and E are incorrect. C is incorrect because the hashCode() method is very flexible in its return values, and often two dissimilar objects can return the same hash code value.

A and E are a negation of the hashCode() and equals() contract.

**78.** Given:

```
public static void before() {  
    Set set = new TreeSet();  
    set.add("2");  
    set.add(3);  
    set.add("1");  
    Iterator it = set.iterator();  
    while (it.hasNext())  
        System.out.print(it.next() + " ");  
}
```

Which statements are true?

- A. The before() method will print 1 2
- B. The before() method will print 1 2 3
- C. The before() method will print three numbers, but the order cannot be determined
- D. The before() method will not compile
- E. The before() method will throw an exception at runtime

Answer:

⌚ ✓E is correct. You can't put both Strings and ints into the same TreeSet. Without generics, the compiler has no way of knowing what type is appropriate for this TreeSet, so it allows everything to compile. At runtime, the TreeSet will try to sort the elements as they're added, and when it tries to compare an Integer with a String it will throw a ClassCastException. Note that although the before() method does not use generics,

it does use autoboxing. Watch out for code that uses some new features and some old features mixed together.

Ⓐ A, B, C, and D are incorrect based on the above.

**79. Given:**

```
import java.util.*;
class MapEQ {
    public static void main(String[] args) {
        Map<ToDos, String> m = new HashMap<ToDos, String>();
        ToDos t1 = new ToDos("Monday");
        ToDos t2 = new ToDos("Monday");
        ToDos t3 = new ToDos("Tuesday");
        m.put(t1, "doLaundry");
        m.put(t2, "payBills");
        m.put(t3, "cleanAttic");
        System.out.println(m.size());
    }
    class ToDos{
        String day;
        ToDos(String d) { day = d; }
        public boolean equals(Object o) {
            return ((ToDos)o).day == this.day;
        }
        // public int hashCode() { return 9; }
    }
}
```

Which is correct? (Choose all that apply.)

- A. As the code stands it will not compile
- B. As the code stands the output will be 2
- C. As the code stands the output will be 3
- D. If the `hashCode()` method is uncommented the output will be 2
- E. If the `hashCode()` method is uncommented the output will be 3
- F. If the `hashCode()` method is uncommented the code will not compile

Answer:

ⓘ ✓C and D are correct. If `hashCode()` is not overridden then every entry will go into its own bucket, and the overridden `equals()` method will have no effect on determining equivalency.

If `hashCode()` is overridden, then the overridden `equals()` method will view `t1` and `t2` as duplicates.

Ⓐ A, B, E, and F are incorrect based on the above.

**80. Given:**

```
12. public class AccountManager {
13.     private Map accountTotals = new HashMap();
14.     private int retirementFund;
15.
16.     public int getBalance(String accountName) {
17.         Integer total = (Integer) accountTotals.get(accountName);
18.         if (total == null)
19.             total = Integer.valueOf(0);
20.         return total.intValue();
21.     }
22.     public void setBalance(String accountName, int amount) {
23.         accountTotals.put(accountName, Integer.valueOf(amount));
24.     }
25. }
```

This class is to be updated to make use of appropriate generic types, with no changes in behavior (for better or worse). Which of these steps could be performed? (Choose three.)

A. Replace line 13 with

```
private Map<String, int> accountTotals = new HashMap<String, int>();
```

B. Replace line 13 with

```
private Map<String, Integer> accountTotals = new HashMap<String, Integer>();
```

C. Replace line 13 with

```
private Map<String<Integer>> accountTotals = new HashMap<String<Integer>>();
```

D. Replace lines 17–20 with

```
int total = accountTotals.get(accountName);
if (total == null) total = 0;
```

```

return total;
E. Replace lines 17–20 with
Integer total = accountTotals.get(accountName);
if (total == null) total = 0;
return total;
F. Replace lines 17–20 with
return accountTotals.get(accountName);
G. Replace line 24 with
accountTotals.put(accountName, amount);
H. Replace line 24 with
accountTotals.put(accountName, amount.intValue());

```

Answer:

✓**B, E, and G** are correct.

**A** is wrong because you can't use a primitive type as a type parameter. **C** is wrong because a Map takes two type parameters separated by a comma. **D** is wrong because an int can't autobox to a null, and **F** is wrong because a `null` can't unbox to 0. **H** is wrong because you can't autobox a primitive just by trying to invoke a method with it.

### 81. Given:

```

interface Hungry<E> { void munch(E x); }
interface Carnivore<E extends Animal> extends Hungry<E> {}
interface Herbivore<E extends Plant> extends Hungry<E> {}
abstract class Plant {}
class Grass extends Plant {}
abstract class Animal {}
class Sheep extends Animal implements Herbivore<Sheep> {
    public void munch(Sheep x) {}
}
class Wolf extends Animal implements Carnivore<Sheep> {
    public void munch(Sheep x) {}
}

```

Which of the following changes (taken separately) would allow this code to compile?

(Choose all that apply.)

**A. Change the Carnivore interface to**

```
interface Carnivore<E extends Plant> extends Hungry<E> {}
```

**B. Change the Herbivore interface to**

```
interface Herbivore<E extends Animal> extends Hungry<E> {}
```

**C. Change the Sheep class to**

```
class Sheep extends Animal implements Herbivore<Plant> {
    public void munch(Grass x) {}
}
```

**D. Change the Sheep class to**

```
class Sheep extends Plant implements Carnivore<Wolf> {
    public void munch(Wolf x) {}
}
```

**E. Change the Wolf class to**

```
class Wolf extends Animal implements Herbivore<Grass> {
    public void munch(Grass x) {}
}
```

**F. No changes are necessary**

Answer:

✓**B** is correct. The problem with the original code is that Sheep tries to implement `Herbivore<Sheep>` and `Herbivore` declares that its type parameter `E` can be any type that extends `Plant`. Since a Sheep is not a `Plant`, `Herbivore<Sheep>` makes no sense—the type `Sheep` is outside the allowed range of `Herbivore`'s parameter `E`. Only solutions that either alter the definition of a Sheep or alter the definition of `Herbivore` will be able to fix this. So **A, E, and F** are eliminated. **B** works, changing the definition of an `Herbivore` to allow it to eat Sheep solves the problem. **C** doesn't work because an `Herbivore<Plant>` must have a `munch(Plant)` method, not `munch(Grass)`. And **D** doesn't work, because in **D** we made Sheep extend `Plant`, now the `Wolf` class breaks because its `munch(Sheep)` method no longer fulfills the contract of `Carnivore`.

**7.** Which collection class(es) allows you to grow or shrink its size and provides indexed access to its elements, but whose methods are not synchronized? (Choose all that apply.)

- A. `java.util.HashSet`
- B. `java.util.LinkedHashSet`
- C. `java.util.List`
- D. `java.util.ArrayList`
- E. `java.util.Vector`
- F. `java.util.PriorityQueue`

Answer:

⌚ ✓D is correct. All of the collection classes allow you to grow or shrink the size of your collection. `ArrayList` provides an index to its elements. The newer collection classes tend not to have synchronized methods. `Vector` is an older implementation of `ArrayList` functionality and has synchronized methods; it is slower than `ArrayList`.

⌚ A, B, C, E, and F are incorrect based on the logic described above; Notes: C, List is an interface, and F, `PriorityQueue` does not offer access by index.

**82.** Given a method declared as

```
public static <E extends Number> List<E> process(List<E> nums)
```

A programmer wants to use this method like this

```
// INSERT DECLARATIONS HERE  
output = process(input);
```

Which pairs of declarations could be placed at // INSERT DECLARATIONS HERE to allow the code to compile? (Choose all that apply.)

- A. `ArrayList<Integer>` input = null;  
`ArrayList<Integer>` output = null;
- B. `ArrayList<Integer>` input = null;  
`List<Integer>` output = null;
- C. `ArrayList<Integer>` input = null;  
`List<Number>` output = null;
- D. `List<Number>` input = null;  
`ArrayList<Integer>` output = null;
- E. `List<Number>` input = null;  
`List<Number>` output = null;
- F. `List<Integer>` input = null;  
`List<Integer>` output = null;

G. None of the above

Answer:

⌚ ✓B, E, and F are correct.

⌚ The return type of `process` is definitely declared as a `List`, not an `ArrayList`, so A and D are wrong. C is wrong because the return type evaluates to `List<Integer>`, and that can't be assigned to a variable of type `List<Number>`. Of course all these would probably cause a `NullPointerException` since the variables are still null—but the question only asked us to get the code to compile.

**83.** Given the proper import statement(s), and

```
13. PriorityQueue<String> pq = new PriorityQueue<String>();  
14. pq.add("2");  
15. pq.add("4");  
16. System.out.print(pq.peek() + " ");  
17. pq.offer("1");  
18. pq.add("3");  
19. pq.remove("1");  
20. System.out.print(pq.poll() + " ");  
21. if(pq.remove("2")) System.out.print(pq.poll() + " ");  
22. System.out.println(pq.poll() + " " + pq.peek());
```

What is the result?

A. 2 2 3 3

- B. 2 2 3 4
- C. 4 3 3 4
- D. 2 2 3 3 3
- E. 4 3 3 3 3
- F. 2 2 3 3 4
- G. Compilation fails
- H. An exception is thrown at runtime

Answer:

✓B is correct. For the sake of the exam, `add()` and `offer()` both add to (in this case), naturally sorted queues. The calls to `poll()` both return and then remove the first item from the queue, so the if test fails.

A, C, D, E, F, G, and H are incorrect based on the above.

#### 84. Given:

```

3. import java.util.*;
4. public class Mixup {
5.     public static void main(String[] args) {
6.         Object o = new Object();
7.         // insert code here
8.         s.add("o");
9.         s.add(o);
10.    }
11. }
```

And these three fragments:

- I. Set s = new HashSet();
- II. TreeSet s = new TreeSet();
- III. LinkedHashSet s = new LinkedHashSet();

When fragments I, II, or III are inserted, independently, at line 7, which are true?

(Choose all that apply.)

- A. Fragment I compiles
- B. Fragment II compiles
- C. Fragment III compiles
- D. Fragment I executes without exception
- E. Fragment II executes without exception
- F. Fragment III executes without exception

Answer:

✓A, B, C, D, and F are all correct.

Only E is incorrect. Elements of a TreeSet must in some way implement Comparable.

#### 85. Given:

```

3. import java.util.*;
4. class Turtle {
5.     int size;
6.     public Turtle(int s) { size = s; }
7.     public boolean equals(Object o) { return (this.size == ((Turtle)o).size); }
8.     // insert code here
9. }
10. public class TurtleTest {
11.     public static void main(String[] args) {
12.         LinkedHashSet<Turtle> t = new LinkedHashSet<Turtle>();
13.         t.add(new Turtle(1)); t.add(new Turtle(2)); t.add(new Turtle(1));
14.         System.out.println(t.size());
15.     }
16. }
```

And these two fragments:

- I. public int hashCode() { return size/5; }
- II. // no hashCode method declared

If fragment I or II is inserted, independently, at line 8, which are true? (Choose all that apply.)

- A. If fragment I is inserted, the output is 2
- B. If fragment I is inserted, the output is 3
- C. If fragment II is inserted, the output is 2

- D. If fragment II is inserted, the output is 3
  - E. If fragment I is inserted, compilation fails
  - F. If fragment II is inserted, compilation fails

### Answer:

④ ✓A and D are correct. While fragment II wouldn't fulfill the hashCode() contract (as you can see by the results), it is legal Java. For the purpose of the exam, if you don't override hashCode(), every object will have a unique hashCode.

 B, C, E, and F are incorrect based on the above.

**86.** Given the proper import statement(s), and:

```
13. TreeSet<String> s = new TreeSet<String>();
14. TreeSet<String> subs = new TreeSet<String>();
15. s.add("a"); s.add("b"); s.add("c"); s.add("d"); s.add("e");
16.
17. subs = (TreeSet)s.subSet("b", true, "d", true);
18. s.add("g");
19. s.pollFirst();
20. s.pollFirst();
21. s.add("c2");
22. System.out.println(s.size() + " " + subs.size());
```

Which are true? (Choose all that apply.)

- A. The size of `s` is 4
  - B. The size of `s` is 5
  - C. The size of `s` is 7
  - D. The size of `subs` is 1
  - E. The size of `subs` is 2
  - F. The size of `subs` is 3
  - G. The size of `subs` is 4
  - H. An exception is thrown at runtime

**Answer:**

⌚ ✓**B** and **F** are correct. After "g" is added, TreeSet s contains six elements and TreeSet subs contains three (b, c, d), because "g" is out of the range of subs. The first pollFirst() finds and removes only the "a". The second pollFirst() finds and removes the "b" from both TreeSets (remember they are backed). The final add() is in range of both TreeSets.

The final contents are [c,c2,d,e,g] and [c,c2,d].

 A, C, D, E, G, and H are incorrect based on the above.

**87.** Given:

```
3. import java.util.*;
4. public class Magellan {
5.     public static void main(String[] args) {
6.         TreeMap<String, String> myMap = new TreeMap<String, String>();
7.         myMap.put("a", "apple"); myMap.put("d", "date");
8.         myMap.put("f", "fig"); myMap.put("p", "pear");
9.         System.out.println("1st after mango: " + // sop 1
10.        myMap.higherKey("f"));
11.        System.out.println("1st after mango: " + // sop 2
12.        myMap.ceilingKey("f"));
13.        System.out.println("1st after mango: " + // sop 3
14.        myMap.floorKey("f"));
15.        SortedMap<String, String> sub = new TreeMap<String, String>();
16.        sub = myMap.tailMap("f");
17.        System.out.println("1st after mango: " + // sop 4
18.        sub.firstKey());
19.    }
20. }
```

Which of the System.out.println statements will produce the output 1st after mango: p?  
(Choose all that apply.)

- A. sop 1  
B. sop 2

- C. sop 3
- D. sop 4
- E. None; compilation fails
- F. None; an exception is thrown at runtime

Answer:

✓A is correct. The `ceilingKey()` method's argument is inclusive. The `floorKey()` method would be used to find keys before the specified key. The `firstKey()` method's argument is also inclusive.

B, C, D, E, and F are incorrect based on the above.

#### 88. Given:

```

3. import java.util.*;
4. class Business { }
5. class Hotel extends Business { }
6. class Inn extends Hotel { }
7. public class Travel {
8. ArrayList<Hotel> go() {
9. // insert code here
10. }
11. }
```

Which, inserted independently at line 9, will compile? (Choose all that apply.)

- A. return new ArrayList<Inn>();
- B. return new ArrayList<Hotel>();
- C. return new ArrayList<Object>();
- D. return new ArrayList<Business>();

Answer:

✓B is correct.

A is incorrect because polymorphic assignments don't apply to generic type parameters. C and D are incorrect because they don't follow basic polymorphism rules. (Objective 6.4)

#### 89. Given:

```

3. import java.util.*;
4. class Dog { int size; Dog(int s) { size = s; } }
5. public class FirstGrade {
6. public static void main(String[] args) {
7. TreeSet<Integer> i = new TreeSet<Integer>();
8. TreeSet<Dog> d = new TreeSet<Dog>();
9.
10. d.add(new Dog(1)); d.add(new Dog(2)); d.add(new Dog(1));
11. i.add(1); i.add(2); i.add(1);
12. System.out.println(d.size() + " " + i.size());
13. }
14. }
```

What is the result?

- A. 1 2
- B. 2 2
- C. 2 3
- D. 3 2
- E. 3 3
- F. Compilation fails
- G. An exception is thrown at runtime

Answer:

✓G is correct. Class `Dog` needs to implement `Comparable` in order for a `TreeSet` (which keeps its elements sorted) to be able to contain `Dog` objects.

A, B, C, D, E, and F are incorrect based on the above.

#### 90. Given:

```

3. import java.util.*;
4. public class GeoCache {
```

```

5. public static void main(String[] args) {
6.     String[] s = {"map", "pen", "marble", "key"};
7.     Othello o = new Othello();
8.     Arrays.sort(s, o);
9.     for(String s2: s) System.out.print(s2 + " ");
10.    System.out.println(Arrays.binarySearch(s, "map"));
11. }
12. static class Othello implements Comparator<String> {
13.     public int compare(String a, String b) { return b.compareTo(a); }
14. }
15. }

```

Which are true? (Choose all that apply.)

- A. Compilation fails
- B. The output will contain a 1
- C. The output will contain a 2
- D. The output will contain a -1
- E. An exception is thrown at runtime
- F. The output will contain "key map marble pen"
- G. The output will contain "pen marble map key"

Answer:

⌚ ✓D and G are correct. First, the `compareTo()` method will reverse the normal sort. Second, the `sort()` is valid. Third, the `binarySearch()` gives -1 because it needs to be invoked using the same `Comparator` (`o`), as was used to sort the array. Note that when the `binarySearch()` returns an "undefined result" it doesn't officially have to be a -1, but it usually is, so if you selected only G, you get full credit!

🚫 A, B, C, E, and F are incorrect based on the above.

**91.** Which are true about a static nested class? (Choose all that apply.)

- A. You must have a reference to an instance of the enclosing class in order to instantiate it
- B. It does not have access to non-static members of the enclosing class
- C. Its variables and methods must be `static`
- D. If the outer class is named `MyOuter`, and the nested class is named `MyInner`, it can be instantiated using `new MyOuter.MyInner();`
- E. It must extend the enclosing class

Answer:

⌚ ✓B and D. B is correct because a static nested class is not tied to an instance of the enclosing class, and thus can't access the non-static members of the class (just as a `static` method can't access non-static members of a class). D uses the correct syntax for instantiating a static nested class.

🚫 A is incorrect because static nested classes do not need (and can't use) a reference to an instance of the enclosing class. C is incorrect because static nested classes can declare and define non-static members. E is wrong because...it just is. There's no rule that says an inner or nested class has to extend anything.

**92.** Given:

```

class Boo {
    Boo(String s) { }
    Boo() { }
}
class Bar extends Boo {
    Bar() { }
    Bar(String s) {super(s);}
    void zoo() {
        // insert code here
    }
}

```

Which create an anonymous inner class from within class Bar? (Choose all that apply.)

- A. `Boo f = new Boo(24) { };`

- B. `Boo f = new Bar() { };`
- C. `Boo f = new Boo() {String s; };`
- D. `Bar f = new Boo(String s) { };`
- E. `Boo f = new Boo.Bar(String s) { };`

Answer:

⌚ ✓**B** and **C.** **B** is correct because anonymous inner classes are no different from any other class when it comes to polymorphism. That means you are always allowed to declare a reference variable of the superclass type and have that reference variable refer to an instance of a subclass type, which in this case is an anonymous subclass of Bar. Since Bar is a subclass of Boo, it all works. **C** uses correct syntax for creating an instance of Boo.

⌚ A is incorrect because it passes an `int` to the Boo constructor, and there is no matching constructor in the Boo class. **D** is incorrect because it violates the rules of polymorphism; you cannot refer to a superclass type using a reference variable declared as the subclass type. The superclass doesn't have everything the subclass has. **E** uses incorrect syntax.

**93.** Which are true about a method-local inner class? (Choose all that apply.)

- A. It must be marked `final`
- B. It can be marked `abstract`
- C. It can be marked `public`
- D. It can be marked `static`
- E. It can access private members of the enclosing class

Answer:

⌚ ✓**B** and **E.** **B** is correct because a method-local inner class can be `abstract`, although it means a subclass of the inner class must be created if the `abstract` class is to be used (so an `abstract` method-local inner class is probably not useful). **E** is correct because a method-local inner class works like any other inner class—it has a special relationship to an instance of the enclosing class, thus it can access all members of the enclosing class.

⌚ A is incorrect because a method-local inner class does not have to be declared `final` (although it is legal to do so). **C** and **D** are incorrect because a method-local inner class cannot be made `public` (remember—local variables can't be `public`) or `static`.

**94.** Given:

```
1. public class TestObj {  
2.     public static void main(String[] args) {  
3.         Object o = new Object() {  
4.             public boolean equals(Object obj) {  
5.                 return true;  
6.             }  
7.         }  
8.         System.out.println(o.equals("Fred"));  
9.     }  
10. }
```

What is the result?

- A. An exception occurs at runtime
- B. `true`
- C. `fred`
- D. Compilation fails because of an error on line 3
- E. Compilation fails because of an error on line 4
- F. Compilation fails because of an error on line 8
- G. Compilation fails because of an error on a line other than 3, 4, or 8

Answer:

⌚ ✓**G.** This code would be legal if line 7 ended with a semicolon. Remember that line 3 is a statement that doesn't end until line 7, and a statement needs a closing semicolon!

⌚ A, B, C, D, E, and F are incorrect based on the program logic described above. If the semicolon were added at line 7, then answer **B** would be correct—the program would print `true`, the return from the `equals()` method overridden by the anonymous

subclass of `Object`.

**95. Given:**

```
1. public class HorseTest {  
2. public static void main(String[] args) {  
3. class Horse {  
4. public String name;  
5. public Horse(String s) {  
6. name = s;  
7. }  
8. }  
9. Object obj = new Horse("Zippo");  
10. System.out.println(obj.name);  
11. }  
12. }
```

What is the result?

- A. An exception occurs at runtime at line 10
- B. Zippo
- C. Compilation fails because of an error on line 3
- D. Compilation fails because of an error on line 9
- E. Compilation fails because of an error on line 10

Answer:

- ⌚ ✓E. If you use a reference variable of type `Object`, you can access only those members defined in class `Object`.
- ⌚ A, B, C, and D are incorrect based on the program logic described above.

**96. Given:**

```
public abstract class AbstractTest {  
public int getNum() {  
return 45;  
}  
public abstract class Bar {  
public int getNum() {  
return 38;  
}  
}  
public static void main(String[] args) {  
AbstractTest t = new AbstractTest() {  
public int getNum() {  
return 22;  
}  
};  
AbstractTest.Bar f = t.new Bar() {  
public int getNum() {  
return 57;  
}  
};  
System.out.println(f.getNum() + " " + t.getNum());  
}
```

What is the result?

- A. 57 22
- B. 45 38
- C. 45 57
- D. An exception occurs at runtime
- E. Compilation fails

Answer:

- ⌚ ✓A. You can define an inner class as `abstract`, which means you can instantiate only concrete subclasses of the abstract inner class. The object referenced by the variable `t` is an instance of an anonymous subclass of `AbstractTest`, and the anonymous class overrides the `getNum()` method to return 22. The variable referenced by `f` is an instance of an anonymous subclass of `Bar`, and the anonymous Bar subclass also overrides the `getNum()` method (to return 57). Remember that to create a `Bar` instance, we need an

instance of the enclosing AbstractTest class to tie to the new Bar inner class instance. AbstractTest can't be instantiated because it's abstract, so we created an anonymous subclass (non-abstract) and then used the instance of that anonymous subclass to tie to the new Bar subclass instance.

⌚ B, C, D, and E are incorrect based on the program logic described above.

**97. Given:**

```
3. public class Tour {  
4. public static void main(String[] args) {  
5. Cathedral c = new Cathedral();  
6. // insert code here  
7. s.go();  
8. }  
9.  
10. class Cathedral {  
11. class Sanctum {  
12. void go() { System.out.println("spooky"); }  
13. }  
14. }
```

Which, inserted independently at line 6, compile and produce the output "spooky"? (Choose all that apply.)

- A. Sanctum s = c.new Sanctum();
- B. c.Sanctum s = c.new Sanctum();
- C. c.Sanctum s = Cathedral.new Sanctum();
- D. Cathedral.Sanctum s = c.new Sanctum();
- E. Cathedral.Sanctum s = Cathedral.new Sanctum();

Answer:

⌚ ✓D is correct. It is the only code that uses the correct inner class instantiation syntax.

⌚ A, B, C, and E are incorrect based on the above.

**98. Given:**

```
5. class A { void m() { System.out.println("outer"); } }  
6.  
7. public class TestInners {  
8. public static void main(String[] args) {  
9. new TestInners().go();  
10. }  
11. void go() {  
12. new A().m();  
13. class A { void m() { System.out.println("inner"); } }  
14. }  
15. class A { void m() { System.out.println("middle"); } }  
16. }
```

What is the result?

- A. inner
- B. outer
- C. middle
- D. Compilation fails
- E. An exception is thrown at runtime

Answer:

⌚ ✓C is correct. The "inner" version of class A isn't used because its declaration comes after the instance of class A is created in the go() method.

⌚ A, B, D, and E are incorrect based on the above.

**99. Given:**

```
3. public class Car {  
4. class Engine {  
5. // insert code here  
6. }  
7. public static void main(String[] args) {  
8. new Car().go();  
9. }
```

```

9. }
10. void go() {
11.     new Engine();
12. }
13. void drive() { System.out.println("hi"); }
14. }

```

Which, inserted independently at line 5, produce the output "hi"? (Choose all that apply.)

- A. { Car.drive(); }
- B. { this.drive(); }
- C. { Car.this.drive(); }
- D. { this.Car.this.drive(); }
- E. Engine() { Car.drive(); }
- F. Engine() { this.drive(); }
- G. Engine() { Car.this.drive(); }

Answer:

Ⓐ ✓C and G are correct. C is the correct syntax to access an inner class's outer instance method from an initialization block, and G is the correct syntax to access it from a constructor.

Ⓑ A, B, D, E, and F are incorrect based on the above.

#### 100. Given:

```

3. public class City {
4.     class Manhattan {
5.         void doStuff() throws Exception { System.out.print("x "); }
6.     }
7.     class TimesSquare extends Manhattan {
8.         void doStuff() throws Exception { }
9.     }
10.    public static void main(String[] args) throws Exception {
11.        new City().go();
12.    }
13.    void go() throws Exception { new TimesSquare().doStuff(); }
14. }

```

What is the result?

- A. x
- B. x x
- C. No output is produced
- D. Compilation fails due to multiple errors
- E. Compilation fails due only to an error on line 4
- F. Compilation fails due only to an error on line 7
- G. Compilation fails due only to an error on line 10
- H. Compilation fails due only to an error on line 13

Answer:

Ⓐ ✓C is correct. The inner classes are valid, and all the methods (including `main()`), correctly throw an Exception, given that `doStuff()` throws an Exception. The `doStuff()` in class `TimesSquare` overrides class `Manhattan`'s `doStuff()` and produces no output.

Ⓑ A, B, D, E, F, G, and H are incorrect based on the above.

#### 101. Given:

```

3. public class Navel {
4.     private int size = 7;
5.     private static int length = 3;
6.     public static void main(String[] args) {
7.         new Navel().go();
8.     }
9.     void go() {
10.        int size = 5;
11.        System.out.println(new Gazer().adder());
12.    }
13.    class Gazer {
14.        int adder() { return size * length; }

```

```
15. }
16. }
```

What is the result?

- A. 15
- B. 21
- C. An exception is thrown at runtime
- D. Compilation fails due to multiple errors
- E. Compilation fails due only to an error on line 4
- F. Compilation fails due only to an error on line 5

Answer:

Ⓐ ✓B is correct. The inner class Gazer has access to Navel's private static and private instance variables.

Ⓑ A, C, D, E, and F are incorrect based on the above.

**102. Given:**

```
3. import java.util.*;
4. public class Pockets {
5.     public static void main(String[] args) {
6.         String[] sa = {"nickel", "button", "key", "lint"};
7.         Sorter s = new Sorter();
8.         for(String s2: sa) System.out.print(s2 + " ");
9.         Arrays.sort(sa,s);
10.        System.out.println();
11.        for(String s2: sa) System.out.print(s2 + " ");
12.    }
13.    class Sorter implements Comparator<String> {
14.        public int compare(String a, String b) {
15.            return b.compareTo(a);
16.        }
17.    }
18. }
```

What is the result?

- A. Compilation fails
- B. button key lint nickel  
nickel lint key button
- C. nickel button key lint  
button key lint nickel
- D. nickel button key lint  
nickel button key lint
- E. nickel button key lint  
nickel lint key button
- F. An exception is thrown at runtime

Answer:

Ⓐ ✓A is correct, the inner class Sorter must be declared static to be called from the static method main(). If Sorter had been static, answer E would be correct.

Ⓑ C, D, E, and F are incorrect based on the above.

**103. The following block of code creates a Thread using a Runnable target:**

```
Runnable target = new MyRunnable();
Thread myThread = new Thread(target);
```

Which of the following classes can be used to create the target, so that the preceding code compiles correctly?

- A. public class MyRunnable extends Runnable{public void run() {}}
- B. public class MyRunnable extends Object{public void run() {}}
- C. public class MyRunnable implements Runnable{public void run() {}}
- D. public class MyRunnable implements Runnable{void run() {}}
- E. public class MyRunnable implements Runnable{public void start() {}}

Answer:

- Ⓐ ✓C is correct. The class implements the Runnable interface with a legal `run()` method.  
 Ⓡ A is incorrect because interfaces are implemented, not extended. B is incorrect because even though the class has a valid `public void run()` method, it does not implement the Runnable interface. D is incorrect because the `run()` method must be `public`. E is incorrect because the method to implement is `run()`, not `start()`.

**104.** Given:

```

3. class MyThread extends Thread {
4.     public static void main(String [] args) {
5.         MyThread t = new MyThread();
6.         Thread x = new Thread(t);
7.         x.start();
8.     }
9.     public void run() {
10.        for(int i=0;i<3;++i) {
11.            System.out.print(i + "..");
12.        } } }
```

What is the result of this code?

- A. Compilation fails
- B. 1..2..3..
- C. 0..1..2..3..
- D. 0..1..2..
- E. An exception occurs at runtime

Answer:

- Ⓐ ✓D is correct. The thread `MyThread` will start and loop three times (from 0 to 2).  
 Ⓡ A is incorrect because the `Thread` class implements the `Runnable` interface; therefore, in line 5, `Thread` can take an object of type `Thread` as an argument in the constructor (this is NOT recommended). B and C are incorrect because the variable `i` in the `for` loop starts with a value of 0 and ends with a value of 2. E is incorrect based on the above.

**105.** Given:

```

3. class Test {
4.     public static void main(String [] args) {
5.         printAll(args);
6.     }
7.     public static void printAll(String[] lines) {
8.         for(int i=0;i<lines.length;i++) {
9.             System.out.println(lines[i]);
10.            Thread.currentThread().sleep(1000);
11.        } } }
```

The `static` method `Thread.currentThread()` returns a reference to the currently executing `Thread` object. What is the result of this code?

- A. Each String in the array `lines` will print, with exactly a 1-second pause between lines
- B. Each String in the array `lines` will print, with no pause in between because this method is not executed in a `Thread`
- C. Each String in the array `lines` will print, and there is no guarantee there will be a pause because `currentThread()` may not retrieve this thread
- D. This code will not compile
- E. Each String in the `lines` array will print, with at least a one-second pause between lines

Answer:

- Ⓐ ✓D is correct. The `sleep()` method must be enclosed in a `try/catch` block, or the method `printAll()` must declare it throws the `InterruptedException`.  
 Ⓡ E is incorrect, but it would be correct if the `InterruptedException` was dealt with (A is too precise). B is incorrect (even if the `InterruptedException` was dealt with) because all Java code, including the `main()` method, runs in threads. C is incorrect. The `sleep()` method is `static`, it always affects the currently executing thread.

**106.** Assume you have a class that holds two `private` variables: `a` and `b`. Which of the following pairs can prevent concurrent access problems in that class? (Choose all that apply.)

- A. `public int read() {return a+b;}`  
`public void set(int a, int b) {this.a=a;this.b=b;}`
- B. `public synchronized int read() {return a+b;}`  
`public synchronized void set(int a, int b) {this.a=a;this.b=b;}`
- C. `public int read() {synchronized(a) {return a+b;}}`  
`public void set(int a, int b) {synchronized(a) {this.a=a;this.b=b;}}`
- D. `public int read() {synchronized(a) {return a+b;}}`  
`public void set(int a, int b) {synchronized(b) {this.a=a;this.b=b;}}`
- E. `public synchronized(this) int read() {return a+b;}`  
`public synchronized(this) void set(int a, int b) {this.a=a;this.b=b;}`
- F. `public int read() {synchronized(this) {return a+b;}}`  
`public void set(int a, int b) {synchronized(this) {this.a=a;this.b=b;}}`

Answer:

- Ⓐ ✓**B** and **F** are correct. By marking the methods as `synchronized`, the threads will get the lock of the `this` object before proceeding. Only one thread will be setting or reading at any given moment, thereby assuring that `read()` always returns the addition of a valid pair.
- Ⓑ Ⓣ **A** is incorrect because it is not `synchronized`; therefore, there is no guarantee that the values added by the `read()` method belong to the same pair. **C** and **D** are incorrect; only objects can be used to synchronize on. **E** fails—it is not possible to select other objects (even `this`) to synchronize on when declaring a method as `synchronized`.

**107.** Given:

```
1. public class WaitTest {
2. public static void main(String [] args) {
3. System.out.print("1 ");
4. synchronized(args){
5. System.out.print("2 ");
6. try {
7. args.wait();
8. }
9. catch(InterruptedException e){}
10. }
11. System.out.print("3 ");
12. } }
```

What is the result of trying to compile and run this program?

- A. It fails to compile because the `IllegalMonitorStateException` of `wait()` is not dealt with in line 7
- B. 1 2 3
- C. 1 3
- D. 1 2
- E. At runtime, it throws an `IllegalMonitorStateException` when trying to wait
- F. It will fail to compile because it has to be synchronized on the `this` object

Answer:

- Ⓐ ✓**D** is correct. 1 and 2 will be printed, but there will be no return from the `wait` call because no other thread will notify the main thread, so 3 will never be printed. It's frozen at line 7.
- Ⓑ Ⓣ **A** is incorrect; `IllegalMonitorStateException` is an unchecked exception. **B** and **C** are incorrect; 3 will never be printed, since this program will wait forever. **E** is incorrect because `IllegalMonitorStateException` will never be thrown because the `wait()` is done on `args` within a block of code synchronized on `args`. **F** is incorrect because any object can be used to synchronize on and `this` and `static` don't mix. (Objective 4.4)

**108.** Assume the following method is properly synchronized and called from a thread A on an object

B:

```
wait(2000);
```

After calling this method, when will the thread A become a candidate to get another turn at the CPU?

- A. After object B is notified, or after two seconds
- B. After the lock on B is released, or after two seconds
- C. Two seconds after object B is notified
- D. Two seconds after lock B is released

Answer:

- A is correct. Either of the two events will make the thread a candidate for running again.  
 B is incorrect because a waiting thread will not return to runnable when the lock is released, unless a notification occurs. C is incorrect because the thread will become a candidate immediately after notification. D is also incorrect because a thread will not come out of a waiting pool just because a lock has been released.

#### 109. Which are true? (Choose all that apply.)

- A. The `notifyAll()` method must be called from a synchronized context
- B. To call `wait()`, an object must own the lock on the thread
- C. The `notify()` method is defined in class `java.lang.Thread`
- D. When a thread is waiting as a result of `wait()`, it releases its lock
- E. The `notify()` method causes a thread to immediately release its lock
- F. The difference between `notify()` and `notifyAll()` is that `notifyAll()` notifies all waiting threads, regardless of the object they're waiting on

Answer:

- A is correct because `notifyAll()` (and `wait()` and `notify()`) must be called from within a synchronized context. D is a correct statement.  
 B is incorrect because to call `wait()`, the thread must own the lock on the object that `wait()` is being invoked on, not the other way around. C is wrong because `notify()` is defined in `java.lang.Object`. E is wrong because `notify()` will not cause a thread to release its locks. The thread can only release its locks by exiting the synchronized code. F is wrong because `notifyAll()` notifies all the threads waiting on a particular locked object, not all threads waiting on *any* object. (Objective 4.4)

#### 110. Given the scenario: This class is intended to allow users to write a series of messages, so that each message is identified with a timestamp and the name of the thread that wrote the message:

```
public class Logger {
    private StringBuilder contents = new StringBuilder();
    public void log(String message) {
        contents.append(System.currentTimeMillis());
        contents.append(": ");
        contents.append(Thread.currentThread().getName());
        contents.append(message);
        contents.append("\n");
    }
    public String getContents() { return contents.toString(); }
}
```

How can we ensure that instances of this class can be safely used by multiple threads?

- A. This class is already thread-safe
- B. Replacing `StringBuilder` with `StringBuffer` will make this class thread-safe
- C. Synchronize the `log()` method only
- D. Synchronize the `getContents()` method only
- E. Synchronize both `log()` and `getContents()`
- F. This class cannot be made thread-safe

Answer:

- E is correct. Synchronizing the `public` methods is sufficient to make this safe, so F is false. This class is not thread-safe unless some sort of synchronization protects the changing data.  
 B is not correct because although a `StringBuffer` is synchronized internally, we call `append()` multiple times, and nothing would prevent two simultaneous `log()` calls from mixing up their messages. C and D are not correct because if one method remains unsynchronized, it can run while the other is executing, which could result in reading the contents

while one of the messages is incomplete, or worse. (You don't want to call `getString()` on the `StringBuffer` as it's resizing its internal character array.)

**111. Given:**

```
public static synchronized void main(String[] args) throws  
InterruptedException {  
    Thread t = new Thread();  
    t.start();  
    System.out.print("X");  
    t.wait(10000);  
    System.out.print("Y");  
}
```

What is the result of this code?

- A. It prints X and exits
- B. It prints X and never exits
- C. It prints XY and exits almost immediately
- D. It prints XY with a 10-second delay between X and Y
- E. It prints XY with a 10000-second delay between X and Y
- F. The code does not compile
- G. An exception is thrown at runtime

Answer:

⌚ ✓G is correct. The code does not acquire a lock on `t` before calling `t.wait()`, so it throws an `IllegalMonitorStateException`. The method is `synchronized`, but it's not `synchronized` on `t` so the exception will be thrown. If the wait were placed inside a `synchronized(t)` block, then the answer would have been D.

⌚ A, B, C, D, E, and F are incorrect based the logic described above.

**112. Given:**

```
class MyThread extends Thread {  
    MyThread() {  
        System.out.print(" MyThread");  
    }  
    public void run() { System.out.print(" bar"); }  
    public void run(String s) { System.out.print(" baz"); }  
}  
public class TestThreads {  
    public static void main (String [] args) {  
        Thread t = new MyThread()  
        public void run() { System.out.print(" foo"); }  
    };  
    t.start();  
} }
```

What is the result?

- A. foo
- B. MyThread foo
- C. MyThread bar
- D. foo bar
- E. foo bar baz
- F. bar foo
- G. Compilation fails
- H. An exception is thrown at runtime

Answer:

⌚ ✓B is correct. The first line of main we're constructing an instance of an anonymous inner class extending from `MyThread`. So the `MyThread` constructor runs and prints `MyThread`. Next, `main()` invokes `start()` on the new thread instance, which causes the overridden `run()` method (the `run()` method in the anonymous inner class) to be invoked.

⌚ A, C, D, E, F, G, and H are incorrect based on the logic described above.

**113. Given:**

```

public class ThreadDemo {
    synchronized void a() { actBusy(); }
    static synchronized void b() { actBusy(); }
    static void actBusy() {
        try { Thread.sleep(1000); }
        catch (InterruptedException e) {}
    }
    public static void main(String[] args) {
        final ThreadDemo x = new ThreadDemo();
        final ThreadDemo y = new ThreadDemo();
        Runnable runnable = new Runnable() {
            public void run() {
                int option = (int) (Math.random() * 4);
                switch (option) {
                    case 0: x.a(); break;
                    case 1: x.b(); break;
                    case 2: y.a(); break;
                    case 3: y.b(); break;
                }
            }
        };
        Thread thread1 = new Thread(runnable);
        Thread thread2 = new Thread(runnable);
        thread1.start();
        thread2.start();
    }
}

```

Which of the following pairs of method invocations could NEVER be executing at the same time?  
(Choose all that apply.)

- A. x.a() in thread1, and x.a() in thread2
- B. x.a() in thread1, and x.b() in thread2
- C. x.a() in thread1, and y.a() in thread2
- D. x.a() in thread1, and y.b() in thread2
- E. x.b() in thread1, and x.a() in thread2
- F. x.b() in thread1, and x.b() in thread2
- G. x.b() in thread1, and y.a() in thread2
- H. x.b() in thread1, and y.b() in thread2

Answer:

- Ⓐ ✓A, F, and H. A is a right answer because when `synchronized` instance methods are called on the same *instance*, they block each other. F and H can't happen because `synchronized static` methods in the same class block each other, regardless of which instance was used to call the methods. (An instance is not required to call `static` methods; only the class.)  
 Ⓡ C could happen because `synchronized` instance methods called on different instances do not block each other. B, D, E, and G could all happen because instance methods and `static` methods lock on different objects, and do not block each other.

#### 114. Given:

```

public class TwoThreads {
    static Thread laurel, hardy;
    public static void main(String[] args) {
        laurel = new Thread() {
            public void run() {
                System.out.println("A");
                try {
                    hardy.sleep(1000);
                } catch (Exception e) {
                    System.out.println("B");
                }
                System.out.println("C");
            }
        };
        hardy = new Thread() {
            public void run() {
                System.out.println("D");
                try {
                    laurel.wait();
                } catch (Exception e) {

```

```

        System.out.println("E");
    }
    System.out.println("F");
}
;
laurel.start();
hardy.start();
}
}

```

Which letters will eventually appear somewhere in the output? (Choose all that apply.)

- A. A
- B. B
- C. C
- D. D
- E. E
- F. F

G. The answer cannot be reliably determined

H. The code does not compile

Answer:

⌚ ✓A, C, D, E, and F are correct. This may look like `laurel` and `hardy` are battling to cause the other to `sleep()` or `wait()`—but that's not the case. Since `sleep()` is a static method, it affects the current thread, which is `laurel` (even though the method is invoked using a reference to `hardy`). That's misleading but perfectly legal, and the Thread `laurel` is able to sleep with no exception, printing A and C (after at least a 1-second delay). Meanwhile `hardy` tries to call `laurel.wait()`—but `hardy` has not synchronized on `laurel`, so calling `laurel.wait()` immediately causes an `IllegalMonitorStateException`, and so `hardy` prints D, E, and F. Although the order of the output is somewhat indeterminate (we have no way of knowing whether A is printed before D, for example) it is guaranteed that A, C, D, E, and F will all be printed in some order, eventually—so G is incorrect.

⌚ B, G, and H are incorrect based on the above.

**115.** Given:

```

3. public class Starter implements Runnable {
4.     void go(long id) {
5.         System.out.println(id);
6.     }
7.     public static void main(String[] args) {
8.         System.out.print(Thread.currentThread().getId() + " ");
9.         // insert code here
10.    }
11.    public void run() { go(Thread.currentThread().getId()); }
12. }

```

And given the following five fragments:

- I. `new Starter().run();`
- II. `new Starter().start();`
- III. `new Thread(new Starter());`
- IV. `new Thread(new Starter()).run();`
- V. `new Thread(new Starter()).start();`

When the five fragments are inserted, one at a time at line 9, which are true? (Choose all that apply.)

- A. All five will compile
- B. Only one might produce the output 4 4
- C. Only one might produce the output 4 2
- D. Exactly two might produce the output 4 4
- E. Exactly two might produce the output 4 2
- F. Exactly three might produce the output 4 4
- G. Exactly three might produce the output 4 2

Answer:

⌚ ✓C and D are correct. Fragment I doesn't start a new thread. Fragment II doesn't compile.

Fragment III creates a new thread but doesn't start it. Fragment IV creates a new thread and invokes `run()` directly, but it doesn't start the new thread. Fragment V creates and

starts a new thread.

 A, B, E, F, and G are incorrect based on the above.

**116.** Given:

```
3. public class Leader implements Runnable {  
4.     public static void main(String[] args) {  
5.         Thread t = new Thread(new Leader());  
6.         t.start();  
7.         System.out.print("m1 ");  
8.         t.join();  
9.         System.out.print("m2 ");  
10.    }  
11.    public void run() {  
12.        System.out.print("r1 ");  
13.        System.out.print("r2 ");  
14.    }  
15. }
```

Which are true? (Choose all that apply.)

- A. Compilation fails
  - B. The output could be r1 r2 m1 m2
  - C. The output could be m1 m2 r1 r2
  - D. The output could be m1 r1 r2 m2
  - E. The output could be m1 r1 m2 r2
  - F. An exception is thrown at runtime

**Answer:**

⌚ ✓A is correct. The `join()` must be placed in a try/catch block. If it were, answers B and D would be correct. The `join()` causes the main thread to pause and join the end of the other thread, meaning "`m2`" must come last.

 B, C, D, E, and F are incorrect based on the above.

**117. Given:**

```
3. class Dudes {  
4.     static long flag = 0;  
5.     // insert code here  
6.     if(flag == 0) flag = id;  
7.     for(int x = 1; x < 3; x++) {  
8.         if(flag == id) System.out.print("yo ");  
9.         else System.out.print("dude ");  
10.    }  
11. }  
12. }  
13. public class DudesChat implements Runnable {  
14.     static Dudes d;  
15.     public static void main(String[] args) {  
16.         new DudesChat().go();  
17.     }  
18.     void go() {  
19.         d = new Dudes();  
20.         new Thread(new DudesChat()).start();  
21.         new Thread(new DudesChat()).start();  
22.     }  
23.     public void run() {  
24.         d.chat(Thread.currentThread().getId());  
25.     }  
26. }
```

And given these two fragments:

```
I. synchronized void chat(long id) {  
II. void chat(long id) {
```

When fragment I or fragment II is inserted at line 5, which are true? (Choose all that apply.)

- A. An exception is thrown at runtime
  - B. With fragment I, compilation fails
  - C. With fragment II, compilation fails
  - D. With fragment I, the output could be yo dude dude yo

- E. With fragment I, the output could be dude dude yo yo  
F. With fragment II, the output could be yo dude dude yo

Answer:

Ⓐ ✓F is correct. With fragment I, the `chat` method is synchronized, so the two threads can't swap back and forth. With either fragment, the first output must be yo.

Ⓑ A, B, C, D, and E are incorrect based on the above.

**118.** Given:

```
3. class Chicks {  
4.     synchronized void yack(long id) {  
5.         for(int x = 1; x < 3; x++) {  
6.             System.out.print(id + " ");  
7.             Thread.yield();  
8.         }  
9.     }  
10.    }  
11.   public class ChicksYack implements Runnable {  
12.       Chicks c;  
13.       public static void main(String[] args) {  
14.           new ChicksYack().go();  
15.       }  
16.       void go() {  
17.           c = new Chicks();  
18.           new Thread(new ChicksYack()).start();  
19.           new Thread(new ChicksYack()).start();  
20.       }  
21.       public void run() {  
22.           c.yack(Thread.currentThread().getId());  
23.       }  
24.   }
```

Which are true? (Choose all that apply.)

- A. Compilation fails
- B. The output could be 4 4 2 3
- C. The output could be 4 4 2 2
- D. The output could be 4 4 4 2
- E. The output could be 2 2 4 4
- F. An exception is thrown at runtime

Answer:

Ⓐ ✓F is correct. When `run()` is invoked, it is with a new instance of `ChicksYack` and `c` has not been assigned to an object. If `c` were static, then because `yack` is synchronized, answers C and E would have been correct.

Ⓑ A, B, C, D, and E are incorrect based on the above.

**119.** Given:

```
3. public class Chess implements Runnable {  
4.     public void run() {  
5.         move(Thread.currentThread().getId());  
6.     }  
7.     // insert code here  
8.     System.out.print(id + " ");  
9.     System.out.print(id + " ");  
10.    }  
11.   public static void main(String[] args) {  
12.       Chess ch = new Chess();  
13.       new Thread(ch).start();  
14.       new Thread(new Chess()).start();  
15.   }  
16. }
```

And given these two fragments:

- I. `synchronized void move(long id) {`
- II. `void move(long id) {`

When either fragment I or fragment II is inserted at line 7, which are true? (Choose all that apply.)

- A. Compilation fails

- B. With fragment I, an exception is thrown
- C. With fragment I, the output could be 4 2 4 2
- D. With fragment I, the output could be 4 4 2 3
- E. With fragment II, the output could be 2 4 2 4

Answer:

- ⌚ ✓C and E are correct. E should be obvious. C is correct because even though `move()` is synchronized, it's being invoked on two different objects.
- ⌚⌚ A, B, and D are incorrect based on the above.

1) Not present in Meta-tag

Options: http-equiv, name, value, content

2) Expression language is used to print something on the screen

3) if(" string ".trim() == "string")

```
s.o.p("equal");
```

```
else
```

```
s.o.p("not equal");
```

Ans: not equal

4) override the init() method

5)\_jpservice

6) lisenced : controller

7) iterator has previous() method: false

8) predefined values:- parameterization

9) 1000 users accessing SampleSevlet : 1 object will create

10) <@ include file="Header.html">

1- What is abbreviation of jaxp?

### **Java API for XML Processing**

2- Do we have remove attribute in enumeration?

Yes

3- Which method of jsp can be overridden?

a-jspService() b-jspInit() c-jspDestroy()

4- Which is a w3 standard?

Ans:DOM

5- Syntax for creating a sequence?

```
CREATE SEQUENCE customers_seq
START WITH 1000
INCREMENT BY 1
NOCACHE
NOCYCLE;
```

6- Which has better performance joins or subqueries?

Ans:joins

7- Which text is not parsed in xml?

Ans:CDATA

8- Does HTML contain program logic?

Ans : NO.

8- select (2+3\*4/2-5) from dual;

3

```
10- String s1=new String("abc");
String s2=new String("abc");
```

```
System.out.println(s1.compareTo(s2)); ?
```

Ans:0

```
11- StringBuffer i=new StringBuffer("welcome")
StringBuffer j=new StringBuffer("welcome")
If(i.equals(j))
Sop("i equals j");
If(i.equals(i))
Sop("i equals i");
```

Ans: i equals i

```
12- Integer a=new Integer(2);
Integer b=new Integer(2);
System.out.println(a==b); ?
```

Ans : False

13- HttpServletRequest is \_\_\_\_\_  
a) HttpRequest sub interface  
b) it's not a sub interface  
c) HttpServlet

Ans : Interface which extends ServletRequest

Which of the following variable represents the uncaught throwable object that resulted from a call to the error page in JSP?

Application

Config

Ans:Exception

Request

Statement A: A tag library descriptors an XML document that contains information about a library as a whole and about each tag contained in the library.

Statement B: TLDs are used by a Web container to validate the tags used by JSP page development tools.

Which of the following is true about these statements?

Ans:Statement A is true and statement B is true.

Statement A is true and statement B is false.

Statement A is false and statement B is true.

Statement A is false and statement B is false.

Carefully read the question and answer accordingly.

State whether TRUE or FALSE.

The below code will compile & provide desired output:

```
package p1;
class MyThread extends Thread {
    public void run() {
        System.out.println("Important job running in MyThread");
    }
    public void run(String s) {
        System.out.println("String in run is " + s);
    }
}
class Test {
    public static void main(String[] args) {
        MyThread t1=new MyThread();
        t1.start();
    }
}
```

Ans TRUE and output="Important job running in MyThread"

Abstract classes can be used when

Statement I: Some implemented functionalities are common between classes

Statement II: Some functionalities need to be implemented in sub classes that extends the abstract class

Ans: Statement I & II are TRUE

Statement I is TRUE & II is FALSE

Statement I is FALSE & II is TRUE

Statement I & II are FALSE

Which one is required as a sub-element of listener tag in Deployment Descriptor?

<listener-type>

Ans: <listener-class>

<listener-attribute>

None of the listed options

Select the benefit of using Transfer Object design pattern

Ans: It reduces network traffic by combining multiple calls into one network call and fetch and return multiple values in one trip

It increases the complexity of the remote interface and access by removing coarse grained methods

Ans: Minimizes the latency and server resource usage

It increases the network performance by introducing multiple fine grained remote requests

PLSQL

-----

Which of the following statements are true?

Ans: 1. A collection is an ordered group of elements, all of the same type

Ans 2. Each element in collection has a unique subscript that determines its position in the collection.

3. A collection is an ordered group of elements of different types

Ans: 4.Records are composite types that have internal components that can be manipulated individually

Ans: 5.Nested Table is also known as associative arrays

Which of the following are abstract classes?

- 1.Reader
- 2.InputStreamReader
- 3.InputStream
- 4.OutputStream

1&2

1&2&3

Ans:1&3&4

1&2&4

2&4

Which of the following gives the order of Database administrative steps needed to open an Oracle Database?

Start an instance, Open the Database, Mount the database

Ans:Mount the database, Start the instance, Open the database

Start an instance, Mount the database, Open the database

Start the database, Start the instance, Mount the Database

You are creating a procedure which accepts the employee name and displays the employee details like Employee Name, Employee No, Manager

Identify the correct syntax to achieve the desired result.

```
create or replace procedure prcEmp_details(EmpName varchar2) as begin declare cursor c1 is select * from Emp where Ename=EmpName; begin for rec in c1 LOOP dbms_output.put_line(rec.ename||'|'||rec.empNO||'|'||rec.Mrg); end loop; end; end;
```

```
create or replace procedure prcEmp_details(EmpName varchar2) as
begin
declare
cursor c1 is select * from Emp where Ename=EmpName;
begin
for rec in c1 LOOP dbms_output.put_line(c1.ename||'|'||c1.empNO||'|'||c1.Mrg);
end loop;
end;
end;
```

```
create or replace procedure prcEmp_details(EmpName varchar2 OUT) as begin declare cursor c1 is select * from Emp where Ename
```

Ans: All the statement compile failed

What will be the old and new value of a database column before AFTER and DELETE operation?

Value before change (:OLD) : Null Value After change (:NEW) : Null

Ans: Value before change (:OLD) : Value before delete Value After change (:NEW) : Null

Value before change (:OLD) : Null Value After change (:NEW) : Not Null

None of the above

what is the ans to this?

What is the output of the current code segment ?

```
<c:forTokens items="a,b,c,d,e" delims="," begin="0" end="4" step="2" var="alphabet">
<c:Out value="${alphabet}" />
</c:forTokens>
```

Ans: a c e

```
public void doPost(HttpServletRequest req, HttpServletResponse resp) {
    HttpSession session = req.getSession();
    com.cts.Account acc= new com.cts.Account();
    emp.setAccountNumber(req.getParameter("acc_num"));
    session.setAttribute("account", acc);
    RequestDispatcher page = req.getRequestDispatcher("index.jsp");
    page.forward(req, resp);
}
```

Which of these complete JSPs will print the account number?

Options:

```
<%= account.getAccountNumber() %>
```

Ans:<%= employee.getAccountNumber();%>

```
<jsp:useBean id="account" type="com.cts.Account" /><%= employee.getAccountNumber(); %>

<jsp:useBean id="account" type="com.cts.Account" scope="session"/>
<jsp:getProperty name="account" property="accountNumber" />

<jsp:useBean id="account" type="com.cts.Account" scope="session">
<jsp:getProperty name="account" property="accountNumber" />
</jsp:useBean>
```

If we want to apply a style for a text or a part of a text which tag will be used?

Ans:I: SPAN

II: DIV

Which type of Statement can execute parameterized queries?

Ans:PreparedStatement

ParameterizedStatement

ParameterizedStatement and CallableStatement

All kinds of Statements (i.e. which implement a sub interface of Statement)

Carefully read the question and answer accordingly.

<%

```
List list=new ArrayList();
list.add("a");
list.add("2");
list.add("c");
request.setAttribute("list",list);
request.setAttribute("number","1");
%>
```

Based on the above code segment, which of the following will display "c"?

Ans:1.\${list[2]}

2.\${list.2}

Ans:3.\${list[number+1]}

4.\${list.3}

multiple correct

Carefully read the question and answer accordingly.

Which two of the following are true statements about sessions?

Ans:1.Sessions are destroyed only after a predefined period of inactivity

2.Sessions can span web applications

3.Sessions can be cloned across JVMs

4.You can use the deployment descriptor to cause sessions to expire after a set number of requests

Ans:5.Sessions can be set to never time out

Which statement specifies a constant value for a simple element?

```
<xs:element name="CountryName" type="xs:String" constant="India"/>
```

Ans: <xs:element name="CountryName" type="xs:String" fixed="India"/>

```
<xs:element name="CountryName" type="xs:String" fixedvalue="India"/>
```

None of the listed options

Ans: Statement I: StringBuffer is efficient than “+” concatenation

Statement II: Using API's in StringBuffer the content and length of String can be changed which intern creates new object.

Iterator i= new HashMap().entrySet().iterator();

is this correct declaration

Ans :Yes Compile Successfully

What are the uses of XML parsers?

Ans:1.Parsing XML files and retrieving data from XML elements

2.Creating XML files programmatically

3.Used to direct conversion using an XSLT processor

Consider you are trying to persist or store object of Customer class using ObjectOutputStream class in java.

When you are trying to persist customer object data java code is throwing runtime exception without persisting object

information. Please suggest what is the key important factor you have consider in code in order to persist customer object data.

Ans:Check whether you have implemented Customer class with Serializable interface

A dropped table can be restored by issuing this command.

FLASHBACK TABLE Supplier TO BEFORE DROP;

State True or False.

Ans True;

Which two statements about packages are true?

Ans:1.Packages can be nested.

2.You can pass parameters to packages.

3.A package is loaded into memory each time it is invoked.

Ans:4.The contents of packages can be shared by many applications.

5. You can achieve information hiding by making package constructs private.

1.Error is the sub class of Throwable

Ans:TRUE

FALSE

2.State whether TRUE or FALSE.

Object class provides a method named getClass() which returns runtime class of an object.

Ans:TRUE

3.Type 1 & Type 3 driver types are not vendor specific implementation of Java driver. State True or False

ANS: TRUE

4.Which of the following is the correct syntax for suggesting that the JVM to performs garbage collection?

System.free();

System.setGarbageCollection();

System.out.gc();

Ans: System.gc();

5.Which of following are EL implicit objects?

- 1.\
- 2.parameter
- 3.parameterValues

ANS: 4.header

5.session

6.Carefully read the question and answer accordingly.

Which of following are EL implicit objects?

- 1.\
- 2.parameter
- 3.parameterValues

Ans: 4.header

5.session

1&4

2&4

3&4

4&5

1&5

7.Which method of ServletConfig interface returns a String containing the value of the named initialization parameter, or null if the parameter does not exist?

Ans:getInitParameter(String name)

getParameter()

getServletName(String name)

getInitParameterName(String name)

8.Which of the following correctly defines use of DTD in XML development?

DTD are used by parsers for validating the structure of the XML

DTD are used as contract between two systems to interoperate.

An Application can use the DTD to validate the XML structure it has received from external systems

Ans: All of the listed options

9.Which of the following gives the order of Database administrative steps needed to open an Oracle Database?

Start an instance, Open the Database, Mount the database

Ans: Mount the database, Start the instance, Open the database

Start an instance, Mount the database, Open the database

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10.What will be the old and new value of a database column before AFTER and DELETE operation?

Value before change (:OLD) : Null Value After change (:NEW) : Null

Ans: Value before change (:OLD) : Value before delete Value After change (:NEW) : Null

Value before change (:OLD) : Null Value After change (:NEW) : Not Null

None of the above

11.Which of the following gives the order of Database administrative steps needed to open an Oracle Database?

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Ans: Mount the database, Start the instance, Open the database

Start an instance, Mount the database, Open the database

Start the database, Start the instance, Mount the Database

12.Which statement specifies a constant value for a simple element?

<xs:element name="CountryName" type="xs:String" constant="India"/>

<xs:element name="CountryName" type="xs:String" fixedvalue="India"/>

Ans:<xs:element name="CountryName" type="xs:String" fixed="India"/>

none

13.Consider the following servlet code segment:

```
HttpSession session = request.getSession(true);
session.setAttribute("name", "Cognizant");
session.invalidate();
if (session.isNew())
{ System.out.println(session.getAttribute("name"));
} else { System.out.println(session.isNew());
}
```

What is the output of the above code segment ?

Ans: Compilation Error due do session.invalidate();

14.Which two statements about packages are true?

Ans: 1.Packages can be nested.

2.You can pass parameters to packages.

3.A package is loaded into memory each time it is invoked.

Ans: 4.The contents of packages can be shared by many applications.

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ans 4&5

15.Consider a development scenario where you want to write the object data into persistence storage devices (like file, disk etc.).Using which of the below concept you can achieve the given requirement?

Ans: Serialization

synchronization

Deserialization

Finalization

Which of the following variable represents the uncaught throwable object that resulted from a call to the error page in JSP?

Application

Config

Ans:Exception

Request

**Statement A:** A tag library descriptors an XML document that contains information about a library as a whole and about each tag contained in the library.

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State whether TRUE or FALSE.

The below code will compile & provide desired output:

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    }
    public void run(String s) {
        System.out.println("String in run is " + s);
    }
}
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    public static void main(String[] args) {
        MyThread t1=new MyThread();
        t1.start();
    }
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Ans TRUE and output="Important job running in MyThread"

Abstract classes can be used when

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<listener-type>

Ans: <listener-class>

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None of the listed options

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Ans: It reduces network traffic by combining multiple calls into one network call and fetch and return multiple values in one trip

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PLSQL

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2&4

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You are creating a procedure which accepts the employee name and displays the employee details like Employee Name, Employee No, Manager

Identify the correct syntax to achieve the desired result.

```
create or replace procedure prcEmp_details(EmpName varchar2) as begin declare cursor c1 is select * from Emp where Ename=EmpName; begin for rec in c1 LOOP dbms_output.put_line(rec.ename||'|'||rec.empNO||'|'||rec.Mrg); end loop; end; end;
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end loop;
end;
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Ans: All the statement compile failed

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```

Ans: a c e

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    RequestDispatcher page = req.getRequestDispatcher("index.jsp");
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}
```

Which of these complete JSPs will print the account number?

Options:

<%= account.getAccountNumber() %>

Ans:<%= employee.getAccountNumber();%>

<jsp:useBean id="account" type="com.cts.Account" /> <%= employee.getAccountNumber(); %>

<jsp:useBean id="account" type="com.cts.Account" scope="session"/>
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List list=new ArrayList();
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request.setAttribute("list",list);
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```

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- Ans:1.`list[2]`
  - 2.`list.2`
  - Ans:3.`list[number+1]`
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- multiple correct

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- Ans:5.Sessions can be set to never time out

Which statement specifies a constant value for a simple element?

```
<xs:element name="CountryName" type="xs:String" constant="India"/>
```

Ans: `<xs:element name="CountryName" type="xs:String" fixed="India"/>`

```
<xs:element name="CountryName" type="xs:String" fixedvalue="India"/>
```

None of the listed options

Ans: Statement I: StringBuffer is efficient than “+” concatenation

Statement II: Using API's in StringBuffer the content and length of String can be changed which intern creates new object.

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information. Please suggest what is the key important factor you have consider in code in order to persist customer object data.

Ans:Check whether you have implemented Customer class with Serializable interface

A dropped table can be restored by issuing this command.

FLASHBACK TABLE Supplier TO BEFORE DROP;

State True or False.

Ans True;

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Ans:1.Packages can be nested.

2.You can pass parameters to packages.

3.A package is loaded into memory each time it is invoked.

Ans:4.The contents of packages can be shared by many applications.

5. You can achieve information hiding by making package constructs private.

1. Can the function get\_employees be called in an SQL statement as below ,

SELECT departmentid, description , get\_employees(maxsalary) "Employeeid"

FROM tbl\_departments

WHERE maxsalary = 3000

Ans:TRUE

FALSE

2.If the proposed system to be developed to handle concurrent user requests, with reduced turn-around time & resource usage, then the architecture should employ -----

Firewall

Ans:Load Balancer answer

Application Servers

Web Server

3. What error the following code will display?

DECLARE

dynamic\_stmt VARCHAR2(200);

dummy BOOLEAN;

FUNCTION get\_x (x INTEGER)

RETURN BOOLEAN

AS

BEGIN

NULL;

END get\_x;

BEGIN

dynamic\_stmt := 'BEGIN :b := get\_x(5); END;';

```
EXECUTE IMMEDIATE dynamic_stmt USING OUT dummy;  
END;
```

"Cannot string in current PLSQL session"

"String is not active"

Ans:"Expressions have to be of SQL types"

None of the listed options

4. Which of the following parameter in Query Flashback clearly defines the maximum time period that the database can be flashbacked?

UNDO\_MANAGEMENT

UNDO\_TABLESPACE

Ans: UNDO\_RETENTION answer

DBA\_UNDO\_EXTENTS

5. What are the true aspects of PLSQL?

Ans:A package specification can exists without a package body

A package body appears without package specification

A package can be invoked by itself.

Ans: The Subprograms that are present inside a package cannot exists separately as database objects.

6. Carefully read the question and answer accordingly.

DECLARE

```
TYPE StockItem IS RECORD(  
    item_no Item_master.Item_code%TYPE,
```

```
item_name Item_master.item_name%TYPE,  
quantity Stock.Current_stock%TYPE,  
Unit_price Item_master.unit_price%TYPE);  
St_rec StockItem;  
Predict what type of record it fall under ?
```

Table Record

Cursor Record

Ans:Custom Record

Simple Record

7. Scripting can be blocked in a jsp by:

Ans: Putting <scripting-invalid> element in web.xml

Declaring <scripting-invalid> tag at the top of JSP page

Putting scripting-invalid=true attribute in form tag this one answer

Scripting can't be blocked

8. What are the true aspects of PLSQL?

Ans: A package specification can exists without a package body

A package body appears without package specification

A package can be invoked by itself.

Ans: The Subprograms that are present inside a package cannot exists separately as database objects.

9. A procedure containing a single OUT parameter would be better rewritten as a function returning the value.

true or false

Ans: true

10. State whether TRUE or FALSE.

String class do not provides a method which is used to compare two strings lexicographically.

Ans:False

11. Which of the following are checked exceptions?

ANS:1.ClassNotFoundException

ANS:2.InterruptedException

3.NullPointerException

4.ArrayIndexOutOfBoundsException

12. Oracle instance comprises of background processes and memory structure. State True or False

ANS TRUE

Consider you are developing an application where you have to store and retrieve data in character format in file.

Which API you will use to store and retrieve the data in character format?

Ans:Reader and Writer Stream APIs

InputStream and OutputStream Stream APIs

Collection APIs

None of the listed options

State whether TRUE or FALSE.

The APIS of StringBuffer are synchronized unlike that of StringBuilder

Ans:TRUE

FALSE

StringBuffer is synchronized;

Which two statements are true?

Ans:1.It is possible for more than two threads to deadlock at once.

2.The JVM implementation guarantees that multiple threads cannot enter into a deadlocked state.  
3.Deadlocked threads release once their sleep() method's sleep duration has expired.  
Ans:4.If a piece of code is capable of deadlocking, you cannot eliminate the possibility of deadlock by inserting invocations of Thread.yield().

1&2

1&3

2&3

1&4

2&4

Find the keyword which is not used to implement exception

try

catch

finally

Ans:access

exception

Type 1 & Type 3 driver types are not vendor specific implementation of Java driver. State True or False

TRUE (ANSR)

FALSE

What are the benefits of Logging?

- 1.Debug applications issues easily
- 2.Detect complier errors easily
- 3.Trouble Shoot performance problems

1&2

2&3

1&3

3

Carefully read the question and answer accordingly.

What will be the output of the following Java Script code when the button is clicked?

```
<body>
<script type="text/javascript">
function displayMessage(){
  document.write("Displaying message by using javaScript");
}
</script>
<button type="button" onclick="DISPLAYMESSAGE()">Display Message</button>
</body>
```

It will print the message "Displaying message by using javaScript"

It will not print the message

It will display some error message on browser

None of the listed options

JSP syntax errors are caught during which lifecycle event of JSP?

Execution

Compilation

Translation

Container doesn't mind JSP syntax errors

When a JSP is executed, out of the following, what is most likely to be sent to the client?

The source JSP file

The source Servlet file

HTML

The compiled Servlet file

What is the effect of executing the following JSP statement, assuming a class with name Employee exists in com.cts package.

```
<jsp:useBean id="employee" class="com.cts.Employee" scope="session"/>
<jsp:setProperty name="employee" property="*"/>
```

The code does not compile as property attribute cannot take \* as a value.

The code sets value of all properties of employee bean to \*.

The code sets the values of all properties of employee bean with default values.

The code does not compile as there is no property attribute of setProperty tag.

None of the given option

Carefully read the question and answer accordingly.

Consider the code segment given below:

```
List list = new ArrayList();
list.add("1");
```

```
list.add("2");
list.add("3");
list.add("4");
request.setAttribute("list", list);
String[] names = {"a", "b", "c", "d", "e"};
What will ${names[list[0] + 1]} display?
```

a,b

b

c

a,b,c

Gen wants to create a new JSP page. Which element of JSP provide global information about an entire JSP page?

Scriptlet

Directive

Expression

Declaration

What are the restrictions of GO TO statements?

A GOTO statement cannot transfer control into an IF statement, CASE statement, LOOP statement, or sub-block.

A GOTO statement can transfer control from one IF statement clause to another, or from one CASE statement WHEN clause to another.

A GOTO statement can transfer control into an exception handler.

A GOTO statement cannot transfer control out of a subprogram.

This is multiple choice

Which of the following statements are true

Statement A :The body of the FORALL statement must contain a single DML operation.

Statement B: The EXECUTE IMMEDIATE statement prepares (parses) and immediately executes a dynamic SQL statement or an anonymous PL/SQL block.

Both statements A and B are False

Both A and B are True

Statement A is false and B is True

Statement A is True and B is False

Which of the following parameter in Query Flashback clearly defines the maximum time period that the database can be flashbacked?

UNDO\_MANAGEMENT

UNDO\_TABLESPACE

UNDO\_RETENTION

DBA\_UNDO\_EXTENTS

Which type of parser is suitable, when applications is required to read data without modifying the content

DOM

SAX

XML

None of the listed options

Which design pattern used in creating connections using Java Database Connectivity (JDBC) API

Proxy pattern

Factory Pattern

Iterator

Abstract Factory



14- vehicle car class a)120,120,120 b)120,60,0 c)0,0,0 d)60,60,60

15- Jsp after processing what will it return to client a)jsp b)html c)source servlet d)compiled servlet

16- Many users accesssing lots of tables each using more than 100 lines of code.

What is the best option?

- 1.View
- 2.Index
- 3.[Stored Procedure](#)

17- Which of these subelement or child elements is created in the Deployment Descriptor(XML) during creation of listeners?

- 1.<listener-class>
- 2.<listener-param>
- 3.<listener-attribute>

18- try{

```
int i=10;
int j=i/0;
return;
}
catch()
{
Sop("welcome");
}
SOP(j);
What happens?
1.prints welcome
2.Runtime-error
3.Compilation error
```

19- Variable V varchar2(20)

- 1.Invalid declaration
- 2.Global declaration
- 3.Local Declaration
- 4.Bind Variable //nt sure

20- how to divide pa page into two rows?

a)rowspan b) colspan c)[rows="50%50%"](#) d)cols="50%50%"

21- why expression language is used in JSP page?

a)write java code b)import files c)[print statements](#) d)declare variables

22- how to disable all triggers?

[ALTER TABLE table\\_name DISABLE ALL TRIGGERS;](#)

23- form action to wat attributes will be redirected to next page..

a)get b)post c)the parameter is added in httprequest d)[the parameter along with submit is added to request](#)

24- which creates container of webpage

i) DIV ii) Span

25- which is true about constructor?

26- whether we have to specify datatype in java Script? no

27- <p:data>

<%=new Date()%>

<p:data/>

What is the body of the custom tag?

- a) Scriptless b) expression language c) JSP

28- Filters can generate auto-response : true/False?

29-JDBC statements are included in which package?

Java.sql.\*;

30-Which reference object in jsp is used in Http servlet Response

a) session

b) context

c) request

d) response

31- how to import a package into JSP?

a) <@ page import="java.util.\*";>

b) < @include import="java.util.\*">

c) < @import="java.util.\*";>

32- line 1 : String string1 =new String("Hi");

line 2: String string2 =String1;

line 3: String1= new String("hello");

line 4: String2= new String("world");

In which line garbage collection takes place?

33- which is a build school?

- a) ANT b)pmd c)cpd

34-. Byte b1=1, Byte b2=2, System.out.println(b1+b2)?

Ans: 3

35. package ke bare me kuchh statement honge aur tumhe 2 ya 3 select krne ha.

Ans: package is logical collection of cls

36. if(" string ".trim.equals(string)) kuch bhi rhega to to ouput else condition wala hoga

37. bufferwriter can be used to read filewriter? ans -true

38. for data security v use with method of servlet? ans- [post](#)
39. . how to implement method of a abstract cls? ans- [method should be defined with public or same access modifier as in abstract cls.](#)
39. return type next() api of iterator? ans-[object](#).
40. join, notify, nofityall should use? ans-[insynchronized method of thread cls.](#)
41. how to destroy session? ans- [session.invalidate\(\)](#).
42. class name should be? ans- [simple n descriptive.](#)
43. when translation n compilation method in jsp in called? ans- [during deployment.](#)
44. filter object consist of? ans- [filter class and description name](#)
45. **study the syntax of complex type element in xml. (In 1<sup>st</sup> ppt of xml)**
46. in collection, synchronized cls r? ans- [vector n hashtable.](#)
47. there r three element in list, we set an element at position 1 then how to access 3rd element of list? Ans: [list\(position of new element+1\)](#)
48. how to create object in xml? ans- [sax](#)
49. for gd practice v use which ? ans- [cpd, pmd.](#)
51. a web page hai jisme 1000 user access kar rhe hai to kitne servlet object banenge? ans- [1](#)
52. ek table me 2000 columns hai, kuchh user ise access karke modify krna chahte hai par sabhi ko access nhi hoga? ans- [create index.](#)
53. ek web application bnaya to iska deployment descriptor ka nam kya hogा? ans- [web.xml](#)
54. XSL ka full form. Ans: [Extensible style sheet language.](#)
55. jsp me servlet context ke equivalent hai? ans-[application.](#)
56. wht is generic n servlet? ans- [servlet is interface n generic is cls which implements servlet.](#)
57. how to include a file in jsp? ans-[import.](#)
59. in jdbc, wht v have to enter data for output? ans-[PreparedStatement.](#)

60. wht is use of filter? ans- security n chking request n response.

61. collection ke bare me optio select krna tha? ans- sabhi sahi the, option yad nhi hai.

■ aur ques programming tha inheritance, thread aur exception handing se.

■ trigger, plsql procedure ka syntax dekh lena

62. how to get element of tag in html page through a java script.

Ans: `document.getElementsByTagName("p")`

63. **publicclass** practice {

```
publicstaticvoid main(String[] args) {  
  
    try{  
        System.out.println("A");  
        System.exit;  
    }catch (Exception e){  
  
    }  
    System.out.println("C");  
}
```

Ans: A

63. **publicclass** practice {

```
publicstaticvoid main(String[] args) {  
  
    char c='a';  
    char c1=c+27; //error  
    System.out.println(c1);  
}
```

Ans: output- compile time erro.

64. **publicclass** practice {

```
publicvoid show(){  
    System.out.println("super");  
}  
}  
class child extends practice{  
    publicvoid show(){  
        System.out.println("child");  
}  
}  
  
publicstaticvoid main(String[] args){
```

```
        super.show();                                //error
    }
}
```

Ans: compilation error.

65) a field in interface is by default->**public,static,final**

66) drop table will keep the table in recycle bin and can be recovered --**true**

67) Purge command will permanently delete the table—**true**

68. .ROW LEVEL trigger-**for each statement**

69. image alt attribute –**displays text if image is not there**

70. Exception and error is super class of **Throwable**

71. send message to error page- **request**

72. tools for testing the code- **PMD, CPD, ANT**

73. option: **doFilter()**

74. . If there are more than one text box with the same name in a form, then how will you retrieve the first value of the text box? (choose all possible options)

- a. **request.getParameter("textBoxName");**
- b. **request.getParameterValues("textBoxName")[0];**
- c. **request.getHeader("textBoxName");**
- d. **request.getAttribute("textBoxName");**

75.

Which HTTP methods are used to show the client what the server is receiving?

- a. **GET**
- b. **PUT**
- c. **TRACE**
- d. **OPTIONS**

76. Assume a class named Employee which has a property called “empId” which is of type int. “employee” is an attribute instance of Employee. Which of the following are legal ways of setting the empId field to Also assume that there is a parameter called “empId” with the value 10 available to the jsp as a request parameter?

- a. **<jsp:setProperty name="employee" property="empId"/>**
- b. **<jsp:setProperty property="empId" value="10"/>**
- c. **<jsp:setProperty name="employee" property="\*"/>**
- d. **<jsp:setProperty name="employee" property="empId" param="empId"/>**

77. How will you retrieve the first value of request parameter “fname”? (Choose all options that apply)

- a.  **\${param.fname}**
- b.  **\${requestParams.fname}**
- c.  **\${requestScope.fname}**
- d.  **\${paramValues.fname[0]}**

78. POST method is considered to be idempotent method (state true/false)

- c. **True**
- d. **False**

79. . In Expression Language \${8 / 0} – displays Infinity (state true/false)

- a. True
- b. False

80. <pref:tag1>  
<%= result %>  
</pref:tag1>

80. Which of the following are valid for the <body-content> tag of tag1?

- a. JSP
- b. empty
- c. scriptless
- d. tag dependant

81. Which of the following EL implicit objects is not a Map?

- a. requestScope
- b. initParam
- c. headerValues
- d. pageContext

82. . How will you access a servlet context initialization parameter named “company-name”?

- a. \${init.company-name}
- b. \${init['company-name']}
- c. \${initParam["company-name"]}
- d. \${contextParam.company-name}

83. Which of the following are JSP implicit objects?

- a. pageContext
- b. application
- c. requestScope
- d. exception

84. Which of the following are valid?

- a. <jsp:include page="Header.jsp"/>
- b. <jsp:include file="Header.jsp"/>
- c. <%@include file="Header.jsp"%>
- d. <%@include page="Header.jsp"%>

85. Can we use try block inside catch block.-→yes

86. .DTD-Document Type Def.

87. content read inside the first paragraph tag

Var content=document.getElementByTagName("p")[0].innerText

88.what is return type of getWriter()

Printwriter out=response.getWriter();

Out

89. Default method-get

90.Which carries bulk data –Post method

91. Why versioning is used in s/w development ??

Options-1.WinZip 2.Branching n merging 3.Formatting 4.Recovery of data

92. When Scriptlet executes then every time call goes to JSP(True/False)?true

93. Select (3\*2) from dual

Ans-6

94. Method to override comparable interface

a.compareTo

b.comarable

c.comapre

d.compare with

95. Where do you find config class.?

Ans-javax.servlet.servleConfig

96.Are there any datatypes in java script?

Ans-No..(only var)

97.How do you store objet to the disk storage?

Ans-Using serialization

98.What will be the output

Class Abc

{

```
Psvm()
{
int i=10;
if((i++<12) && (++i<15))
{
Sysout(i);
}
Else
{
Sysout(i)
}

}
```

Ans-12;

99.Select checked exceptions

Ans-1. Intercepted Exception  
2. ClassNotFoundException

100. send message to error page- request

101.reading the object from disk (ObjectInputStream) → deserialization

102; writing the object to disk ( ObjectOutputStream) → serialization

103. GOOGLEBOT – page should not be archived

104. static variables can be **serialized** and transient variables **can not be serialized** → true

105. ) bank question - locking system ans: synchronization

106.coading standard checking using → pmd nd cpd

107Can send large amount of information via POST method → yes

108) In MVC presentation logic is done in → view

109) change RAISE\_APPLICATION\_ERROR to RAISE\_APPLICATIONS\_ERROR

110.<% int b=6;%>

<%=a\*b;%>

Ans: Error at line 3

111) Varray question

VArray ar={1,2,3,4,5,6}

While (x<v.last) loop out.print()

Ans: compilation at line 3

112) x=1;

If (x>0)

X=3;switch(x){case1 ...}

Ans:3,4

113. to import custom tags **Taglib directive** is used

114>Protected abstract void method\_name ()---->can be implemented in sub class with public or protected mode

115)  
<%! Int a=6; %>  
    <% Int b=6; %>  
    <% =a\*b; %>

Ans:--error in 3<sup>rd</sup> line because of ;

116)

- a)static variable can be serialized
- b)transient variable can't be serialized.

Which staments are true:

True,true.

117)Atm machine scenario->thread synchronization

118)in threads synchronized methods are always better than synchronized code

119) Which of the following attributes of page directive are invalid?

- a. isELIgnored
- b. session
- c. language
- d. isScriptingEnabled

120.what can be used to include one or more html file/page→frameset

121.garbage collection is demon thread→true

122. Which of the following are JSP implicit objects?

- a. pageContext
- b. application
- c. requestScope
- d. exception

123.multiple view→view delegate

124.decouple→business delegate,business application

Questions

1.advantage of branching

2.cursor syntax

## OUR SWEET

1)Runtime exception can be handled:

- a. True
- b. False

2) Garbage Collection can be forced with certainty

- a. True
- b. False

3) class TestReturn{  
 Public static void main(string args[])  
 {  
 Int i=10;  
 SOP("Result : "+ getSquare(i));  
 }  
 Public static int getSquare (int i)  
 {  
 Return i\*i;  
 SOP("END OF GET SQUARE");  
 }  
 }  
 a)100  
 b) runtime error  
 c) END OF GET SQUARE , 100  
 d) 100 , END OF GET SQUARE  
 e) compile error (Because, it shows 'Unreachable code' error, SOP after return statement can't be reached)

4) class A{  
 void display(){  
 }  
 class B extends A {  
 //CODE1  
 }  
 Which of the below options can replace the CODE1  
 a. void display()  
 b. protected void display()  
 c. int display()  
 d. private display()

5) Runtime Polymorphism  
 a. makes efficient use of memory  
 b. Code reuse  
 c. code flexibility at runtime

6) How to create a new File creation (choose 2)  
 a. File f= new File("abc.txt");  
 b. FileWriter f= new FileWriter("m.text");  
 c. new File().createNewFile("abc.txt");  
 d. BufferedReader br= new BufferedReader( new InputStreamReader( new FileInputStreamreader))

7) Which of the following gives the supertype of all annotation?

Answer: java.lang.annotation.Annotation

8) stored procedure answer: CallableStatement

9) Which parameters are registered before using Callable Statement

- a. IN parameter
- b. INOUT parameter
- c. OUT parameter**

9 ) public class array3{  
 PSVM(string args[]){  
 Int ai[][]={{ {1,2},null };  
 For(int [] ea:ai)  
 For(int e:ea)  
 SOP(e);  
 }  
 }

- a)1,2
- b) 1, 2, null
- c) compile error at 4**
- d) runtime error at 5

10) supertest{  
 Static int y=2;  
 Supertest(int x)  
 {  
 This();  
 Y=x\*2;  
 this();  
 .....[can't remember]  
 }  
 Testcase{  
 Testcase(int y)  
 {  
 Super y;  
 }  
 PSVM(string args[]){..... SOP(y)}  
 }

- a) y=2
- b) y=3
- c) y=6
- d) y=9**

11) Object obj= new Object(); (Check out the answer, doubt)

How to destroy this object

- a. System.gc();
- b. obj= null;**
- c. destroy();
- d. finalize();

12)

Consider the following code snippet:

```
1)long test = 045;
2)float f = -132;
```

```
3)int value = (int)true;  
4)double d = 0x12345678;]
```

5)short s = 20;

Which of the following option gives the legal assignments?

a. 1245

b. 1 3 4

c. 1 3 4 5

13) Unboxing the Numeric Wrapper types to primitive types is done under operations (choose 3)

a. **++**

b. +

c. **--**

d. =

e. **==**

14) which are not the default delimiters for StringTokenizer (Choose 2)

a. \t

b. \f

c. ;

d. ,

15) int method(byte s, int a) {

    return s+a;

}

int method(short s, short a) {

    return s-a;

}

Psvm(..) {

    SOP( method(12,2);

}

a. 14

b. 10

c. Complier error

d. 9

16) Which is true about Annotation(choose 3)

a. Its used as metadata information for Java source file

b. Can replace XML configuration

c. Can be embedded in class file

d. Can not be retrieved during Run time

17) class someclass{

```
Psvm() {  
    byte b=1;  
    long lg=1000;  
    b+=lg;  
}  
}
```

a. Compiles successfully without printing anything

- b. Compilation error
- c. Runtime exception
- d. Required explicit type casting

18) Which method is static in Thread class

- a. join()
- b. sleep()
- c. wait()
- d. start()

19) class Myerror extends Error{ }

```
class myClass{  
    try{  
        throw new Error();  
    } catch(Error e){  
        SOP("Error caught");  
    }  
}
```

a. Compilation error

b. Prints Error caught

c. Run time Error

20) Object obj[] = ("Hellw world", new Date());

```
For each(String s: obj)  
{  
    SOP(s);  
}
```

What changes must be made for successful compilation (Choose 2) (Not sure)

a. In line 1, make Object to String type

b. In line 2, make String to Object

c. Use new Date().toString()

d. Downcast Object to String class

21) Parent class extends Child class, which is true about this:

- a. Child c= new Parent();

- b. Parent p= new Child();
- c. Parent c = new Object();
- d. child c= new Object();

22) Which of the following is the supertype of Annotation:

- a. java.lang.annotation
- b. .java.lang.annotation.Annotation
- c. It has no supertype, cannot extend any class or interface

23) What is 'Java platform'?

- a. JRE
- b.JDK
- c. JVM

24) Which collection stores No duplicates and sorted data

- a. HashSet
- b. ArrayList
- c.TreeSet

25) TreeSet uses interface to sort the data

- a. Serializable
- b. sortTable
- c. Comparable

26) What is true about Object class? (choose 2)

- a.It implements Serializable interface
- b. It has code for Thread synchrnozation
- c. cannot be instantiated
- d. Its an abstract class
- e. It has methods for Set implementation

27) StringTokenizer str= “This \tis intentionally made tough”;

How many tokens?(Token =”t”)

a. 5

b. 8 (there are 4 blank space and 1 \t and three lower case t= 4+1+3 )

c. 9

d. 7

28) class.forName(“Oracle.Jdbc.JdbcDriver”);

Which options are correct?

- a. It loads Driver and instantiate it
- b. It loads driver, register and instantiates it.
- c. It loads, but instantiation is done at the time of establishing connection
- d. Oracle.Jdbc.JdbcOdbc is an object of DriverManager class
- e. Oracle.Jdbc.JdbcOdbc is an object of Driver interface

29) New update in Java 6?

Ans: JDBC 4.0

```
30) import java.IOException; (Not sure about program)
    Import java.io.FileNotFoundException;
    Public class TestThrow{
        Psvm() {
            Try {
                method1();
            }
        Finally{
            SOP("finally method");
            Throw new IOException();
        }
        Static void method1() throws FileNotFoundException {
            Throw new FileNotFoundException();
        }
    }
```

a. Finally method1

b. Finally method1

IOException

c. Finally method1

FileNotFoundException

d. FileNotFoundException

Finally method1

31) To get metadata of ResultSet object, method is:

- a. rs.getmetaData()
- b. rs.getmetaInfo()
- c. getmetaData()
- d. getResultSetgetmetaData

32) Which of the lines are correct

Apple extends Runnable{

```
//Line 1. Thread t1= new Thread(new Apple());
//Line 2. Thread t1= new Thread("Apple");
//Line 3. Thread t1= new Thread(new Apple(), "name");
//Line 4. Thread t1= new Thread();
```

a. 1 is wrong

b. 2 is wrong

c. 3 is wrong

d. 4 is wrong

e. All are correct

33) Which string method doesnot create a new string object

- a. concat()
- b. replace()
- c. **toString()**
- d. subString()

34) psvm() {  
    sum("A", "B", "C");  
    sum(2,4,6);  
    sum(1.4, 1.6, 3.9);  
}

```
Static String sum(<CODE1>... item){  
    String s;  
    For( <CODE2 > e: item)  
    {  
        s+=e.toString()  
    }  
    return s;  
}
```

What can replace CODE1 and CODE2?

a. String & String

**b. Object & Object**

c. Number & Number

35) Consider the following listed items:

- A. Employee();
- B. public Employee();
- C. private Employee();

Consider the following statements:

- I. no-argument constructor, that does not allow instantiation from within the package
- II. no-argument constructor, that does not allow instantiation from outside the package
- III. no-argument constructor

36) Which of the following option gives the exact matches of above listed items and statements?

- a. A-II, B-III, C-I**
- b. A-III, B-I, C-II
- c. A-II, B-I, C-III
- d. A-I, B-II, C-III

36) Consider the following list of items in Column A and column B

Column A

- 1) Vector
- 2) HashSet
- 3) TreeSet
- 4) ArrayList

Column B

- A) It is not ordered or sorted

- B) It compares and stores the data in a sorting order
- C) Permits all elements including NULL.
- D) It tries to optimize storage management by maintaining a capacity and a capacity Increment.

Which of the following option gives the valid match between the Items in Column A and Statements in Column B?

- a. 2-A, 4-B, 3-C, 1-D
- b. 2-A, 3-B, 4-C, 1-D
- c. 1-A, 2-B, 3-C, 4-D
- d. 1-A, 3-B, 4-C, 2-D

37) interface I{

```
protected Int i=10;      //line 1  
Public static final c=20; //line 2  
Transient c=24; //line 3  
Volatile d=32; //line 4  
}
```

Which are the wrong declarations?

- a. 1, 2, 3

- b. 1,3,4

- c. Only 2

- d. None

38 ) To choose which is true from the given options,

Ans: Final && private cant be used with abstract keyword

39) Which are true

- a. Array cant be used with instanceof operator
- b. It can used for Object references
- c. equals() method compare the contents of objects
- d. == compares the references of two objects

40) Which is right?

- a. Iterator i= HashMap.Iterator();
- b. Iterator i= HashMap.entrySet().Iterator();
- c. some options..

41) List l= new ArrayList();

```
l.add(12);  
l.add(34.344);  
l.add(19239456);
```

Which generic type must be used?

- a. List<Integer>

- b. List<Number>

- c. List<Double>

- d. List<Float>

(We have given our best, please verify the answers again ☺ )

42. Consider the following Statements:

Statement A:

**wait**, notify and notifyAll methods are not called on Thread, they are called on Object

Statement B:

These methods can only be called from synchronized code, or an IllegalMonitorStateException **will** be thrown. Which of the following option **is** true regarding the above statements?

- a.s statement A and B both are true
- b. Statement A **is** true and B **is** false
- c. Statement B **is** true and A **is** false
- d. Statement A and B both are false

43. Which of the following statement **is** true regarding the throws declarations for overridden methods?

- a. the overriding method cannot re-declare the Unchecked exceptions, that are declared by super class method.
- b. The overriding method cannot declare additional exceptions **which is** not declared in its super class version.
- c. The overriding methods cannot declare to throw the Super Class types of those exceptions declared in the super class methods.
- d. **When** a method in the super class **is** declared to throw a Checked Exception, the overriding method in the sub class should also declare the same.

45. Which of the following statements are true? (Choose 2)

- a. Final modifier is not applicable for abstract classes
- b. Private members of a class are not accessible through its object instance
- c. Package level members in a public class will be available to the inherited class outside the package.
- d. Static modifier is applicable only for inner classes

46. An Annotation Type can extend another Annotation type. State True or False.

Answer:      °True

0 False

47. Consider the following variable declarations:

```
int x=100, y=200;  
Integer i=100, j=200;
```

Which of the following options are true regarding the above code snippet? (Choose 3)

- a. The expressions  $(x < y)$  and  $(i < y)$  are functionally same
- b. The expression  $(j - i)$  evaluates to another Integer wrapper type object with the value 100
- c. The expressions  $(x == y)$  and  $(i == j)$  are functionally same
- d. The expressions  $(x != j)$  and  $(i != y)$  evaluates to the same result

48. A private method can be declared as abstract. State True or False.

**49.** Which of the following option gives the valid collection implementation class that implements the List interface and also provides the additional methods to get, add and remove elements from the head and tail of the list without specifying an index?

- a. LinkedList
- b. ArrayList
- c. List
- d. Collection**

**50.** Consider the following code:

```
1 public class FinallyCatch {
    2 public static void main(String args[]) {
3 try {
4 throw new java.io.IOException;
5 }
6 }
```

Which of the following is true regarding the above code?

- a. Demands a finally block at line number 4
- b. Shows unhandled exception type IOException at line number 5
- c. Demands a finally block at line number 5

d. Shows unhandled exception type IOException at line number 4

**51.** Consider the following statements:

- A) Every floating-point literal is implicitly a double, not a float.
  - B) In the declaration byte b=120; int literal 120 is implicitly converted to byte.
- Which of the following option is valid regarding the above statements?

- a. Both A and B are true
- b. Both A and B are false
- c. Only A is true
- d. Only B is true

**52.** Consider the following Statements:

Statement A: Anonymous inner class can extend a class and implement an interface at the same time. Statement B: Anonymous class can have their own members.

Which of the following option is true regarding the above statements?

- a. Both the statements are true
- b. Statement B is true and A is false
- c. Both the statements are false
- d. Statement A is true and B is false

Constructors can be declared as private. State True or False.

True

False

53.protected methods can be accessed from outside the package. State True or False.

answer:       True

False

54.Which of the following is true about packages?

- a. Class and Interfaces in the sub packages will be automatically available to the outer packages without using import statement.
- b. Packages can contain both Classes and Interfaces
- c. Packages can contain only Java Source files
- d. Sub packages should be declared as private in order to deny importing them

55.Which of the following statements are true regarding try-catch-finally? (Choose 2)

- a. A catch block can have another try block nested inside
  - b. An exception which is not handled by a catch block will be handled by subsequent catch blocks
- c. Finally block cannot have a try block with multiple catch blocks
- d. An exception which is not handled by a catch block can be handled by writing another try catch block inside finally block

56.Consider the following code snippet:

```
static {try Class.forName("oracle.jdbc.OracleDriver"); } catch(ClassNotFoundException cnfe)  
System.out.println("Driver not found");
```

Which of the following statements are true regarding the above code snippet?

- a. It loads the OracleDriver class, and instantiates a DriverManager object and returns
- b. oracle.jdbc.OracleDriver is a DriverManager class type object.
- c. It just loads the OracleDriver class, instantiation happens at the time of connectiond.
- d. It loads the OracleDriver class, instantiates it and registers it with DriverManager class

57.jDBC API allows to connect to more than one database from a Java Application simultaneously. State TRUE or FALSE.

True False.

58.Which of the following statements are true about finalize method?

- a. finalize will run when an object becomes unreachable
- b. finalize allows a programmer to free memory allocated to an object
- c. finalize may run before or after an object is garbage collected
- d. finalize will always run before an object is garbage collected

Consider the following code:

```
public class Eatable {
```

```

Eatable() {System.out.print("Eat"+ " ");}
class Chocolate{
    Chocolate() {System.out.print("Chocolate"+ " ");}
    public void eat() {System.out.print("enjoy"+ " ");}
}
public static void main(String[] args) {
Eatable f = new Eatable(); f.makeChocolateQ;
void makeChocolateQ {(new Chocolate() {}).eat();}

```

59.Which of the following option gives the valid output for the above code?

- a. Eat Chocolate enjoy
- b. Compilation Error
- c. Runtime Error
- d. Chocolate enjoy Which of the following option can be best

60.matched against the example 'Television'?

- a. abstraction//encapsulation

61.Consider the following listed items:

- A.a method declared as final
- B.a method declared as abstract
- C.a method declared as private

Consider the following statements:

- I. Will not be available in sub classes
- II. Will deny overriding the method
- III. Will not allow instantiating the class

Which of the following option gives the exact matches of above listed items and statements?

- a. A-II, B-III, C-I
- b. A-III, B-II, C-I
- c. A-II, B-I, C-III
- d. A-I, B-II, C-III

62.Consider the following statement about volatile key word in java:

Declaring a volatile lava variable means, the value of this variable will never be cached thread-locally: all reads and writes will go straight to "main memory";

State whether the above statement is TRUE or FALSE? Answer:

True

False

63.Consider the following code

```

class Smile {
    protected joy h;
}
class Happy extends Smile { } class joy { }

```

Which of the following statement is correct regarding the above given code?

- a. Happy is-a joy and has-a Smile.
- b. joy has-a Happy and Happy is-a Smile.
- c. Happy has-a joy and Happy is-a Smile
- d. Smile is-a Happy and has-a joy

64.Consider the following code:

```
public class TestOverloading ; 75 int _length(String s)
```

```
return s.lengthQ;  
float _length(String s) return (float) s.lengthQ;  
Which of the following statement is true regarding the above code?
```

- A. Both the length() methods are duplicated methods  
b. Both the length() methods are overloaded methods  
c. Overloaded methods cannot start with a special character like  
d. Overloaded methods should be declared as public

65. Which of the following statements is TRUE about StringBuffer class?  
a. StringBuffer can be extended, since it is mutable  
b. StringBuffer is a mutable class  
c. StringBuffer is a sub class of String class  
d. StringBuffer is a Wrapper to the existing String class

66. Consider the following code:

```
Line no:1 interface iOne  
Line no:2 {int i=10;}  
Line no:3 interface iTwo  
Line no:4 ; {int i=10;}  
Line no:5 public class TestInterface implements iOne,iTwo{  
Line no:6 public static void main(String[J a)  
Line no:7 ; System.out.println(i);
```

- a. 10 b. 0 c. Compilation error at line no 7 d. Runtime Error at line no 7  
67. Which of the following statement gives the use of CLASSPATH?

- a. Holds the location of Java Extension Library  
b. Holds the location of User Defined classes, packages and JARs  
c. Holds the location of Java Software  
d. Holds the location of Core Java Class Library (Bootstrap classes)

68. Consider the following interface declarations:

```
interface A (void main(String[] args);}  
5 interface B ;public void main(String[] args);} interface C ;public static void main(String[] args);} interface D ;protected void  
main(String[] args);} interface E ;private void main(String[] args);}
```

Which of the following option gives the valid interface declaration that will compile successfully?

- a. interface A,B,C  
 b. interface B,C,D  
 c. interface B,C,D  
 d. interfaces A,B set of services

69. provided by a component or by a class is called

- a. Interfaces
- b. Objects**
- c. Components
- d. Containers

70. Consider the following statement that represents a relationship:  
"Shyam has a best friend who is a Tree" :

Which of the following option represents the above relationship correctly?

- a. class Shyam extends Tree { }
- b. class Shyam { private BestFriend Tree; }
- c. **class Shyam { private Tree bestFriend; }**
- d. class Shyam implements Tree { }

71. Consider the following:

Assume that there is a package structure as follows:

75

com.testpack

which contains a class called TestPack, with some static and non-static methods and a static inner class.

Which of the following options give the valid import statements for the above package structure and class, in order to import the class TestPack or its members? (Choose 2)

- a. import com.testpack.TestPack;
- b. **import com.testpack;**
- import com.testpack.TestPack.\*;
- import static com.testpack.TestPack;

72. Consider the following code snippet:

- 1) long test = 045;
- 2) float f = -132;
- 3) int value = (int)true;
- 4) double d = 0x12345678;
- 5) short s = 20;

Which of the following option gives the legal assignments?

- a. 1 2 3 4
- b. 1 2 3 4 5
- c. 1 2 4 5
- d. 1 3 4 2

73. Consider the following listed items:

- A. Differing by Signatures
- B. Code that executes before main() method
- C. Code that executes before constructor

Consider the following statements:

- I. Instance Block
- II. Method Overloading

### III. Static Block

Which of the following option gives the exact matches of above listed items and statements?

- a. A-I, B-II, C-III
- b. A-II, B-III, C-I
- c. A-II, B-I, C-III
- d. A-I, B-III, C-II

74. into distinct layers of abstraction is called as

- a. Abstraction
- b. Cohesion
- c. Composition
- d. Decoupling

75. Consider the following list of items in Column A and column B

Column A

- 1) Vector
- 2) HashSet
- 3) TreeSet
- 4) ArrayList

Column B

- A) It is not ordered or sorted
  - B) It compares and stores the data in a sorting order
  - C) Permits all elements including NULL.
  - D) It tries to optimize storage management by maintaining a capacity and a capacity Increment.
- Which of the following option gives the valid match between the Items in Column A and Statements in Column B?

- a. 2-A, 4-B, 3-C, 1-D
- b. 2-A, 3-B, 4-C, 1-D
- c. 1-A, 2-B, 3-C, 4-D
- d. 1-A, 3-B, 4-C, 2-D

76. Which of the following are true regarding RuntimeException? (Choose 2)

- a. RuntimeException can be handled using a catch that handles Error
- b. Any class that derives the RuntimeException will always be an unchecked exception
- c. RuntimeException does not require a throws declaration
- d. If RuntimeException is declared using throws clause, then the calling method should handle it using try-catch block

77. Which of the following statement is false about for-each loop in Java?

- a. for-each loop does the automatic typecasting
- b. for-each loop is an alternative to Enumeration
- c. for-each loop is an alternative to Iterator
- d. for-each loop can work only with generic collections

78. Consider the following listed items:

- A. Employee();
- B. public Employee();
- C. private Employee();<sup>14</sup>?

Consider the following statements:

- I. no-argument constructor, that does not allow instantiation from within the package
- II. no-argument constructor, that does not allow instantiation from outside the package
- III. no-argument constructor

Which of the following option gives the exact matches of above listed items and statements?

- a. A-II, B-III, C-I
- b. A-III, B-I, C-II
- c. A-II, B-I, C-III
- d. A-I, B-II, C-III

79. HashMap is a Collection class. State TRUE or FALSE.

True

False

80.a.Employee() {

- b. public Employee() {
- c. private Employee() {

Consider the following statements:

- I. no-argument constructor, that does not allow instantiation from within the package
- H. no-argument constructor, that does not allow instantiation from outside the package
- HI. no-argument constructor

Which of the following option gives the exact matches of above listed items and statements?

- a. A-II, B-III, C-I
- b. A-III, B-I, C-II
- c. A-II, B-I, C-III
- d. A I, B-II, C-III

81. HashMap is a Collection class. State TRUE or FALSE.

Answer: True

False

82. Which of the following statement gives the significance of overriding equals() method in user defined classes?

- a. Comparing creation time of two objects
- b. Comparing object Ids of two objects
- c. Comparing content of two objects
- d. Comparing memory references of two objects

Consider the following Statements:

Statement A:

`wait`, `notify` and `notifyAll` methods are not called on Thread, they are called on Object

Statement B:

These methods can only be called from synchronized code, or an `IllegalMonitorStateException` will be thrown. Which of the following option is true regarding the above statements?

- a. Statement A and B both are true
- b. Statement A is true and B is false
- c. Statement B is true and A is false
- d. Statement A and B both are false Which of the following statement is true

regarding the throws declarations for overridden methods?

a. the overriding method cannot re-declare the Unchecked exceptions, that are declared by super class method.

b. The overriding method cannot declare additional exceptions which is not declared in its super class version.

- c. The overriding methods cannot declare to throw the Super Class types of those exceptions declared in the super class methods.
- d. When a method in the super class is declared to throw a Checked Exception, the overriding method in the sub class should also declare the same.

Which of the following statements are true? (Choose 2)

- a. Final modifier is not applicable for abstract classes
- b. Private members of a class are not accessible through its object Which of the following statements are true? (Choose 2)
- a. Final modifier is not applicable for abstract classes
- b. Private members of a class are not accessible through its object instance
- c. Package level members in a public class will be available to the inherited class outside the package.
- d. Static modifier is applicable only for inner classes

An Annotation Type can extend another Annotation type. State True or False.

Answer:  True

0 False

Consider the following variable declarations:

int x=100, y=200;

Integer i=100, j=200;

Which of the following options are true regarding the above code snippet? (Choose 3)

- a. The expressions `(x < y)` and `(i < y)` are functionally same
- b. The expression `(j - i)` evaluates to another Integer wrapper type object with the value 100
- c. The expressions `(x == y)` and `(i == j)` are functionally same
- d. The expressions `(x != j)` and `(i != y)` evaluates to the same result

instance

A private method can be declared as abstract. State True or False.

75

**0 True 0 False** Which of the following option gives the valid collection implementation class that implements the List interface and also provides the additional methods to get, add and remove elements from the head and tail of the list without specifying an index?

1. To execute DDL queries---- execute() and executeUpdate().
2. What should be inserted at CODE1 and CODE2? Object and Object.
3. Runtime polymorphism? Code flexibility.
4. Garbage collector can be forced with certainty? False.
5. Dynamic polymorphism? Object.
6. Wrapper class of char? Character.
7. Int a=2; Integer b= 2; SOP (if (a==b))? TRUE
8. Program: public void run(){ while (true) sop("save tigers");} ....implements runnable{ runnable t1= new runnable(); runnable t2= new runnable(); runnable t3= new runnable(); t1.run(); t2.run(); t3.run();} Ans: prints save tigers infinite times.
9. String sql="create table Sample3 ....."; // line1  
Prepared statement st = .....(sql); // line2  
Ans: throwing SQLException at line 2.
10. StringBuffer is immutable? False.
11. Stored procedure? Callable statement.
12. Generic collections? Type safety, automatic typecasting.
13. While (N<=32){N=N\*2; SOP(N);} Ans: 2 4 8 16 32 64.
14. Throw new Throwable(); Ans: compilation fails.
15. Finalize(); choose two? Called only once, before calling garbage collector.
16. Try{ try{ sop("inner try"); return 100; } finally{ sop("inner finally"); return 200; } finally{ sop("outer finally"); return 300; } }  
Ans: inner try  
Inner finally  
Outer finally  
300
17. Methods that cannot be overridden in Object class? Wait() and notify().
18. Super() etc etc program? Ans: 9.
19. String tokenizer.. "this \tis intentionally made tough? Ans:5
20. Runtime exception can be handled? True.
21. Number of the objects eligible for garbage collector.. some pgm. Ans: 3.
22. @Override? Method of superclass.
23. No duplicated allowed, must be sorted. Which collection? Tree set.
24. Which are not vendor specific? Type 3 and 4.
25. Jagadeesh ? Linked hash set.
26. Date format pgm.. Ans: dd/MM/yyyy hh/mm/ss a.
27. Pgm.. Ans: nullJava.

HIGHLIGHTED QUESTIONS ARE NEW COMPARED TO HISTYLE...

1. Try block can be used with finally without catch – **TRUE**
  2. Client A sends some data to server which is sent to B in the same order – **QUEUE**
  - 3. Which of the following reads it Line by line? – FILE READER FILEWRITER**
  4. Which one of the following is not a valid declaration? **char("b")**
  - 5. What is true about the methods? Methods cannot have more than one return type**
  6. **CALLABLE STATEMENTS** are used to store the procedure
  7. Interface A, B [ public, public void] – **INTERFACE A,B**
  8. Methods in DDL? **Execute(), Execute update()**
  9. Question on Iterators – **Iterator<String>myIterator=new iterator(); myIterator.hasNext();**
  10. Which of the loops does not require Boolean? **Foreach**
  11. What is true about interfaces? **Every method in interfaces have abstract methods by default.**
  12. Which of the following is not a part of the String class? **Capacity(),delete()**
  13. ArrayList is threadsafe. **FALSE**
  14. Destroy in Garbage collection- **System.gc();**
  15. Annotation types? **Java.lang.annotation.Annotation**
  16. Updation in JDK 1.6? **JDBC 4.0**
  17. (A) wait(),notify(),notifyAll() and (B) ..... – **Both A and B are true**
  18. Wrapper type for char – **Character**
  - 19. IO Exception – Xception caught**
  20. String object wouldn't be created with which of the following? - **toString()**
  21. Runtime polymorphism-**Code flexibility**
  22. Which of the following? Create and remove ...tail – **LinkedList**
  23. When objects are referenced to null they are ready for garbage collection – **TRUE**
  24. Int a=10; switch(a) ..... prints? - **"G"**
  25. Checkvalue{.....} - prints **5,20**
  26. Three tier? - **Type III // driver jdbc**
  27. True about Object Class? - **code for thread synchronization and method for set implementation**
  28. Catch(Throwable e) – **Not error, It can catch**
  29. Hashcode() in HashSet- **not required because it has duplicate elimination by default**
  30. Prepared Statement s; s=create table(...) - **error at executeupdate() since table creation is over.**
  31. @Demo - **{value="TEST"}class myclass;**
  32. **JRE** is the platform independent.
  33. Abstract classes cannot be private - **TRUE**
- HIGHLIGHTED QUESTIONS ARE NEW COMPARED TO HISTYLE...**

## HTML Questions

**Prepared by – Ayyappan SN**

1. Which attribute in the <a> tag is used to open the link in separate window
- a. Target.

- b. Source.
- c. Browser
- d. src

HeadFirst Reference: 158

- 2. An attribute “style” is used to specify
  - a. An inline style for an element.
  - b. An unique id for an element.
  - c. Extra information about an element
  - d. None of the above

Reference: [http://www.w3schools.com/html/html\\_styles.asp](http://www.w3schools.com/html/html_styles.asp)

- 3. URL specified in the “href” attribute must be an absolute URL.
  - a. True
  - b. False

HeadFirst Reference: 61

- 4. Which element is deprecated in HTML
  - a. <center>
  - b. <h1>
  - c. <img>
  - d. <u>

Reference: [http://www.w3schools.com/html/html\\_styles.asp](http://www.w3schools.com/html/html_styles.asp)

- 5. A horizontal line can be inserted using
  - a. <H1>
  - b. <P>
  - c. <hr/>
  - d. <br>

HeadFirst Reference: 116

- 6. The comment tag in HTML is used to insert the comment in the
  - a. Browser
  - b. Source code
  - c. External files
  - d. Style sheets

HeadFirst Reference: 6

- 7. In HTML <br> tag has an end tag
  - a. True
  - b. False

Head first Reference: 100

- 8. If you add 100% in red, green and blue, what colour you will get?
  - a. Yellow
  - b. Gray
  - c. White
  - d. Purple

HeadFirst reference : 364

9. The font-weight property allows to control
  - a. How bold the test looks
  - b. The size of the font
  - c. The font face
  - d. None of the above

HeadFirst reference : 359

10. Which tag is used to link the external style sheet?
  - a. <connect>
  - b. <link>
  - c. <type>
  - d. <a>

HeadFirst reference : 305

### **HTML QUESTIONS AND ANSWERS**

- 1) Is it possible to set up a browser so it refuse pages that does not have a content rating meta tag?
  - a) Yes - many companies and parents actually do
  - b) No
  - c) Only with a cybersitter add on
- 2) When images are used as links they get a blue border.
  - a) Always
  - b) Never
  - c) Unless border is set to zero
- 3) A 6 digit Hex color (#FF9966) defines values of Red, Blue and Green in which order ?
  - a) #BBRRGG
  - b) #BGGRRR
  - c) #RRGGBB
- 4) When you count to 15 using hexadecimal numbers, the highest number is what ?
  - a) F
  - b) B
  - c) 15
- 5) The <small> and <big> tags are special in what way ?
  - a) They can be repeated
  - b) They work on anything
  - c) They are for images only
- 6) What does vlink mean ?

- a) visited link
  - b) very good link
  - c) active link
- 7) Banners, buttons, dividers, clipart and other simple images usually work best as ?
- a) fonts
  - b) gif
  - c) jpg
- 8) Which format usually works best for photos ?
- a) JPG
  - b) HTML
  - c) GIF
- 9) <a> and </a> are the tags used for ?
- a) Audio-voiced text
  - b) Adding links to your page
  - c) Aligning text
- 10) What does the GENERATOR meta tag tell ?
- a) What type of server your page is on
  - b) Which program was used to produce the page
  - c) Who designed the page
- 11) What tag is used to add columns to tables ?
- a) <colspan>
  - b) <td>
  - c)<tr>
- 12) Use<td> and </td>to add what to your tables?
- a) columns
  - b) rows
  - c) steps
- 13) What is the REFRESH meta tag used for ?
- a) Refresh your keywords
  - b) Allow search engines to relist your page
  - c) Redirect to a new domain
- 14) Screen colors are defined by which colors ?
- a) Green, Blue, and Yellow
  - b) Crayola Colors
  - c) Red, Green and Blue

- 15) What tag can prevent sites with adult content from being seen on MSIEbrowsers ?
- a) <meta refresh> tag
  - b)<meta keywords> tag
  - c) icra.org registered <meta http-equiv="pics-label">
- 16) To specify a font for your whole page add which tag ?
- a) <targetfont>
  - b) <defaultfont>
  - c)<basefont>
- 17) Increasing the cellpadding value will what ?
- a) Increase the distance between cell and content
  - b) Increase the space between cells
  - c) Increase the softness of your site
- 18) Which of the following is NOT true of metatags use ?
- a) Which of the following is NOT true of metatags use ?
  - b) Do not include words that are not present on your pages
  - c) Use as many keywords as you can
- 19) To change the size of an image in HTML use what ?
- a) pliers
  - b) height and width
  - c) bigger and smaller
- 20) Hex-colors are the only way to define colors on the web?
- a) True for Internet Explorer, False for Netscape browsers
  - b) False, colors can also be specified with names and CSS
  - c) True, computer screens only understands hexadecimal values.
- 21) Is it a common myth that meta tags seriously improve search engine rankings ?
- a) no
  - b) only in Nepal
  - c) yes
- 22) Choose the correct HTML tag to make a text italic
- a) <italic>
  - b) <i>
- 23) Choose the correct HTML tag to make a text bold
- a) <bold>
  - b) <b>
- 24) If the background image is smaller than the screen, what will happen ?

- a) It will be stretched
  - b) It will leave a blank space at the bottom of your page
  - c) It will be repeated
- 25) HTML defines colors using hexadecimal values, while graphics programs most often use what ?
- a) Names
  - b) Normal numbers
  - c) RGB Code
- 26) The <title> tag belongs where in your HTML ?
- a) Head
  - b) Arm
  - c) Body
- 27) If you don't want the frame windows to be resizeable, simply add what to the <frame> lines ?
- a) save
  - b) dontresize
  - c) noresize
- 28) How can you make a list that lists the items with numbers?
- a) <dl>
  - b) <ol>
  - c)<ul>
  - d)<list>
- 29) Most search engines give serious importance to meta tags when ranking websites in their listings ?
- a) True
  - b) It depends on the keywords
  - c) False
- 30) Which colors consist of equal amounts of all basic colors ?
- a) purple, green, and red
  - b) black, blue, and gray
  - c) white, black and gray
- 31) Which has higher priority, cell settings or table settings ?
- a) Neither
  - b) Cell settings
  - c) Table settings
- 32) What does HTML stand for?

- a) Hyper Text Markup Language
- b) Hyperlinks and Text Markup Language
- c) Home Tool Markup Language

33) What is the correct HTML for adding a background color?

- a) <body background="yellow">
- b)<background>yellow</background>
- c) <body style="background-color:white">

34) To make the appearance of the colors more powerful on your site do which of the following ?

- a) Do not use colors
- b) Limit their use
- c) Splash them all over

35) When is the content of a table shown ?

- a) In pieces as it loads
- b) Before the border loads
- c) After the table is loaded

36) To add rows to your tables use which tags?

- a) <td> and </td>
- b)<cr> and </cr>
- c) <tr> and </tr>

37) Gif and jpg are the two main types of what ?

- a) animated effects
- b) outlines
- c) images

38) WYSIWYG stands for ?

- a) What You See Is What You Get
- b) When You Start Is When You Go
- c) What You See Is What You Gain

39) Choose the correct HTML tag for the largest heading

- a) <heading>
- b)<h6>
- c) <head>
- d) <h1>

40) Choose the correct HTML to left-align the content inside a tablecell

- a) <td valign="left">

- b) <tdleft>
- c) <td align="left">
- d)<td leftalign>

41) To create a bulleted list use ?

- a) <il>
- b) <ul>
- c) <ol>

42) Besides<B>, another way to make text bold is what ?

- a) <strong>
- b) <dark>
- c) <fat>

43) Hexadecimal numbers are numbers based on the value of what ?

- a) 10
- b) 8
- c) 16

44) Which is NOT a predefined target for links ?

- a) \_son
- b) \_parent
- c) \_blank

45) If you do not include a DESCRIPTION meta tag, most search engine will simply list what ?

- a) Nothing
- b) All text above the fold of your page
- c) The first few words on the page

46) How many characters can be written with 1 Kilobyte ?

- a) 1024
- b) 1
- c) Depends on the font used

47)To start a list at the count of 3, use which ?

- a) <ol start="3">
- b) <ol begin="3">
- c)<ol list="5">

48) Who is making the Web standards?

- a) The World Wide Web Consortium
- b) Mozilla

c) Microsoft

49) Which tag can set the background color for your page?

- a) <body>
- b)<head>
- c)<font>

50) What is the correct HTML tag for inserting a line break?

- a) <lb />
- b) <br />
- c)<break />

51) The attribute used to choose the type of font in HTML is ?

- a) Character
- b) Face
- c) Text-type

52) colspan=n can be added to only what tag?

- a)<table>
- b)<td>
- c)<tr>

53) Rather than using Hspace and Vspace you can use which of the following to add spacing to your image ?

- a) height and width
- b) 1x1 pixel transparent image
- c) align=+2

54) What is the correct HTML for creating a hyperlink?

- a)<a name="http://www.qualitypointtech.com">Qualitypoint Technologies</a>
- b) <a href="http://www.qualitypointtech.com">Qualitypoint Technologies</a>
- c) <a>http://www.qualitypointtech.com</a>
- d) <a url="http://www.qualitypointtech.com">Qualitypoint Technologies</a>

55) In the code <frameset cols="120,\*"> the following would be true.

- a) Top frame would be 120 pixels high
- b) Left frame would be 120 inches wide
- c) Left frame would be 120 pixels wide

56) Which program do you need to write HTML?

- a) Any text editor
- b) HTML-development suite 4
- c) A graphics program

57) When making bulleted lists you have what options ?

- a) disc, circle, square
- b) triangle, square, circle
- c) square, disc, polygon

58) A file that specifies how the screen is divided into frames is called a \_\_\_\_\_

- a) frameset
- b) frametable
- c) tablelink

59) Which of these is not valid HTML?

- a) <font face="verdana,arial">
- b)<fontface="verdana">
- c) <font face="verdana">

60) Which of these tags are all <table>tags?

- a) <thead><body><tr>
- b) <table><tr><td>
- c)<table><head><tfoot>
- d)<table><tr><tt>

61) The <br>tag adds what to your webpage ?

- a) Line break
- b) Little bubbles
- c) Long breaks

62) What tag tells where a link starts ?

- a) <l>
- b) <start>
- c) <a>

63) Settings for columns(<td> tag) have higher priority than settings for rows(<tr> tag)

- a) Sometimes true, sometimes not
- b) True
- c) False

64) Colors in plain HTML can be specified using ?

- a) Meta tags
- b) Images
- c) Hexadecimal Colors

65) Relative path make your hypertext links\_\_\_\_\_.

- a) Portable

- b) Discrete
- c) Uniform

66) <ol> tags will create what kind of list ?

- a) Numbered List
- b) Bulleted List
- c) Grocery List

67) Is it possible to link within the current page ?

- a) No
- b) Only in framesets
- c) Yes

68) Tags and text that do not show directly on the page are placed where ?

- a) Body
- b) Tables
- c) Head

69) To create a list using lowercase letters use ?

- a)<ol "a">
- b) <ol letter="a">
- c)<ol type="a">

70) To separate single list items use ?

- a)<li> and </li>
- b)<ol> and </ol>
- c) <ul> and </ul>

71) Which section is used for text and tags that are shown directly on your web page ?

- a) Body
- b) Metatags
- c) Head

72) To set the font for a single link, where do you add the <font></font> tags ?

- a)Outside the <a> and </a>
- b) In the <body> tag
- c) Inside the <a> and </a> tags

73) Why should you add alternative text to your images ?

- a) In case the user wishes to load a different picture
- b) So the user can save the image using the text as a name
- c) So the users can get an idea of what the image is before it loads

74) What is used to store information usually relevant to browsers and searchengines?

- a) Tabs
- b) Cookies
- c) Metatags

75) What tag tells the browser where the page starts and stops ?

- a) <head>
- b) <body>
- c)<html>

76) Why should you specify a background color if you are using an image for the actual background of your page ?

- a) The background color will be shown until the image loads
- b) In case the image doesnt fit right
- c) So the text shows up better

77) The background image will scroll when the user scrolls down the page, unless you add which property to the <body> tag?

- a) bgproperties="holdstill"
- b) bgproperties="fixed"
- c) bgproperties="stationary"

78) Imagelinks can show a text label if you add which property?

- a) alternative
- b) str
- c) alt

79) Adding a border to your image helps the visitor to recognize it as what ?

- a) A really great picture
- b) A frame
- c) A Link

80) Which of the following is NOT a valid pair for browser safe colors ?

- a) AA
- b) CC
- c) 00

81)To start a numbered list with regular numerals use ?

- a) <ol type="a">
- b) <ol type="1">
- c) <ol type="I">

82) Defining clickable sub-areas on an image is called?

- a) imagelinking
- b) imagemapping

c) multiple linking

83) How can you open a link in a new browser window?

- a) <a href="url" new>
- b) <a href="url" target="\_blank">
- c) <a href="url" target="new

84) What tag adds a paragraph break after the text ?

- a) <PARAGRAPH>
- b) <P>
- c) <BR>

85) Which property will open a page in a new window?

- a) target="\_self"
- b) target="\_blank"
- c) target="\_top"

86) The <i> tag makes text... ?

- a) Bold
- b) Inline
- c) Italic

87) Which two meta tags have special relevance for search engines ?

- a) Description and Keywords
- b) Description and Name
- c) Cookies and Keywords

88) To start a list using circles use which of these tags ?

- a) <ul type="circle">
- b)<ul "circle">
- c) <ul type="round">

89) All normal webpages consist of what two parts ?

- a) Head and body
- b) Top and bottom
- c) Body and frameset

90) Use what to prevent confusion on numbers higher than 9 with hexadecimal colors ?

- a) #
- b) !
- c) %

91) Why do designers often use slight variations of black and white as background colors ?

- a) Personal choice

- b) Black and white are ugly colors
- c) To make the page more readable

92) Which will let text wrap down the side of the image?

- a) 
- b)
- c) 

93) There are how many "browser safe colors" ?

- a) 16 Million
- b) 216
- c) 256

94) How do you add a link which will allow the visitor to send an email from your page ?

- a) Add an image of an envelope
- b)Add <a href="mailto:youraddress">
- c) Add <a href="mailto:youraddress">

95) Which tag is used to insert images into your web page ?

- a) pic
- b) scr
- c) img

96) One should never combine the "start" and "type" option ?

- a) True
- b) Sometimes True, sometimes False
- c) False

97) What is the most important tool for adding colors to certain areas of the page rather than the entire background ?

- a) Fonts
- b) Tables
- c) Images

98) All HTML tags are enclosed in what ?

- a) <>
- b) ? and !
- c) # and #

99) Which of the following will NOT be found in the <head> section ?

- a) Metatags
- b) Title
- c) Table

100) Which property tells how many rows a cell should span ?

- a) colspan=n
- b) Both rowspan=n and colspan=n
- c) rowspan=n

101) You can add names to each frame window using which setting ?

- a) name
- b) src
- c) ur

102) Using Hspace will add what to your image ?

- a) Space to the left and right
- b) Space to the top and bottom
- c) Height to all sides

[Show Answer](#)

[Answers](#)

- |         |         |        |        |        |        |        |        |        |         |
|---------|---------|--------|--------|--------|--------|--------|--------|--------|---------|
| (1) a   | (2) c   | (3) c  | (4) a  | (5) a  | (6) a  | (7) b  | (8) a  | (9) b  | (10) b  |
| (11) b  | (12) a  | (13) c | (14) c | (15) c | (16) c | (17) a | (18) c | (19) b | (20) b  |
| (21) c  | (22) b  | (23) b | (24) c | (25) c | (26) a | (27) c | (28) b | (29) c | (30) c  |
| (31) b  | (32) a  | (33) c | (34) b | (35) c | (36) c | (37) c | (38) a | (39) d | (40) c  |
| (41) b  | (42) a  | (43) c | (44) a | (45) c | (46) a | (47) a | (48) a | (49) a | (50) b  |
| (51) b  | (52) b  | (53) b | (54) b | (55) c | (56) a | (57) a | (58) a | (59) b | (60) b  |
| (61) a  | (62) c  | (63) b | (64) c | (65) a | (66) a | (67) c | (68) c | (69) c | (70) a  |
| (71) a  | (72) c  | (73) c | (74) c | (75) c | (76) a | (77) b | (78) c | (79) c | (80) a  |
| (81) b  | (82) b  | (83) b | (84) b | (85) b | (86) c | (87) a | (88) a | (89) a | (90) a  |
| (91) c  | (92) b  | (93) c | (94) c | (95) c | (96) c | (97) b | (98) a | (99) c | (100) c |
| (101) a | (102) a |        |        |        |        |        |        |        |         |

Q 1 Which of the following are HTML lists? (Choose 3)

Answer:

- a. Definition List
- b. Numbered List
- c. Unordered List
- d. Ordered List
- e. Bulleted List

Ans a,c,d

Q2. If a client(browser) does NOT accept a cookie, which session management mechanism could the web container employ?

- Answer:
- a. Either cookies or URL rewriting can be used.
  - b. Cookies, but NOT URL rewriting.
  - c. URL rewriting, but NOT cookies.
  - d. Neither cookies nor URL rewriting can be used.

Ans c

Q 3 Which of the following statements about ServletContext initialization parameters are true? (Choose 3)

Answer:

- a. They should be used for data that changes rarely.
- b. They should be used for data that is applicable to an entire web application.
- c. They should be used for data that changes frequently.
- d. They can be accessed using ServletContext.getInitParameter().
- e. They can be accessed using ServletContext.getParameter().

Ans a,b,d

Q 4. HTML is case sensitive.

State True or False. Answer: True False

Q 5 .Which of the following HTTP method is used to show the client what the server is receiving?

- Answer:
- a. TRACE
  - b. PUT
  - c. OPTIONS
  - d. GET
  - e. RETURN

ans a

Q 6 Which two of the following statements are correct?

- Answer:
- a. HttpServlet.doHead() throws ServletException
  - b. HttpServlet.init() throws ServletException
  - c. HttpServlet.destroy() throws ServletException
  - d. HttpServlet.doPut() throws IOException
  - e. HttpServlet.service() throws ServletException and IOException

ans b,e

Q 7 Where does the response redirect happen?

Select one correct answer from the following. Answer:

- a. On the Servlet Container
- b. On the Deployment Descriptor
- c. On the Servlet Program
- d. On the Client

ans d

**Q 8.** Following are some of the rules framed for writing a java bean:

- a) it must have a public no-arg constructor
- b) it should have public accessor and mutator methods
- c) it should have private member variables
- d) the return type of getter method should be of same type of setter type argument
- e) it must implement serializable interface

Only some of the above rules are correct.

Select one answer from the following that gives the combination of correct rules.

- a. All the rules listed are correct for writing a javabean
- b. Only b,d and e are correct
- c. Only a,b,c are correct
- d. Only b,c,d and e are correct

**Q 9** Which of the following best represents the sequence of events in a servlet lifecycle?

Answer: a. class loading,

class instantiation,

service method,

init method,

delete method

b. class instantiation,

class loading,

service method,

init method,

delete method

c. class loading,

class instantiation,

init method,

service method,

destroy method

d. class loading,

class instantiation,

init method,

service method,

delete method

e. class loading,

class instantiation,

service method,

init method,

destroy method

**ans c**

10 You want the copyright information contained in /html/copyright.html to be added to the html content that your servlet generates. Which of the following code fragments occurring in the doGet() method as below would achieve this objective?

1. this.getServletContext().getRequestDispatcher("../html/copyright.html").include(request, response);
2. this.getServletContext().getRequestDispatcher("/html/copyright.html").include(request, response);
3. request.getRequestDispatcher("../html/copyright.html").include(request, response);
4. request.include("../html/copyright.html", request, response);
  
5. this.getServletContext().getRequestDispatcher("/html/copyright.html").forward(request, response);
6. request.getRequestDispatcher("/html/copyright.html").forward(request, response);

Select one answer from the following that has the right combination of required code fragments..

Answer:

- a. 2 and 3
- b. 4 and 5
- c. 1 and 4
- d. only 3
- e. 1, 2 and 3

ans a

11 Which one of the following statements is true? Answer:

- a. A session attribute can store either a class or primitive type
- b. A session attribute is stored with the type Object
- c. A session attribute is stored with a call to the setSessionAttribute method
- d. A session attribute can only be a data type that implements the serializable interface

ans b

12 Consider the following code for an HTML form.

```
<form action="/servlet/Login">
<input type="text" name="username" value="enter username"/>
<input type="submit" name="sbbbutton" value="signin!.."/>
</form>
```

Which of the following happens upon pressing the submit button in the above HTML form?(Choose 2)

Answer: a. The parameters username and sbbbutton are passed to the web server as part of the request body.

- b. The parameter username is the only parameter passed to the web server in the request
- c. The parameters username and sbbbutton are passed to the web server in the request URL

- d. A request is sent with the HTTP method POST
  - e. A request is sent with the HTTP method GET
- ans b,,e

13 What can be inferred by the following deployment descriptor?

```
<error-page>
<exception-type>java.lang.ArithmetricException</exception-type>
<location>/math_error.html</location>
</error-page>
```

Select one answer from the following.

- Answer:
- a. Route any ServletExceptions with the code 404 thrown from your servlet to math\_error.html
  - b. Prevents throwing ArithmetricException from math\_error.html
  - c. Route any ArithmetricException thrown from your servlet to math\_error.html
  - d. Route any request to your web application for a page or servlet that cannot be found to math\_error.html
- ans c

14 Which two of the following statements correctly store an object associated with a name at a place where all the servlets/JSPs of the same webapp participating in a session can use it?

(Assume that request, response, name, value etc. are references to objects of appropriate types.) Answer:

- a. response.setAttribute(name, value)
- b. servlet.getServletContext().setAttribute(name, value)
- c. request.setAttribute(name, value)
- d. request.getSession().setAttribute(name, value)
- e. request.setParameter(name, value)

ans b,d

15 Which one of the following statements is true?

Answer:

- a. The scope of an attribute can be HttpSession,ServletRequest or ServletConfig
  - b. A request attribute will exist for as long as the web application
  - c. A session attribute is visible to all clients currently accessing the application
  - d. ServletContext attributes are visible to all clients currently accessing the application
  - e. A ServletContext attribute is only visible to the servlet from which it is created
- ans d

16. Which one of the following methods would you use to put the session id into the URL to support sessions using URL rewriting? Answer:

- a. rewriteURL() of HttpServlet
- b. encodeURL() of HttpServletRequest
- c. rewriteURL() of HttpServletResponse
- d. encodeURL() of HttpServletResponse

e. encodeURL() of HttpServlet

ans d

17. The following line of code exists in the doGet method of Servlet:

```
String sid = request.getParameter("jsessionid");
```

Which three of the following options will retrieve the HttpSession associated with the request? (Assume that the session has already been created.) Answer:

- a. HttpSession session = request.getSession();
- b. HttpSession session = request.getSession(true);
- c. HttpSession session = HttpSession.getSession(sid);
- d. HttpSession session = request.getSession(false);
- e. HttpSession session = request.getSession(sid);

ans a,b,d

18 . Which two of the following can store data attributes? Answer:

- a. HttpServletResponse
- b. HttpServlet
- c. HttpSession
- d. ServletConfig
- e. ServletContext

ans c,e

19. Which one of the following lines would initialize the out variable for sending a Microsoft Word file to the browser? Answer:

- a. OutputStream out = response.getOuputStream();
- b. PrintWriter out = response.getWriter();
- c. PrintWriter out = response.getOuputStream();
- d. PrintWriter out = response.getServletOutput();
- e. OutputStream out = response.getWriter();

ans a

20. Which one of the following interfaces or classes is used to retrieve the session associated with a user? Answer:

- a. ServletConfig
- b. ServletContext
- c. GenericServlet
- d. HttpServletRequest
- e. HttpServlet

ans d

**1 Which two of the following statements are true? Answer:**

- a. An overridden jspInit method will not be called by the container
- b. The jspInit method is called before each time \_jspService is called
- c. The jspInit method is called once and only once for a servlet instance
- d. The jspInit method has access to the ServletConfig and ServletContext objects.

**Ans c,d**

**2 Where does the response redirect happen?**  
**Select one correct answer from the following.**

**Answer:**

- a. On the Servlet Program
- b. On the Deployment Descriptor
- c. On the Servlet Container
- d. On the Client

**ans d**

**3 Which two of the following statements are true?**

**Answer:**

- a. The welcome-file tag can mark a servlet as the default item that is returned from a url
- b. The init-param tag may contain java code between its opening and closing brackets
- c. The error-page tag must point to an html or JSP page, not a servlet.
- d. To be able to directly access a servlet the servlet-name must have a matching servlet-mapping
- e. The welcome-file tag must point to a servlet called welcome

**ans a,d**

**4 Consider the following scenario:**

An existing JSP page is modified.

The following steps happen when the modified page is requested:

- (a) `jspInit()`
- (b) `jspDestroy()`
- (c) translation
- (d) Load the class
- (e) `_jspService()`
- (f) Create an Instance
- (g) Compile the translated code

Which one of the following options gives the correct sequence in which the above steps happen?

- Answer:
- a. a, b, c, d, e, f, g
  - b. c, g, f, d, a, e, b
  - c. c, g, d, f, a, e, b
  - d. a, c, g, f, d, e, b

**ans c**

**5 Consider the following code written in a servlet:**

```
RequestDispatcher rd = request.getRequestDispatcher("world.jsp");
rd.forward(request, response);
```

Which one of the following is the JSP equivalent of the above code? Answer: a.

- a. <jsp:directive.forward page="world.jsp"/>
- b. <jsp:action.forward page="world.jsp"/>
- c. <%@ forward file="world.jsp"%>
- d. <%@ forward page="world.jsp"%>
- e. <jsp:forward page="world.jsp"/>

ans e

**6 The users of your web application do not accept cookies.**

**Which one of the following statements is correct? Answer:**

- a. You cannot use URL rewriting
- b. URLs displayed by static HTML pages may not work properly
- c. You cannot set session timeout explicitly
- d. You cannot maintain client state

ans b

**7 Which of the following are equivalent?**

- 1) <jsp:expression
- 2) <%
- 3) <%=
- 4) <@

Select the one correct answer from below that provides the right combination. Answer: a. 1 and 4

- b. None are equal.
- c. 1 and 3
- d. 1 and 2
- e. the elements are Sorted

ans c

**8 Which three of the following will compile and execute without error in a JSP page?**

**Answer:**

- a. <% System.out.println("hello"); %>
- b. <%!-- out.print("hello"); --%>
- c. <%! System.out.println("hello"); %>
- d. <%="Marcus Green" %>
- e. <%! public String cat(String word1, String word2){ return word1 + " " + word2; } %>

ans a,d,e

**9 Which two of the following are valid within a JSP page?**

Answer: a. <%@ taglib uri="http://java.sun.com/jstl/core\_rt" prefix="c" %>

b. <%@ taglib uri="/richjava" class="question" %>

c. <%@ taglib uri="/customtag" type=com.javarich.customtag prefix="question" %>

d. <%@ taglib uri="/richjava\_tag" prefix="question" %>

ans a,d

**10 Which one of the following statements is true?Answer:**

- a. A session attribute can store either a class or primitive type
  - b. A session attribute is stored with the type Object
  - c. A session attribute is stored with a call to the setSessionAttribute method
  - d. A session attribute can only be a data type that implements the serializable interface
- ans b

**11 Which three of the following options locate the bean equivalent to the following action <jsp:useBean id="address" class="AddressBean" scope="request" />?**

- Answer: a. getServletContext().getRequestAttribute("address");  
b. pageContext.getAttribute("address",PageContext.REQUEST\_SCOPE);  
c. pageContext.getRequest().getAttribute("address");  
d. request.getParameter("address");  
e. request.getAttribute("address");
- ans b,c,e

**12 What can be inferred by the following deployment descriptor?**

```
<error-page>
<exception-type>java.lang.ArithmaticException</exception-type>
<location>/math_error.html</location>
</error-page>
```

Select one answer from the following.

- Answer: a. Route any ServletExceptions with the code 404 thrown from your servlet to math\_error.html  
b. Prevents throwing ArithmaticException from math\_error.html  
c. Route any ArithmaticException thrown from your servlet to math\_error.html  
d. Route any request to your web application for a page or servlet that cannot be found to math\_error.html
- ans c

**13 Which one of the following HttpServletResponse is used to redirect an HTTP request to another URL?Answer:**

- a. sendRedirect()
- b. redirecthttp()
- c. sendURL()
- d. redirectURL()

ans a

**14.What will be the output of the following JSP code snippet at run-time when it is accessed the third time?**

```
<% int test = 0; %>
```

```
<% ++test; %>
```

The value of test is

```
<%= test %>
```

(select one answer)

- Answer:
- a. The value of the 'test' variable will be 0.
  - b. The variable 'test' must be declared at global scope, else a run-time error will occur.
  - c. The value of the 'test' variable will be 1.
  - d. The value of the 'test' variable will be 2.

**15. Consider the following code:**

```
public class MyTagHandler extends TagSupport
```

```
{
```

```
    public int doStartTag() throws JspException
```

```
{
```

```
    try
```

```
{
```

```
        //insert code here
```

```
}
```

```
    catch(Exception e){ }
```

```
    return super.doStartTag();
```

```
}
```

```
}
```

Which one of the following options, when inserted in the above code, causes the value "hello" to be output? Answer:

- a. JspWriter out = getPageContext().getOut();  
out.print("hello");
- b. JspWriter out = pageContext.getWriter();  
out.print("hello");
- c. JspWriter out = new JspWriter(pageContext.getWriter());  
out.print("hello");
- d. JspWriter out = pageContext.getOut();  
out.print("hello");
- e. JspWriter out = getPageContext().getWriter();  
out.print("hello");

ans d

**16 Which two of the following statements correctly store an object associated with a name at a place where all the servlets/JSPs of the same webapp participating in a session can use it?**

(Assume that request, response, name, value etc. are references to objects of appropriate types.)

- Answer:
- a. response.setAttribute(name, value)
  - b. getServletContext().setAttribute(name, value)
  - c. request.setAttribute(name, value)
  - d. request.getSession().setAttribute(name, value)
  - e. request.setParameter(name, value)

Ans b,d

**17. Consider the following:**

```
<taglib>
<tag>
<name>heading</name>
<tagclass>coreservlets.tags.HeadingTag</tagclass>
<info>Outputs a 1-cell table used as a heading.</info>
<attribute>
<name>bgColor</name>
<required>true</required><!-- bgColor is required -->
<rtpvalue>true</rtpvalue>
</attribute>
<attribute>
<name>color</name>
<required>false</required>
</attribute>
<attribute>
<name>style</name>
<required>true</required>
<rtpvalue>false</rtpvalue>

</attribute>

...
</tag>
</taglib>
```

Which two of the following statements can be inferred from the above code? Answer:

- a. Taglib tag can have only a maximum of 15 tags.
- b. Attribute value of style required for the tag and will be given by the user.
- c. Attribute value of colour is optional for the tag.
- d. Attribute value of bgcolour will be retrieved from the parent tag.
- e. Attribute value of bgcolour is required for the tag.

Ans c,e

**18. Which one of the following elements of web.xml affect the whole web application instead of a specific servlet?** Answer: a. init-param

- b. app-config
  - c. listener
  - d. application
  - e. content-type
- ans c

**19. Consider the following JSP page code:**

```
<HTML>
<HEAD></HEAD>
<BODY>
<%
for(int i=0; i<3; ++i){
%
out.print(i);
%
}
%
</BODY>
</HTML>
```

What will be the output of above code? Answer: a. 2 3 4

- b. Does not compile
  - c. 0 1 2
  - d. out.print(i);out.print(i);out.print(i);
  - e. 1 2 3
- ans d

**20 Which two of the following are true statements about sessions?**

Answer:

- a. Sessions are destroyed only after a predefined period of inactivity
- b. Sessions can span web applications
- c. Sessions can be cloned across JVMs
- d. You can use the deployment descriptor to cause sessions to expire after a set number of requests.
- e. Sessions can be set to never time out

ans c,e

**21. Consider the following JSP code:**

```
<%@page language="java" %>
<html>
<body>

<%! int x;%>
<%! public void jspDestroy()
{
```

```

System.out.println("self-destructing");
}%
<%!
Public void jspInit()
{
System.out.println(<%= x %>);
}%
</body>
</html>

```

Which one of the following is a valid reason for the above JSP failing to translate and compile? Answer:

- a. Data member x not initialized before use
- b. Expression embedded in declaration
- c. The page actually compiles and translates without any problem
- d. Local variable x not initialized before use
- e. Placement of jspDestroy() method before jspInit() method

ans b

**22. Assume that the following servlet mapping is defined in the deployment descriptor of a web application:**

```

<servlet-mapping>
<servlet-name>TestServlet</servlet-name>
<url-pattern>*.jsp</url-pattern>
</servlet-mapping>

```

Which one of the following requests will NOT be serviced by TestServlet? Answer:

- a. /gui/Hello.jsp
- b. ./gui/\*.jsp
- c. ./gui/Hello.jsp/bye.jsp
- d. ./Hello.jsp
- e. ./gui/jsp

ans e

**23. Consider the following contents of two JSP files:**

File 1: test1.jsp

```

<html><body>
<% pageContext.setAttribute("ninetyNine", new Integer(99)); %>
//1
</body></html>

```

File 2: test2.jsp

The number is <%= pageContext.getAttribute("ninetyNine") %>

Which one of the following, when placed at line //1 in the test1.jsp file, will allow the test2.jsp file to print the value of the attribute when test1.jsp is

- requested? Answer:
- a. <jsp:forward page="test2.jsp" />
  - b. <jsp:include page="test2.jsp" />
  - c. <%@ include file="test2.jsp" %>
  - d. None of the listed options because objects placed in pageContext have the page scope and cannot be shared with other components.

Ans c

**24. Consider the following:**

```
<web-app>
<servlet>
.....
</servlet>
<listener>
<listener-class>com.javarich.LogListener</listener-class>
</listener>
</web-app>
```

Which one of the following will happen because of the above entry in the Deployment Descriptor(DD)? Answer:

- a. The webapp will not be loaded due to a parse exception of the DD
- b. <Listener> must come under <servlet> tag
- c. Create a listener as defined by the com.javarich.LogListener class.
- d. Log all session information as they occur
- e. Provide a Log Servlet for the entire application

ans c

**25. Which one of the following is a method of the HttpSessionListener interface?**

- Answer:
- a. ValueBound
  - b. SessionInitialized
  - c. AttributeRemoved
  - d. SessionCreated
  - e. SessionDidActivate

ans d

1. StringBuffer i=new StringBuffer("welcome")  
StringBuffer j=new SrtingBuffer("welcome")  
If(i==j))  
Sop("equals");  
else  
Sop("not equal");  
ans = not equal..

2. how to divide pa page into two rows?  
a) rowspan b) colspan c)rows="50%50%" d)cols="50%50%"  
ans: c

3.HTML is not a used for programming logic. Ans:true

- 4.Filters can generate auto-response : true/False? ans true

5. Long l=100;  
sys0(l);  
ans:error

6. i=12  
j=13  
k=++i-j--;  
ans : 13,12,0

7. div has automatic line break as of para tag.  
ans:true

8. how print the request address?  
a)\${request.address} b)\${param.address} ans:b

9. scripting should be done in header part

10. Servet first time instantiation this is lazy loading ans:true

11. large data should be sent in Post method.

12. which reads only small chunck of data ans:SAX

13. syncronize ans: hashtable, vector.

14. interface hav only function & behaviour not implementation code ans:true

15. PMD tool check Violation, code standards, all ans:all

16. xml version first line ans:<? xml version="1.0" ?>

17. how to name a package? ans:com.pack.sun, pack123, pack\_123

18. person don't want to share the content ? WEB\_INF

19. servlet life cycle \*init \*service \*destroy with and without parameter(destroy(),destroy(ServletContext)).

20. atm there are two users who have add on cards...how to ensure that one's transaction starts after another one completes his transac...  
ans...thread synchronization

21. which is more secure comparing get and post? Ans: post

22. what part of trigger determines the number of times d trigger body is executed?  
a)trigger type b) trigger timing c)trigger body d)trigger event ans:a

23. Grant ALL  
on orders,suppliers TO PUBLIC.  
identify the errors in the oracle statement?

24. how wil u transform d xml document? XSTL

25. select instr('my java world','q') from dual;  
ans.....0

27.How 2 declare a tag library to use custom tags?  
ans...by using taglib directive

28.what is d use of versioning in s/w?  
ans...Branching and merging,backup and restore,synchronization

29. try should be followed either by catch or finally ans:true.

30.

31.

32.

33.



11) uncaught throwable object Exception

12) Not mandatory ? Null pointerException

13) what are the checked exception ? ClassCastException, InterruptedException

14) parameterized value? prepared statement

15) Apply style to text or part of text ? span

16) Divide page into two rows ? rows 50%50%

17) Divide page into two halves? rows 50%50%,cols 50%50%

18) document.getElementByTagname("p")[0].innerText

19) Code? display method display method 10 10

20) select (2+3\*4/2-5) from dual ? 3

21) select count(\*) from employee where sal >(select Avg(sal) from Employeee)

22) create or replace proc\_name (emp\_name varchar2)as

Declare

Cursor c1 is

Select \* from Emp

Where e\_name=emp\_name

Begin

For rec in c1 Loop

d.o.p(rec.e\_name.....)

end Loop

end

23) do post-large amount of data

24) user name will be passed to the servlet

Get method

25) attribute? adds behavior of the tag

26) Jsp translated to servlet-> compiled->instantiated

27) person don't want to share the content ? WEB\_INF

28) valid variables-Javascript ? \_num,num

29) create session ? request.getsession()

30) when a interface is implemented by class and the class is extended by another class, the second class should override all the method in the first class

Ans? All the above

31) Runnable r=new Runnable();

Thread t=new thread(r)

? Complier error

32) Hardware bench marking? true

33) A. Applet server side application

B. Servlet client side

A and B false

34) 3-tier architecture

\*Application server

\*Database server

\*Web server

35) Real world volums? load testing

36) rapidly varying users? spike testing

37) wrapper class int,short,char in switch ? true

38) transaction response time related to throughput in loadtesting ? true

39) objectoutputstream deserializes the object which was previously serialized by objectoutputstream?  
true

- 40) A. static serializable  
B. transient can not be serializable  
A.false B.true

- 41) collection ques  
\* ordered set of elements with different data types

- 42) i) PL/SQL declaration part, execution and exception.  
ii) PL/SQL block can be anonymous or named.  
iii) PL/SQL block converted by PL/SQL engine and then it is put to client side or server side

```
43)     Array a = new ArrayList();
        a.add(10);
        a.add(23);
        a.add("abc");
        HashSet as = new HashSet();
        as.add("abc");
        as.add(23);
        a.addAll(as);
        a.removeAll(as);
        System.out.println(a);
```

Ans: [10]

44. if(((i++)>12)&&(++i<15))

S.O.P(i);

Else

S.O.P(i);

Ans:11

45. Automatically create unique index for the primary key column

46. Garbage collection cannot be forced.

47. Not implemented by RequestDispatcher

Ans: redirect

Dispatch

48.  $i = 32;$

Char c = 65;

Char a = i+c;

S.o.p(a);

Ans: a;

1. Long l=50;

Ans: Compile time error(type mismatch)

2. Byte a=10;

```
Byte b=15;  
sop(a+b);
```

Ans: 25

3. int i=12,j=13,k=0;

```
k=++i-j--;  
sop(i);  
sop(j);  
sop(k);
```

Ans: 13

12  
0

4. try

```
{  
    system.exit(0);  
}  
  
finally  
{  
    sop("Hello");  
}
```

Ans: NO output(finally will no execute)

5. which are runtime (checked) exceptions?

- (a). Null pointer exception
- (b). Array index out of bound exception
- (c). File not found exception
- (d). SQL exception
- (e). I/O exception

Ans: a, b

6. Enumeration is having remove method (t/f)?

Ans: False

7. class parent

```
{  
    protected void disp()  
    {  
        sop("Parent class");  
    }  
  
    void base()  
    {  
        sop("Hello");  
        disp();  
    }  
}
```

```
}
```

class child extends parent

```
{
```

protected void disp()

```
{
```

sop("Child class");

```
}
```

psvmain()

```
{
```

child c=new child();

c.base();

```
}
```

```
}
```

Ans:Hello

Child class

8. public interface abc

```
{
```

/\*code\*/ int a=10;

```
}
```

Ans: public, final, and static

9. public static void main(String[] args)

```
{  
    String str =  
        "India is a/n developing country.";  
  
    StringTokenizer strTok =  
        new StringTokenizer(str);  
  
    System.out.println(strTok.countTokens());  
}
```

Ans: 5

10. Which one of the following lines produces error

```
<%! int a=10;%>Line-1  
<% int b=7;%>Line-2  
<%=a*b;%>Line-3
```

Ans: Line-3

11. which is more secure comparing get and post?

Ans: post

12. sop(10+"20.392");

Ans: 1020.392

34) how print the request address?

a) `${request.address}` b) `${param.address}`

35) which of the following is a marker interface?

a)serializable b)Runnable c)**Externalizable**

36) which of the following is a child element of filter?

a)**filter-class** b)display-name c)Init d)context e)config

37) a developer creates a class which he does not want anyone to inherit or modify. What should he do? Declare it as -

- 1.final
- 2.abstract
- 3.**private**

38) how will u set a constant value for a simple element

- A )fixed  
B )value

- 1- What is abbreviation of jaxp?
- 2- Do we have remove attribute in enumeration?**s**
- 3- Which method of jsp can be overridden?  
a-**\_jspService()** b-**\_jspInit()** c-**\_jspDestroy()**
- 4- Which is a w3 standard?

Ans:DOM

- 5- Syntax for creating a sequence? Without as
- 6- Which has better performance joins or subqueries?

Ans:joins

- 7- Which text is not parsed in xml?

Ans:CDATA

8- Does HTML contain program logic?

Ans : NO.

8- select (2+3\*4)/2-5 from dual;

10- String s1=new String("abc");  
String s2=new String("abc");  
System.out.println(s1.compareTo(s2)); ?**0**

11- StringBuffer i=new StringBuffer("welcome")  
StringBuffer j=new StringBuffer("welcome")  
If(i.equals(j))  
Sop("i equals j");  
If(i.equals(i))  
**Sop("i equals i");**

12- Integer a=new Integer(2);  
Integer b=new Integer(2);  
System.out.println(a==b); ?**false**

13- httpServletRequest is \_\_\_\_\_ a)HttpRequests sub interface) it's not a sub interface c)HttpServlet  
HttpServlebtRequest is a **subinterface of ServletRequest**

14- vehicle car class a)120,120,120 b)120,60,0 c)0,0,0 d)60,60,60

15- Jsp after processing what will it return to client a)jsp b)**html** c)source servlet d)compiled servlet

16- Many users accesssing lots of tables each using more than 100 lines of code.

What is the best option?

- 1.View
- 2.Index
- 3.Stored Procedure**

17- Which of thesesubelement or child elements is created in the Deploymaent Descriptor(XML) during creation of listeners?

- 1.<listener-class>**
- 2.<listener-param>
- 3.<listener-attribute>

18- try{  
int i=10;  
int j=i/0;  
return;  
}  
catch()  
{  
Sop("welcome");  
}  
SOP(j);  
What happens?  
1.prints welcome  
2.Runtime-error  
**3.Compilation error**

19- Variable V varchar2(20)

1.Invalid declaration

**2.Global declaration**

3.Local Declaration

20- how to divide a page into two rows?

a) rowspan b) colspan c)**rows="50%50%"** d)cols="50%50%"

21- why expression language is used in JSP page?

a)write java code b)import files c)**print statements** d)declare variables

22- how to disable all triggers?

**ALTER TABLE table\_name DISABLE ALL TRIGGERS;**

23- form action to what attributes will be redirected to next page..

a)get b)post c)the parameter is added in httprequest d)the parameter along with submit is added to request

24- which creates container of webpage

i)**DIV** ii)Span

25- which is true about constructor?

26- whether we have to specify datatype in java Script?**S**

27- <p:data>

<%=new Date()%>

<p:/data>

What is the body of the custom tag?

a) **Scriptless** b)expression language c)JSP

28- Filters can generate auto-response : true/**False**?

29-JDBC statements are included in which package?

**Java.sql....**

30-Which reference object in jsp is used in Http servlet Response

a)session

b)context

c)request

**d)response**

31- how to import a package into JSP?

- a) <@ **page import="java.util.\*";>**
- b) < @include import="java.util.\*">
- c) < @import="java.util.\*";>

32- line 1 : String string1 =new String("Hi");

line 2: String string2 =String1;

line 3: String1= new String("hello");

line 4: String2= new String("world");

In which line garbage collection takes place?

33- which is a build school?

- a) **ANT** b)pmd c)cmd
- .....

attempt 2

.....

1.model1 separates view and control:false

2.el implicit objects and jsp implicit objects are same-false

3.credit card-post

4.jsp expression is used to-print

5.business tier components-Business delegates,Transfer objects,Session facade

6.deouples-business delegate,business application

7.singleton-creational design pattern

8.xml,html-mvc

9.for loop <int i;i<3;i++>-the value of i is,the value of i is, the value of i is 3.

10.init param can be accessed inside the servelet constructor-false

11<%!..!>,<%@..@>-declaration syntax

12 tag extension-.tag or .tagx-refer head fist java

13structure of http request- get/uri/http/1.1

14.jsp can be used stand alone

15.not related to session-filter

16.<c:when>-for switching

17.sendRedirect()-after commit exception returned(refer when sendredirect() is used)

18.Http-set of rules

19. setattribute&get attribute-http session,servlet context,servlet request

20.el -scriptless,simple & powerful,

21.getParameterNames(String[])-enumeration.

22.Singleton-creational.

23.

---

attempt1

---

1.model1 used for large applications:false

2.object of getwriter is printwriter

3.structure of http request:Get/reports/sales/index.html HTTP/1.0

4.Servlet can declare a constructor-true

5.geniric servlet:override service() method

http servlet:override doget(),dopost() method.

it contains default implemntation of service() that calls approximate doxxx() method

6.servlets are pure solution to web request

many application:servlet+jsp

7.<servlet -mapping>tag used to specify URL

8.trace

9.c<if -test

10.userdefined servelets extends-servlet

11.complex multiple views which pattern-composite delegate

12.transfer object advantages

13.servelet a one application.servelet b another application.request is sent.

14.questions on model view con

15.which acts as a controller-servlet

Imp questions in JSP and Servlets

1. Syntax of <c:url>

2. Where library descriptor file stored?

a. META-INF/tlds

**b. META-INF/**

**c. WEB-INF/**

d. WEB-INF/tlds

3. True or false \${8/0}=infinity —Ans:true

4. <pre:tag1>

<%=name%>

</pre:tag1>

- a. jsp
- b. Tagdependant
- c. Empty
- d. Scriptless

5. Your servlet class extends.....

- a. **HttpServlet**
- b. Servlet
- c. GenericServlet

6. Which implicit object is used unique identifier user....

- a. Request
- b. Response
- c. Application
- d. **Session**

7. How you can set session timeout for 2 minutes??

Answer:

a. <session-timeout>**2**</session-timeout>

b. **Session.setMaxInactiveSession(120);**

8. Which listener is used when session is created??

Answer:HttpSessionListner

9. Which listener attribute is used for listerner tag??

Answer: <listener-class>

10. Which used for print el \${var}

Answer : <c:url value="" ">

11. Choose the right

Answer : a. <jsp:include page="">  
b. <%@ include file="" %>

12. <jsp:setproperty> syntax
13. Jsp lifecycle...
14. Translation and compilation is done at..
  - a. Execution
  - b. Deployment**
  - c. Undeployment
  - d. None of the above

15. Which is used when cookies not used in session management?

Answer: url rewriting not cookies

16. Which is used to extract the values of request parameter address?

Answer: \${param.address}

17. Feature not contained in container
  - a. Servlet life manager
  - b. Session management
  - c. Application controller**
  - d. Multithreading support

18. Question on synchronization

19. One program of session to display output

20. . You have created a web application that you license to real estate brokers. The webapp is highly customizable including the email address of the broker, which is placed on the footer of each page. This is configured as a context parameter in the deployment descriptor:

```
<context-param>
<param-name>footerEmail</param-name>
<param-value>joe@estates-r-us.biz</param-value>
</context-param>
```

Which EL code snippet will insert this context parameter into the footer?

```
<a href='mailto:${footerEmail}'>Contact me</a>
<a href='mailto:${initParam@footerEmail}'>Contact me</a>
<a href='mailto:${initParam.footerEmail}'>Contact me</a>
<a href='mailto:${contextParam@footerEmail}'>Contact me</a>
<a href='mailto:${contextParam.footerEmail}'>Contact me</a>
```

Answer: C

21. Select two options to retrieve first value in request variable

Answer: `request.getParameter("...");`  
`Request.getParameterValues(..)[0];`

22. How to access the variables fort in variable name using EL

Answer:  `${name["fort"]}`  
 `${name.fort}`

23. Which header is used to retrieve the info of "User-agent"?

Answer: `response.getHeader("User-Agent");`

1)  $\{8/0\}=\infty$

true or false

2) EL expressions used for?

3) What is default scope of JSP:useBean or JSP:getproperty?

4) Session timeout is in minutes and programmatically is in Seconds

5) Request dispatcher object

request, include, forward

6) How to store java primitive types in session?

7) `<! x=4;>`

`<% y=4;%>`

Solution is `<%=x*y; %>`

Ans: syntax error at line 3..

NEW questions:

1.do get method syntax ..? ans : do get (httpserveleterequest request, httpserveletereponse response)

2.request is the object of..?

Ans: httpserveleterequest

3. EL consider null values as zero..? ans: true //not sure

4.<%! a=6%>

<%b=3%>

<%a=5%>

What is the result of <%=a\*b%>

Ans: 15

5.how will u send cookie in response..?

Ans: response.addCookie(new cookie(" ", " "))

6.where is the <servlet-name> element is present in DD.

Ans: in <servlet> tag and in <servlet-mapping> tag

7.which methods can be overridden in JSP..?

Ans: JSPinit(); and JSPdestroy();

8.if servlet class implements single thread model then what will happen..?

Ans: only one thread will run for servlet

9.if session variable s is not in session and \${true and s[0]}...? Ans: false [bcoz EL will not throw any Null Pointer exception , it will consider it as 0 or False]

10.httpsession session= request.getsession(true);

Session.setattribute(" ", " ")

setmaxInactivesession(0);

if(session.is New())

{

-----//getattribute...

}

Else

{

-----

}

Ans: nothing will display,session will expire.... // not sure

11.

Ans: 1. Session timeout set in DD is in minute..

2. Session timeout set in programmatically is in seconds

12. question on custom tag..

13. what is the return type of getattribute method..? ans: object

14.one question was that there were two custom tags Tag1 and Tag2(which is extending from Tag1) of which Body content should not be empty. They have asked how we can implement these tags in our code and they have given options of different possibilities.

Ans: //Not sure just go through it once

```
<tag1>
    <tag2>
        Addsgada
    </tag2>
</tag1>
```

15. The question is on how to set init param value=10 of a using <jsp:setProperty> ?

They have given different combination , go through syntax of <jsp:setProperty>.

16.What is the default scope of useBean?

Ans: Page //not sure

17.Go through the syntax of <jsp:setProperty>,<jsp:getProperty> and useBean?

18. Syntax of import file.... E.g <%@ page import="java.util.\* , java.awt.\*"

19. what we use for conditional check in <c:>

- a. Cond
- b. test
- c. check
- d. choose / /may be this was option

I don't remember the complete question but Conditional check in <c:if> or <c:choose> etc....

20. question: Which are true[choose any two]

Ans:

- a. ServletCongig is one per Servlet
- B. SERVLETcONTEXT IS ONE PER APLLICATION

21. Which argument we pass to Servlet Init method?

Ans:

ServletConfig

- 1. Without cookies? -UrL writing.. manual/automatic?
- 2. implicit objects -application, exception, PageContext
- 3. ServletConfig- One per Servlet, Servletcontext one per application
- 5. Choose the right

<jsp:include page="">

b. <%@ include file="" %>

6. How you can set session timeout for 2 minutes??

7. You have created a web application that you license to real estate brokers. The webapp is highly customizable including the email address of the broker, which is placed on the footer of each page. This is configured as a context parameter in the deployment descriptor:

```
<context-param>  
<param-name>footerEmail</param-name>  
<param-value>joe@estates-r-us.biz</param-value>  
</context-param>
```

Which EL code snippet will insert this context parameter into the footer?

```
<a href='mailto:${footerEmail}'>Contact me</a>  
<a href='mailto:${initParam@footerEmail}'>Contact me</a>  
<a href='mailto:${initParam.footerEmail}'>Contact me</a>  
<a href='mailto:${contextParam@footerEmail}'>Contact me</a>  
<a href='mailto:${contextParam.footerEmail}'>Contact me</a>
```

Answer: C

8. How to store java primitive types in session? longattribute

9. Select two option to retrieve first value in request variable

```
request.getParameter(".");
```

```
Request.getParameterValues(..)[0];
```

10. Feature not contained in container

- a. Servlet life manager
- b. JSP Session
- c. Application controller
- d. Multithreading support

11. Syntax of <c:url>

12. <! x=4;>

<% x=6 %>

<% y=4;%>

Solution is <%=x\*y %>

What is the output?

13. line 4:<! x=4;>

line 5: <% y=4;%>

line 6: <%=x\*y; %>

whats the output

14. map={a,1}

map={b,2}

map={c,3}

map={d,4}

string names=names

what is names[0]

15. what is true about init-params

16. to throw exception in doEnd()

17. how to disable the scripting

18. getStream() of HttpServletResponse is object of ServletInputStream/PrintWriter/etc

19. switch case for JSTL <c:when>

20. client req depends on only jsp/only servlet/both

21. if information is forwarded from one page to other.. can v access all the info

22. import option is used to import html/java pkg or class/jsp page/any of the options

23. sme ques ans is implementing the singlethread interface

24. to start a servlet we need- listener

25. one more ques on listener

Imp questions in JSP and Servlets

24. Syntax of <c:url>

25. Where library descriptor file stored?

- e. META-INF/tlds
- f. **META-INF/**
- g. **WEB-INF/**
- h. WEB-INF/tlds

26. True or false \${8/0}=infinity —Ans:true

27. <pre:tag1>

```
<%=name%>  
</pre:tag1>  
  
e. jsp  
f. Tagdependant  
g. Empty  
h. Scriptless
```

28. Your servlet class extends.....

- d. **HttpServlet**
- e. Servlet
- f. GenericServlet

29. Which implicit object is used unique identifier user....

- e. Request
- f. Response
- g. Application
- h. Session**

30. How you can set session timeout for 2 minutes??

Answer:

- c. **<session-timeout>2</session-timeout>**

d. **Session.setMaxInactiveSession(120);**

31. Which listener is used when session is created??

Answer: HttpSessionListner

32. Which listener attribute is used for listerner tag??

Answer: <listener-class>

33. Which used for print el \${var}

Answer : <c:url value="" ">

34. Choose the right

Answer : a. <jsp:include page="">

b. <%@ include file="" %>

35. <jsp:setproperty> syntax

36. Jsp lifecycle...

37. Translation and compilation is done at..

e. Execution

f. **Deployment**

g. Undeployment

h. None of the above

38. Which is used when cookies not used in session management?

Answer: url rewriting not cookies

39. Which is used to extract the values of request parameter address?

Answer: \${param.address}

40. Feature not contined in container

e. Servlet life manager

f. Session management

g. **Application controller**

h. Multithreading support

41. Question on synchronization

42. One program of session to display output

43. . You have created a web application that you license to real estate brokers. The webapp is highly customizable including the email address of the broker, which is placed on the footer of each page. This is configured as a context parameter in the deployment descriptor:

```
<context-param>
<param-name>footerEmail</param-name>
<param-value>joe@estates-r-us.biz</param-value>
</context-param>
```

Which EL code snippet will insert this context parameter into the footer?

```
<a href='mailto:${footerEmail}'>Contact me</a>
<a href='mailto:${initParam@footerEmail}'>Contact me</a>
<a href='mailto:${initParam.footerEmail}'>Contact me</a>
<a href='mailto:${contextParam@footerEmail}'>Contact me</a>
<a href='mailto:${contextParam.footerEmail}'>Contact me</a>
```

Answer: C

44. Select two options to retrieve first value in request variable

Answer: request.getParameter("...");  
Request.getParameterValues(..)[0];

45. How to access the variables fort in variable name using EL

Answer: \${name["fort"]}  
\${name.fort}

46. Which header is used to retrieve the info of "User-agent"?

Answer: response.getHeader("User-Agent");

1) \${8/0}=infinity

true or false

2) EL expressions used for?

3) What is default scope of JSP:useBean or JSP:getProperty?

4) Session timeout is in minutes and programmatically is in Seconds

5) Request dispatcher object

request, include, forward

6) How to store Java primitive types in session?

7) <! x=4;>

<% y=4;%>

Solution is <%=x\*y; %>

Ans: syntax error at line 3..

NEW questions:

1.do get method syntax ..? ans : do get (httpserveletrequest request, httpserveletresponse response)

2.request is the object of..?

Ans: httpserveletrequest

3. EL consider null values as zero..? ans: true //not sure

4.<%! a=6%>

<%b=3%>

<%a=5%>

What is the result of <%=a\*b%>

Ans: 15

5.how will u send cookie in response..?

Ans: response.addCookie(new cookie(" ", " "))

6.where is the <servlet-name> element is present in DD.

Ans: in <servlet> tag and in <servlet-mapping> tag

7.which methods can be overridden in JSP..?

Ans: JSPinit(); and JSPdestroy();

8.if servlet class implements single thread model then what will happen..?

Ans: only one thread will run for servlet

9.if session variable s is not in session and \${true and s[0]}...? Ans: false [bcoz EL will not throw any Null Pointer exception , it will consider it as 0 or False]

10.httpsession session= request.getsession(true);

Session.setattribute(" ", " ")

setmaxInactivesession(0);

if(session.is New())

{

-----//getattribute...

}

Else

{

-----

}

Ans: nothing will display, session will expire.... // not sure

11.

Ans: 1. Session timeout set in DD is in minute..

2. Session timeout set in programmatically is in seconds

12. question on custom tag..

13. what is the return type of getattribute method..? ans: object

14. one question was that there were two custom tags Tag1 and Tag2(which is extending from Tag1) of which Body content should not be empty. They have asked how we can implement these tags in our code and they have given options of different possibilities.

Ans: //Not sure just go through it once

```
<tag1>
    <tag2>
        Addsgada
    </tag2>
</tag1>
```

15. The question is on how to set init param value=10 of a using <jsp:setProperty> ?

They have given different combination , go through syntax of <jsp:setProperty>.

16.What is the default scope of useBean?

Ans: Page //not sure

17. Go through the syntax of <jsp:setProperty>, <jsp:getProperty> and useBean?

18. Syntax of import file.... E.g <%@ page import="java.util.\* , java.awt.\*"

19. what we use for conditional check in <c:>

- a. Cond
- b. test
- c. check
- d. choose / /may be this was option

I don't remember the complete question but Conditional check in <c:if> or <c:choose> etc....

20. question: Which are true[choose any two]

Ans:

- a. ServletConfig is one per Servlet
- B. SERVLETCONTEXT IS ONE PER APPLICATION

21. Which argument we pass to Servlet Init method?

Ans:

ServletConfig

## Question 1

---

Select which of the following XML documents are well-formed XML documents.

- a. <productname>Electric Water Heater&piccoro\_</productname>
- b. <productname>"Water Purifier(<<6>>)"</productname>
- c. <productname>Dehumidifier "XZ001" </productname>
- d. <productname/ >

**Select any 1 option.**

Correct answer : **c**

When the character "&" is directly described within the element, it is parsed as the start of an entity reference. Since an entity reference requires the ";" character, a is not a well-formed document. Directly describing the "<" character within an element is parsed as a start tag, rather than element content, and therefore, b is also not a well-formed document.

A blank space is not allowed after the "/" character in an empty element, so d is also not a well-formed document.

---

## Question 2

---

Select which of the following is correct with respect to the description position of the attribute definition if an element is defined within XML Schema, and an attribute is added to that element.

- a. The attribute definition is described before the complex type definition model group.
- b. The attribute definition is described within the complex type definition model group.
- c. The attribute definition is described after the complex type definition model group.

- d.** If the attribute definition is inside the complex type definition, there are no restrictions on the description position

**Select any 1 option.**

Correct answer : **c**

The description position of the attribute definition must be after the complex type definition model group (sequence element, etc.)

Example)

```
<xs:element name="ProductInformation" type="productInfoType" />
<xs:complexType name="productInfoType">
  <xs:sequence>
    <xs:element name="ProductName" type="xs:string" />
    <xs:element name="Price" type="xs:int" />
  </xs:sequence>
  <xs:attribute name="ProductID" type="xs:string" use="required" />
</xs:complexType>
```

Accordingly, the correct answer is c.

---

### Question 3

---

Select which of the following is the specification used when transforming XML documents to HTML.

- a.** XSLT
- b.** DTD
- c.** XML Schema
- d.** SOAP

**Select any 1 option.**

Correct answer : **a**

XML documents can be transformed and output in XML format, HTML format, or plain text through XSLT style sheets.

---

#### Question 4

---

Select which of the following is correct with respect to an XML parser.

- a. An XML parser transforms XML documents using an XSLT style sheet
- b. An XML parser checks whether an XML document is a well-formed document
- c. An XML parser must be able to conduct validity verification to qualify as an XML parser
- d. An XML parser is software developed by the W3C

**Select any 1 option.**

Correct answer : **b**

At a minimum, an XML parser must include functions to check whether an XML document is a well-formed document. Some XML parsers also include functions to perform validity verification. XML parsers are developed and marketed by their respective software vendors.

Accordingly, the correct answer is b.

---

#### Question 5

---

Select which of the following describes the method to ensure that the character encoding for transformation results is “UTF-16” when applying an XSLT stylesheet to a source XML Document, and outputting the transformation results.

- a. Make the character encoding of the source XML Document “UTF-16”
- b. Make the character encoding of the XSLT stylesheet “UTF-16”

c. Designate "UTF-16" as the encoding attribute of the xsl:template element that is described first in the XSLT stylesheet

d. Designate "UTF-16" as the encoding attribute of the xsl:output element

**Select any 1 option.**

Correct answer : **d**

To designate the character encoding for transformation results, you describe the character encoding for the encoding attribute of the xsl:output element.

<xsl:output encoding="UTF-16" />

Accordingly, the correct answer is d.

---

**Question 6**

---

Select which of the following is a correct XML declaration description.

a. <?xml version="1.0" encoding="">

b. <?xml encoding="UTF-8">

c. <?xml encoding="UTF-8" version="1.0"?>

d. <?xml version="1.0"?>

**Select any 1 option**

Correct answer : **d**

The version designation may not be omitted from an XML declaration. In addition, XML declarations must always be in the order of 1) version and 2) encoding.

Accordingly, the correct answer is d.

---

**Question 7**

---

Select which two of the following are correct with respect to a DTD.

- a. Designate #PCDATA in an element type declaration to define an element in which only character data is included
- b. Designate CDATA in an element type declaration to define an element in which only character data is included
- c. Designate ANY in an element type declaration when you do not wish to have any content in an element
- d. Designate EMPTY in an element type declaration when you do not wish to have any content in an element

**Select any 2 options.**

Correct answer : **a, d**

For a DTD, enclose #PCDATA in "()" to define an element in which only character data is contained. Use EMPTY to define an element for which you wish to have no content (empty element).

- Definition for an element in which only character data is contained  
`<!ELEMENT element1 (#PCDATA)>`
- Definition for an element with no content  
`<!ELEMENT element1 EMPTY>`

Accordingly, the correct answers are a and d.

---

## Question 8

---

Select which of the following files has the correct extension as a file storing an XML document.

- a. a.xml
- b. b.html
- c. c.txt
- d. All of the above

**Select any 1 option.**

Correct answer : **d**

Since there are no particular rules related to file names for files storing XML documents, XML documents may be stored under any name.

---

### Question 9

---

Which of the following XML Schema definitions is not correct if you wish content element contents to be a text string that does not include tabs (#X9), linefeeds (#xA) or carriage returns (#xD), or a text string that replaces tabs (#X9), linefeeds (#xA) and carriage returns (#xD) with blank space?

Assume that the XML Schema namespace prefix is "xs".

- a. <xs:element name="Content" type="xs:token" />
- b. <xs:element name="Content" type="xs:normalizedString" />
- c. <xs:element name="Content" type="xs:string" />
- d. <xs:element name="Content" type="xs:NMTOKEN" />

**Select any 1 option.**

Correct answer : **c**

For an embedded simple type, use "token type" or "NMTOKEN type" to express a text string that does not include tabs (#X9), linefeeds (#xA) or carriage returns (#xD). "normalizedString type" can also be used to replace any included tabs (#X9), linefeeds (#xA) or carriage returns (#xD) with blank spaces. "string type" can include tabs (#X9), linefeeds (#xA) or carriage returns (#xD) in any text.

Accordingly, c is the incorrect definition.

---

### Question 10

---

Select which of the following elements should be used to sort the node set order in an XSLT stylesheet.

The XSLT namespace prefix is "xsl".

- a. xsl:sort
- b. xsl:orderBy
- c. xsl:order
- d. The node set order cannot be sorted in an XSLT stylesheet

**Select any 1 option.**

Correct answer : a

Use the xsl:sort element to sort the node set order in an XSLT stylesheet. The xsl:sort element is described as the child element of the xsl:apply-templates element or the xsl:for-each element. There are no xsl:orderBy or xsl:order XSLT elements.

Accordingly, the correct answer is a.

---

### Question 11

---

Select which two of the following are valid XML document with respect to "DTD", below.

"DTD"

```
<!DOCTYPE Calendar [  
<!ELEMENT Calendar (Month,(Date,Day)+)*>  
<!ELEMENT Month (#PCDATA)>  
<!ELEMENT Date (#PCDATA)>  
<!ELEMENT Day (#PCDATA)>  
<!ATTLIST Calendar Year CDATA #IMPLIED>  
]>
```

- a.  

```
<Calendar Year="2007">  
<Month>January</Month>  
<Date>1</Date>  
<Day>Monday</Day>  
<Date>2</Date>  
<Day>Tuesday</Day>
```

```
<Date>3</Date>
<Day>Wednesday</Day>
</Calendar>
```



**b.**

```
<Calendar Year="2007">
<Month>January
<Date>1</Date>
<Day>Monday</Day>
<Date>2</Date>
<Day>Tuesday</Day>
<Date>3</Date>
<Day>Wednesday</Day>
</Month>
</Calendar>
```



**c.**

```
<Calendar>
<Month>January</Month>
<Month>February</Month>
<Month>March</Month>
</Calendar>
```



**d.**

```
<Calendar/>
```

**Select any 2 options.**

Correct answer : **a, d**

Since the "Month," "Date," and "Day" elements are all child elements of "Calendar," the "Date" and "Day" elements are not child elements of "Month." Accordingly, b is not a valid XML document. The "+" designation for number of occurrences represents an occurrence of once or more. When describing the "Month" element, the "Date" and "Day" elements cannot be omitted; accordingly, c is not a valid XML document. The "\*" designation for number of occurrences represents an arbitrary number of occurrences, including 0. As such, in the case of 0 occurrences, the <Calendar/> description is used. This being the case, d is a valid XML document.

Accordingly, the correct answers are a and d.

---

## Question 12

---

Given "XML Document" below, select the namespace to which the Id attribute belongs.

"XML Document"

```
<ItemList xmlns="urn:example:Item"
    xmlns:Item01="urn:example:Item01">
    <Item01:ItemInformation Id="X01-0001">
        <ItemName>XML SchemaProblemSet1</ItemName>
        <Price>1500</Price>
    </Item01:ItemInformation>
</ItemList>
```

- a. ItemInfo
- b. urn:example:Item
- c. urn:example:Item01
- d. The Id attribute does not belong to a namespace

**Select any 1 option.**

Correct answer : **d**

In "XML Document," two namespaces have been declared. One is the default namespace "urn:example:Item," while the other is namespace "urn:example:Item01;" the namespace prefix is "Item01." For an attribute to belong to a namespace, the namespace prefix must always be described, and the default namespace is not applied. Because a namespace prefix is not attached to the Id attribute, the Id attribute does not belong to a namespace.

Accordingly, the correct answer is d.

---

## Question 13

---

Select which of the following is a correct element type declaration for the occurrence of the "FirstName" element and the "LastName" element in that order as the child element of "Name" Element.

- a. `<!ELEMENT Name (FirstName) >`  
`<!ELEMENT Name (LastName) >`
- b. `<!ELEMENT Name ( FirstName, LastName ) >`
- c. `<!ELEMENT Name ( FirstName | LastName ) >`
- d. `<!ELEMENT Name ( FirstName / LastName ) >`

**Select any 1 option.**

Correct answer : **b**

For a DTD element type declaration, the occurrence of the "FirstName" element and the "LastName" element in that order as child elements of the "Name" element are defined using a comma (,) to separate the "FirstName" element and "LastName" element.

Accordingly, the correct answer is b.

---

#### **Question 14**

---

Select which two of the following are described as the top-level element in an XSLT stylesheet. The XSLT namespace prefix is "xsl".

- a. `xsl:stylesheet`
- b. `xsl:transform`
- c. `xsl:template`
- d. `xsl:output`

**Select any 2 options.**

Correct answer : **a, b**

The top-level element of an XSLT stylesheet becomes the root element of the XSLT stylesheet. The `xsl:stylesheet` element is described as the root element of the XSLT stylesheet, and the actual template

rule is described as the descendant of the xsl:stylesheet element. The xsl:transform element may be described in place of the xsl:stylesheet element.

Accordingly, the correct answers are a and b.

---

### Question 15

---

Select which of the following is required for a well-formed XML document.

- a. XML declaration
- b. Schema definition
- c. Element
- d. Entity reference

**Select any 1 option.**

Correct answer : c

A well-formed XML document requires a root element.

Accordingly, the correct answer is c.

---

### Question 16

---

Select which three of the following must always be a well-formed XML document.

- a. XHTML documents
- b. XML Schema documents
- c. XSLT style sheets
- d. Output results from XSLT style sheets

**Select any 3 options.**

Correct answer : **a, b, c**

XSLT style sheet output results may be in XML format, plain text or in HTML format.

---

**Question 17**

---

Select which two of the following are the XML Schema element element that defines a number of occurrences between 1 and 5 for the "Telephone\_Number" element.

<xs:element name="Telephone\_Number" type="xs:string" />

- a. <xs:element ref="Telephone\_Number" minInclusive="1" maxInclusive="5" />
- b. <xs:element ref="Telephone\_Number" minOccurs="1" maxOccurs="5" />
- c. <xs:element ref="Telephone\_Number" maxInclusive="5" />
- d. <xs:element ref="Telephone\_Number" maxOccurs="5" />

**Select any 2 options.**

Correct answer : **b, d**

Use the minOccurs attribute and maxOccurs attribute to designate the number of occurrences for an element. The minOccurs attribute and maxOccurs attribute may be omitted. In this case, the value is "1." "minInclusive" and "maxInclusive" are constraining facets that designate the minimum and maximum values, respectively, and cannot be designated as attributes in element type declarations.

Accordingly, b and d are the correct answers.

---

**Question 18**

---

Select which three of the following are valid XML document with respect to "XML Schema Document" below.

"XML Schema Document"

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="Data" type="dataType" />
  <xs:complexType name="dataType">
    <xs:sequence>
      <xs:element ref="DataFile" maxOccurs="100" />
    </xs:sequence>
  </xs:complexType>
  <xs:element name="DataFile" type="dataFileType" />
  <xs:complexType name="dataFileType">
    <xs:sequence>
      <xs:element ref="DataFileName" />
    </xs:sequence>
  </xs:complexType>
  <xs:element name="DataFileName" type="xs:string" />
</xs:schema>
```



a.

```
<?xml version="1.0" encoding="UTF-8"?>
<Data>
  <DataFile>
    <DataFileName>accountList.xml</DataFileName>
  </DataFile>
  <DataFile>
    <DataFileName>productList.xml</DataFileName>
  </DataFile>
</Data>
```



b.

```
<?xml version="1.0" encoding="UTF-8"?>
<Data>
  <DataFile>
    <DataFileName>accountList.xml</DataFileName>
    <DataFileName>productList.xml</DataFileName>
  </DataFile>
</Data>
```



c.

```
<?xml version="1.0" encoding="UTF-8"?>
<Data>
```

```
<DataFile>
  <DataFileName>accountList.xml</DataFileName>
</DataFile>
</Data>
```



**d.**

```
<?xml version="1.0" encoding="UTF-8"?>
<DataFile>
  <DataFileName>accountList.xml</DataFileName>
</DataFile>
```



**e.**

```
<?xml version="1.0" encoding="UTF-8"?>
<Data>
  <DataFile/>
</Data>
```

**Select any 3 options.**

Correct answer : **a, c, d**

The following summarizes the content defined by the "XML Schema Document:"

- The "Data" element occurs one time.
- The "DataFile" element is defined as the child element of the "Data" element.
- The "DataFile" element may occur from 1 to 100 times.
- The "DataFileName" element is defined as the child element of the "DataFile" element.
- The "DataFileName" element occurs one time.

The number of occurrences for an element can be designated by the element element or model group (xs:sequence, etc.) using the minOccurs attribute and the maxOccurs attribute. The number of occurrences is one time when these attributes are omitted. All elements defined within the XML Schema Document can be described as root elements of the XML document.

a, c, and d are valid XML documents. In b, the "DataFileName" child element of the "DataFile" element occurs two times, and is therefore not a valid XML document. In e, the "DataFile" element is an empty element, and is therefore not a valid XML document.

Accordingly, the correct answers are a, c, and d.

---

### Question 19

---

Select the XPath expression that fits in \_\_\_\_\_ (1) \_\_\_\_\_ of "XSLT Stylesheet" when "XSLT Stylesheet" is applied to the given "XML Document" to output "Transformation Results".

"XML Document"

```
<?xml version="1.0" encoding="UTF-8" ?>
<UserList>
  <UserID Password="xxxxxx" authority="administrator">User01</UserID>
  <UserID Password="zzzzzz" authority="general">User02</UserID>
  <UserID Password="xyzxyz" authority="system">User03</UserID>
  <UserID Password="yyyyyy" authority="general">User04</UserID>
</UserList>
```

"Transformation Results"

```
<?xml version="1.0" encoding="UTF-8"?>
<GeneralUserList>
  <UserID>User02</UserID>
  <authority>general</authority>
  <UserID>User04</UserID>
  <authority>general</authority>
</GeneralUserList>
```

"XSLT Stylesheet"

```
<?xml version="1.0" encoding="UTF-8" ?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
  <xsl:template match="/">
    <GeneralUserList>
      <xsl:apply-templates select="_____ ( 1 ) _____" />
    </GeneralUserList>
  </xsl:template>
  <xsl:template match="UserID">
    <UserID><xsl:value-of select="text()" /></UserID>
    <xsl:element name="authority"><xsl:value-of select="@authority" /></xsl:element>
  </xsl:template>
</xsl:stylesheet>
```



a. UserList/UserID[@authority='general']



b. UserList/UserID/@authority='general'



c. UserList/UserID/[@authority='general']

- d.** There is no correct description, since there is an error in the XPath expressions

**Select any 1 option.**

Correct answer : **a**

The node set can be filtered using XPath. This is called the “XPath predicate,” where the “[terms]” coming after the XPath expression are described. The authority attribute filters according to “general” via the transformation results. The “UserList/UserID” is described in the select attribute of the xsl:apply-templates element, after which [@authority='general. '] is described to perform node set filtering. The authority attribute becomes “general” only, and “Transformation Results” is output.

Accordingly, the correct XPath expression is a.

---

### Question 20

---

Select which of the following is the correct combination of XML Schema elements when a simple type element is defined by the XML Schema, and restrictions have been placed on the simple type.

- a.** element element, simpleType element, extension element
- b.** element element, complexType element, extension element
- c.** element element, simpleType element, restriction element
- d.** element element, complexType element, restriction element

**Select any 1 option.**

Correct answer : **c**

A simpleType element is used to define the simple type; a restriction element is used to place restrictions. Use a constraining facet as the child element of the restriction element, placing restrictions on the element content.

In the following example, a regular expression is used for the “ProductNumber” element, and the values that can be set have been restricted (“X” + 2 numeral number + “-” + 4 numeral number (e.g. X01-0001))

```
<xs:element name="ProductNumber" type="productType" />
<xs:simpleType name="productType">
  <xs:restriction base="xs:string">
    <xs:pattern value="X\d{2}-\d{4}" />
  </xs:restriction >
</xs:simpleType>
```

Accordingly, the correct answer is c.

---

### Question 21

---

Select which two of the following correctly describes the difference between HTML and XML.

- a. Under HTML, the names and meanings of tags have been predefined. Under XML, well-formed XML documents allow for the free description of tags.
- b. HTML is a grass roots de facto standard, while XML has been drafted by the W3C.
- c. HTML cannot mark up semantic information for data. XML can mark up semantic information for data.
- d. HTML is not a markup language. XML is a markup language.

**Select any 2 options.**

Correct answer : **a, c**

Both HTML and XML are markup languages drawn up by the W3C. While HTML defines only the web display format of data through tags, XML can define the semantic information of data through tags. Under the HTML specification, the names and meanings of each tag are already defined, while tag names (element names) under XML can be used freely according to well-formed document.

---

### Question 22

---

Select which two of the following elements may be used for conditional branch processes in an XSLT stylesheet.

- a. xsl:case

b. xsl:choose

c. xsl:if

d. xsl:switch

**Select any 2 options.**

Correct answer : **b, c**

In an XSLT stylesheet, the conditional branch processes xsl:choose element and xsl:if element are used. There is no xsl:case or xsl:switch for XSLT elements.

Accordingly, the correct answer is b, and c.

---

### Question 23

---

Select which of the following is a well-formed XML document.

a.

<Bylaw>  
The final decision-making authority is the <Department>General Affairs  
Department</Department><Position>Section Chief</Position>  
</Bylaw>

b.

<Article>Article 2</Article>  
<Bylaw>  
The final decision-making authority is the General Affairs Department Section Chief.  
</Bylaw>

c.

<Bylaw>  
<Final\_decision-making\_authority Department="General Affairs Department" Position="Section Chief">  
</Bylaw>

d.

<Bylaw>

```
<Final_decision-making_authority><Department>General Affairs Department<Position>Section Chief</Position></Final_decision-making_authority>
</Bylaw>
```

**Select any 1 option.**

Correct answer : **a**

B will result in an error since there is no single root element for the XML document. C will result in an error since the "Final\_decision-making\_authority" element does not have an end tag. D will result in an error because the "Department" element and "Position" element do not have a correctly nested structure.

Accordingly, the correct answer is A.

---

### Question 24

---

Select which two of the following correctly explains the value that can be described in the "ItemPrice" element content.

```
<xs:element name="ItemPrice" type="itemPriceType" />
<xs:simpleType name="itemPriceType">
  <xs:restriction base="xs:int">
    <xs:minInclusive value="500" />
    <xs:maxInclusive value="2000000" />
  </xs:restriction>
</xs:simpleType>
```

- a.** The value "2000000" can be described, but the value "2000001" cannot be described
- b.** The value "1999999" can be described, but the value "2000000" cannot be described
- c.** The value "501" can be described, but the value "500" cannot be described
- d.** The value "500" can be described, but the value "499" cannot be described

**Select any 2 options.**

Correct answer : **a, d**

With this simple type, “minInclusive” and “maxInclusive” limit the respective minimum and maximum values that can be described for the ItemPrice element. However, “minInclusive” and “maxInclusive” include the values defined in the value attribute.

In this problem, the value ranges from 500 to 2000000.

Accordingly, the correct answers are a and d.

---

### Question 25

---

Select which is the best DTD definition to fulfill the “Requirements” below.

“Requirements”

- The “BookList” element has the child element “BookInfo”
- The “BookInfo” element has the child elements “BookName” and “ISBN,” one of which occurs once
- The “BookInfo” element has a “BookID” attribute, which may be omitted
- The “BookInfo” element occurs once or more times



a.

```
<!ELEMENT BookList ( BookInfo )*>
<!ELEMENT BookInfo ( BookName | ISBN )>
<!ELEMENT BookName (#PCDATA)>
<!ELEMENT ISBN (#PCDATA)>
<!ATTLIST BookInfo BookID CDATA #IMPLIED>
```



b.

```
<!ELEMENT BookList ( BookInfo )*>
<!ELEMENT BookInfo ( BookName , ISBN )>
<!ELEMENT BookName (#PCDATA)>
<!ELEMENT ISBN (#PCDATA)>
<!ATTLIST BookInfo BookID CDATA #IMPLIED>
```



c.

```
<!ELEMENT BookList ( BookInfo )+>
<!ELEMENT BookInfo ( BookName | ISBN )>
<!ELEMENT BookName (#PCDATA)>
<!ELEMENT ISBN (#PCDATA)>
<!ATTLIST BookInfo BookID CDATA #IMPLIED>
```



d.

```
<!ELEMENT BookList ( BookInfo )+>
<!ELEMENT BookInfo ( BookName , ISBN )>
<!ELEMENT BookName (#PCDATA)>
<!ELEMENT ISBN (#PCDATA)>
<!ATTLIST BookInfo BookID CDATA #IMPLIED>
```

**Select any 1 option.**

Correct answer : c

The following summarizes the designation method for occurrence order and number of occurrences for the element and content model:

- Occurrence Order
  - , -> Occurs in described order
  - | -> Any one of the described elements occurs
- Number of Occurrences
  - \* -> Any selected number of 0 or more occurrences
  - + -> Any selected number of 1 or more occurrences
  - ? -> 0 or 1 occurrence
  - No description -> One occurrence

The following are the default values for the attribute-list declaration:

- Default Values
  - #REQUIRED -> Required
  - #IMPLIED -> May be omitted

Given the preceding information and looking at the requirements, the description using "+" for the "BookList" element content model and "|" for the "BookInfo" element content model is the DTD definition that fulfills the requirements given.

Accordingly, c is the DTD definition that best fulfills the requirements.

---

## Question 26

---

Given "XML Document" below, select the namespace to which the ItemInformation element belongs.

"XML Document"

```
<ItemList xmlns="urn:example:Item"
          xmlns:Item01="urn:example:Item01">
```

```
<ItemInformation Id="X01-0001">  
  <Item01:ItemName>XML SchemaProblemSet1</Item01:ItemName>  
  <Item01:Price>1500</Item01:Price>  
</ItemInformation>  
</ItemList>
```

- a. ItemInformation
- b. urn:example:Item
- c. urn:example:Item01
- d. ItemInformation element does not belong to a namespace

**Select any 1 option.**

Correct answer : **b**

In "XML Document," two namespaces have been declared. One is the default namespace "urn:example:Item," while the other is namespace "urn:example:Item01;" the namespace prefix is "Item01." A namespace prefix is not attached to the ItemInformation element, so the default namespace is applied.

Accordingly, the correct answer is b.

---

### Question 27

---

Select which three of the following are incorrect when extending the definition of a simple type element that has been defined using XML Schema.

- a.

```
<xs:element name="BookInformation" type="bookInfoType" />  
<xs:simpleType name="newBookInfoType">  
  <xs:simpleContent>  
    <xs:extension base="bookInfoType">  
      <xs:attribute name="ISBN" type="xs:string" use="required" />  
    </xs:extension>  
  </xs:simpleContent>  
</xs:simpleType>
```



**b.**

```
<xs:element name="BookInformation" type="bookInfoType" />
<xs:simpleType name="newBookInfoType">
<xs:simpleContent>
<xs:restriction base="bookInfoType">
<xs:attribute name="ISBN" type="xs:string" use="required" />
</xs:restriction>
</xs:simpleContent>
</xs:simpleType>
```



**c.**

```
<xs:element name="BookInformation" type="bookInfoType" />
<xs:complexType name="newBookInfoType">
<xs:simpleContent>
<xs:extension base="bookInfoType">
<xs:attribute name="ISBN" type="xs:string" use="required" />
</xs:extension>
</xs:simpleContent>
</xs:complexType>
```



**d.**

```
<xs:element name="BookInformation" type="bookInfoType" />
<xs:complexType name="newBookInfoType">
<xs:simpleContent>
<xs:restriction base="bookInfoType">
<xs:attribute name="ISBN" type="xs:string" use="required" />
</xs:restriction>
</xs:simpleContent>
</xs:complexType>
```

**Select any 3 options.**

Correct answer : **a, b, d**

A simple type extension does not increase the scope of the value for the value of the type forming a base, but rather adds an attribute definition to the simple type element. Adding an attribute to a simple type element results in a complexType element; however, the content of the element is still simple type, so a simpleContent element is designated as the child element of the complexType element. Next, an extension element is designated, with an attribute definition described for that child element.

Accordingly, the incorrect definitions are a, b and d.

---

### Question 28

---

Select the correct description that fits in \_\_\_\_\_ (1) \_\_\_\_\_ of "XSLT Stylesheet" to obtain "Transformation Results" when "XSLT Stylesheet" is applied to the given "XML Document".

"XML Document"

```
<?xml version="1.0" encoding="UTF-8" ?>
<ProductList>
    <ProductName ProductID="X01-0001">XML SchemaProblemSet1</ProductName>
    <ProductName ProductID="X01-0002">XML SchemaProblemSet2</ProductName>
    <ProductName ProductID="X01-0003">XSLTProblemSet1</ProductName>
    <ProductName ProductID="X01-0004">XSLTProblemSet2</ProductName>
</ProductList>
```

"XSLT Stylesheet"

```
<?xml version="1.0" encoding="UTF-8" ?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
    <xsl:template match="/">
        <xsl:apply-templates select="ProductList/ProductName" />
    </xsl:template>
    <xsl:template match="ProductName">
        _____ ( 1 ) _____
    </xsl:template>
</xsl:stylesheet>
```

"Transformation Results"

```
<?xml version="1.0" encoding="UTF-8"?>
<ProductName ProductID="X01-0001">XML SchemaProblemSet1</ProductName>
```



a.

```
<xsl:if test="@ProductID='X01-0001'">
    <xsl:copy />
</xsl:if>
```



b.

```
<xsl:if test="@ProductID='X01-0001'">
    <xsl:copy-of select="." />
</xsl:if>
```



c.

```
<xsl:if test="@ProductID='X01-0001'">  
  <xsl:copy select=". />  
</xsl:if>
```



d.

```
<xsl:if test="@ProductID='X01-0001'">  
  <xsl:copy-of />  
</xsl:if>
```

**Select any 1 option.**

Correct answer : b

The XSLT Stylesheet must be designed to exactly copy a portion of "XML Document" via "Transformation Results." First, the xsl:if element is used to identify node where the "Product" attribute of "XML Document" is "X01-0001" in the template that is placed in \_\_\_\_\_ (1) \_\_\_\_\_. Next, the xsl:copy-of element is used to copy an exact portion of "XML Document." Designate the node to be the subject of the copy function in the select attribute of the xsl:copy-of element. "." represents the current node.

The xsl:copy element only copies the current node; it does not copy the current node attributes or descendant nodes.

Accordingly, the correct answer is b.

---

### Question 29

---

Which two of the following are correct when including "&" character within an element value?



a.

The "&" character cannot be included within an element value



b.

Enclose the "&" character in single quotes ('')

```
<Element1>you'&'me</element>
```



c.

Enclose the "&" character in double quotes ("")

```
<Element1>you"&"me</element>
```



**d.**

Use the predefined entity reference "&" for the "&" character

```
<Element1>you&me</Element1>
```



**e.**

Use a CDATA section

```
<Element1><![CDATA[you&me]]></Element1>
```

**Select any 2 options.**

Correct answer : **d, e**

To describe the "&" character within an element, use one of the following methods:

- Replace "&" with the predefined entity reference "&"  

```
<Element1>you&me</Element1>
```
- Use a CDATA section 

```
<Element1><![CDATA[you&me]]></Element1>
```

In addition to the above, you can make use of the Unicode "&" character code ("0x0026"), using the character reference "&x0026;".

```
<Element1>you&x0026;me</Element1>
```

Accordingly, the correct answers are d and e.

---

### Question 30

---

From the following, select which specification was drawn up for the purpose of defining XML schema.



**a.** XSLT



**b.** DTD



**c.** XML Schema



**d.** Namespaces in XML

**Select any 2 options.**

Correct answer : **b, c**

Given the possible answers above, the correct answers regarding specifications for conducting schema definitions are Answer b, DTD (Document Type Definition), and Answer c, XML Schema. XML schema is a specification independent of the XML 1.0 specification, while DTD has been drawn up within the XML 1.0 specification (<http://www.w3.org/TR/xml/>).

---

### Question 31

---

Select which of the following is a valid XML document with respect to "XML Schema Document" below.

"XML Schema Document"

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:element name="Personal_Information" type="newPersonalInfoType" />
<xs:complexType name="newPersonalInfoType">
<xs:complexContent>
<xs:extension base="personalInfoType">
<xs:sequence>
<xs:element ref="Birth_Date" />
<xs:element ref="Hobbies" maxOccurs="30" />
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="personalInfoType">
<xs:sequence>
<xs:element ref="Name" />
<xs:element ref="Email_Address" />
</xs:sequence>
</xs:complexType>
<xs:element name="Name" type="xs:string" />
<xs:element name="Email_Address" type="xs:string" />
<xs:element name="Birth_Date" type="xs:string" />
<xs:element name="Hobbies" type="xs:string" />
</xs:schema>
```



a.

```
<?xml version="1.0" encoding="UTF-8"?>
<Personal_Information>
```

```
<Name>Taro Yamada</Name>
<Email_Address>tyamada@aaa.com</Email_Address>
<Birth_Date>1980-03-30</Birth_Date>
</Personal_Information>
```



**b.**

```
<?xml version="1.0" encoding="UTF-8"?>
<Personal_Information>
<Name>Taro Yamada</Name>
<Email_Address>tyamada@aaa.com</Email_Address>
<Birth_Date>1980-03-30</Birth_Date>
<Hobbies>Listening to music</Hobbies>
<Hobbies>Watching movies</Hobbies>
</Personal_Information>
```



**c.**

```
<?xml version="1.0" encoding="UTF-8"?>
<Personal_Information>
<Birth_Date>1980-03-30</Birth_Date>
<Hobbies>Listening to music</Hobbies>
<Hobbies>Watching movies</Hobbies>
<Name>Taro Yamada</Name>
<Email_Address>tyamada@aaa.com</Email_Address>
</Personal_Information>
```



**d.**

```
<?xml version="1.0" encoding="UTF-8"?>
<Personal_Information>
<Hobbies>Listening to music</Hobbies>
<Hobbies>Watching movies</Hobbies>
<Birth_Date>1980-03-30</Birth_Date>
<Email_Address>tyamada@aaa.com</Email_Address>
<Name>Taro Yamada</Name>
</Personal_Information>
```

**Select any 1 option.**

Correct answer : **b**

The following summarizes the content defined by the "XML Schema Document:"

- The “Personal Information” element occurs one time.
- The “Name,” “Email\_Address,” “Birth\_Date,” and “Hobbies” elements are all defined as child elements of the “Personal Information” element.
- The “Name” element, “Email Address” element and “Birth\_Date” element occur one time.
- The “Hobbies” element may occur from 1 to 30 times.
- The “Name,” “Email Address,” “Birth\_Date,” and “Hobbies” elements (child elements of the “Personal Information” element) occur in that order.

In this “XML Schema Document,” an element is added to the complex type personalInfoType defined in the complexType element. This is called a complex type derived by extension. The following illustrates the procedures for a complex type derived by extension:

1. Designate a new data type name for the name attribute of the complexType element.

```
<xs:complexType name="newPersonalInfoType">
  ...
</xs:complexType>
```

2. Clearly indicate that the content of the complexContent element is a complex type, and designate the name of the data type serving as the base attribute of the extension element.

```
<xs:complexContent>
  <xs:extension base="personalInfoType">
    ...
  </xs:extension>
</xs:complexContent>
```

3. Define the order of occurrence (model group) of the added element and the element as descendant elements of the extension element.

Here, use the sequence element to make the occurrence in the defined order.

```
<xs:sequence>
  <xs:element ref="Birth_Date" />
  <xs:element ref="Hobbies" maxOccurs="30" />
</xs:sequence>
```

When the complex type is derived by extension, the position for the added element is after the element last defined with the original data type.

In a, the “Hobbies” element does not occur at all, and therefore is not a valid XML document. b is a valid XML document. Neither c nor d are valid XML documents, as the order of occurrence is not correct.

Accordingly, b is correct as a valid XML document.

---

## Question 32

---

Select which of the following is incorrect with respect to XSLT stylesheets?

- a. Namespace may be used in XSLT stylesheets
- b. XSLT stylesheets must be well-formed XML documents
- c. The transformation rule of the XML document that is the source for the XSLT stylesheet and the transformation process model may be described in the XSLT stylesheet
- d. Only XML documents are allowed as output format for XSLT stylesheets

**Select any 1 option.**

Correct answer : **d**

Namespace may be used in XSLT stylesheets, and XSLT stylesheets must be well-formed XML documents. In addition the transformation rule for the source XML document and the process model may be described in the XSLT stylesheet. Besides descriptions for rules to transform to an XML document of different structure, descriptions of rules for transforming to HTML documents, CSV and other structures may also be included.

---

## Question 33

---

Select which two of the following XML Schema documents correctly defines "Condition" below.

"Condition"

- Use an integer value for the "Quantity" element content
- The "Quantity" element has a "Unit" attribute, which must be described (may not be omitted)
- Use a text type value for the "Unit" attribute

- a.

```
<?xml version="1.0" encoding="UTF-8" ?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:element name="Quantity" type="quantityType" />
<xs:complexType name="quantityType">
<xs:simpleContent>
```

```
<xs:extension base="xs:int" >
  <xs:attribute name="Unit" type="xs:string" use="required" />
</xs:extension>
</xs:simpleContent>
</xs:complexType>
</xs:schema>
```



**b.**

```
<?xml version="1.0" encoding="UTF-8" ?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="Quantity" type="quantityType" />
  <xs:complexType name="quantityType">
    <xs:attribute name="Unit" type="xs:string" use="required" />
  </xs:complexType>
</xs:schema>
```



**c.**

```
<?xml version="1.0" encoding="UTF-8" ?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="Quantity">
    <xs:complexType>
      <xs:simpleContent>
        <xs:extension base="xs:int" >
          <xs:attribute name="Unit" type="xs:string" use="required" />
        </xs:extension>
      </xs:simpleContent>
    </xs:complexType>
  </xs:element>
</xs:schema>
```



**d.**

```
<?xml version="1.0" encoding="UTF-8" ?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="Quantity">
    <xs:complexType>
      <xs:attribute name="Unit" type="xs:string" use="required" />
    </xs:complexType>
  </xs:element>
</xs:schema>
```

**Select any 2 options.**

Correct answer : **a, c**

The “Condition” in the question above shows a “Quantity” element with an integer value content, and a “Unit” attribute. In this case, use a simple type extension to add a “Unit” attribute to the “Quantity” element. Use the element element to define the “Quantity” element as a unique type. The simple type extension is handled as a complex type; accordingly, use the complexType element as well as the simpleContent element to show that the type content is simple type. Describe “xs:int” as the base attribute of the extension element that extends the type, and describe the “Unit” attribute as the child element. Because the “Unit” attribute data type is text type, use “xs:string” for the type attribute, and “required” for the use attribute, since this cannot be omitted.

You can also describe a complexType element as the child element of the element element, without designating the element element data type.

Accordingly, the correct answers are a and c.

---

**Question 34**

---

Select which two of the following are a well-formed XML document.



**a.**

<item color="white" color="yellow">Paint</item >



**b.**

<item color='red' price="100"/>



**c.**

<item color="red"  
price="100">  
Paint  
</item>



**d.**

<item color="blue">  
Paint  
</item price="100">

**Select any 2 options.**

c	c	a	b	d	d
a			d	d	c
a	a			d	d
b	a	b			c
a	b	c			b
	d	a		c	d
	a	c	a		c
		b	c		a
a			d	c	b
a	b		d	b	
		d	e		b
c		b	d	a	
c					

Correct answer : **b, c**

Since two color attributes are described in a, it is not a well-formed XML document. b and c are well-formed XML documents. Quotes used to describe an attribute value can either be single quotes or double quotes. Since a price attribute is described in the end tag for d, it is not a well-formed XML document. Accordingly, the correct answers are b and c.

---

### Question 35

---

Select which of the following is the correct XSLT stylesheet to output “Transformation Results” sorted by the Password attribute value for the given “XML Document”.

“XML Document”

```
<?xml version="1.0" encoding="UTF-8" ?>
<UserList>
  <UserID Password="xxxxxx" Delete="1">User01</UserID>
  <UserID Password="zzzzzz" Delete="0">User02</UserID>
  <UserID Password="xyzxyz" Delete="0">User03</UserID>
  <UserID Password="yyyyyy" Delete="0">User04</UserID>
</UserList>
```

“Transformation Results”

User01/User03/User04/User02/



a.

```
<?xml version="1.0" encoding="UTF-8" ?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
<xsl:output method="text" />
<xsl:template match="/">
  <xsl:sort select="@Password" data-type="text" />
  <xsl:apply-templates select="UserList/UserID" />
</xsl:template>
<xsl:template match="UserID">
  <xsl:value-of select=". " /><xsl:text>/</xsl:text>
</xsl:template>
</xsl:stylesheet>
```



b.

```
<?xml version="1.0" encoding="UTF-8" ?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
<xsl:output method="text" />
<xsl:template match="/">
  <xsl:apply-templates select="UserList/UserID" />
  <xsl:sort select="@Password" data-type="text" />
</xsl:template>
<xsl:template match="UserID">
  <xsl:value-of select=". " /><xsl:text>/</xsl:text>
</xsl:template>
</xsl:stylesheet>
```



c.

```
<?xml version="1.0" encoding="UTF-8" ?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
<xsl:output method="text" />
<xsl:template match="/">
  <xsl:apply-templates select="UserList/UserID">
    <xsl:sort select="@Password" data-type="text" />
  </xsl:apply-templates>
</xsl:template>
<xsl:template match="UserID">
  <xsl:value-of select=". " /><xsl:text>/</xsl:text>
</xsl:template>
</xsl:stylesheet>
```



**d.**

```
<?xml version="1.0" encoding="UTF-8" ?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
<xsl:output method="text" />
<xsl:template match="/">
  <xsl:apply-templates select="UserList/UserID" />
</xsl:template>
<xsl:template match="UserID">
  <xsl:sort select="@Password" data-type="text">
    <xsl:value-of select=". " /><xsl:text>/</xsl:text>
  </xsl:sort>
</xsl:template>
</xsl:stylesheet>
```

**Select any 1 option.**

Correct answer : **c**

Use the xsl:sort element to sort the output order using element or attribute values. Use XPath expression to designate the node that holds the value that is the sort key for the select attribute of the xsl:sort element, and designate either “text” or “number” as the data-type attribute. Sort will be conducted by character if “text” is designated, and by number when “number” is designated. If the data-type attribute is omitted, sorting will be performed by character. The order attribute can be designated as either ascending or descending, and will default to ascending if omitted.

The xsl:sort element is described as the child element of the xsl:apply-templates element or the xsl:for-each element.

Accordingly, the correct XSLT stylesheet is .c

---

### Question 36

---

Select which two of the following are correct description method for an XML element.



**a.** A child element cannot have the same name as a parent element



**b.** Only one root element may be described in a single XML document



**c.** An attribute cannot be designated for an empty element

- d. A numeral cannot be used as the first character in an element name

**Select any 2 option.**

Correct answer : **b, d**

Numerals, periods, and hyphens cannot be used as the first character for element names, attribute names. The correct answers are b and d.

---

### Question 37

---

Select which of the following is a correct XML Schema definition if you must designate an integer less than or equal to 0 as the content of the "Discount\_Amount" element.

Assume that the XML Schema namespace prefix is "xs".

- a. <xs:element name="Discount\_Amount" type="xs:negativeInteger" />
- b. <xs:element name="Discount\_Amount" type="xs:positiveInteger" />
- c. <xs:element name="Discount\_Amount" type="xs:"nonNegativeInteger" />
- d. <xs:element name="Discount\_Amount" type="xs:nonPositiveInteger" />

**Select any 1 option.**

Correct answer : **d**

Use "nonPositiveInteger type" to express an integer less than or equal to 0 for an embedded simple type.

Accordingly, d is the correct definition.

---

### Question 38

---

The following sentences describe characteristics of XML schema as compared to DTD. Select which of the following is not correct.

- a. Since the specification is simple, using XML schema rather than DTD allows for shorter XML statements when defining the same schema structure.

- b. XML schema is a well-formed XML document.
- c. XML schema provides for various data types, including date type, integer type, etc.
- d. XML schema is compatible with XML namespace.

**Select any 1 option.**

Correct answer : a

While DTD does involve simple descriptions, it has several limitations, including not conform to XML namespace, not being an XML grammar statement, and not able to define detailed data types. Recently, XML schema has come to be used more in practice.

---

### Question 39

---

Select which of the following is the correct transformation result when "XSLT Stylesheet" is applied to the given "XML Document".

"XML Document"

```
<?xml version="1.0" encoding="UTF-8" ?>
<UserList>
  <UserID Password="xxxxxx" authority="administrator">User01</UserID>
  <UserID Password="zzzzzz" authority="general">User02</UserID>
  <UserID Password="xyzxyz" authority="system">User03</UserID>
  <UserID Password="yyyyyy" authority="general">User04</UserID>
</UserList>
```

"XSLT Stylesheet"

```
<?xml version="1.0" encoding="UTF-8" ?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
  <xsl:template match="/">
    <SystemUserList>
      <xsl:apply-templates select="UserList/UserID" />
    </SystemUserList>
  </xsl:template>
  <xsl:template match="UserID">
    <xsl:if test="@authority='system'">
      <UserID><xsl:value-of select="text()" /></UserID>
      <xsl:element name="authority"><xsl:value-of select="@authority" /></xsl:element>
```

```
</xsl:if>
</xsl:template>
</xsl:stylesheet>
```



a.

```
<?xml version="1.0" encoding="UTF-8"?>
<UserID>User03</UserID>
<authority>system</authority>
```



b.

```
<?xml version="1.0" encoding="UTF-8"?>
<SystemUserList>
  <UserID>User03</UserID>
</SystemUserList>
```



c.

```
<?xml version="1.0" encoding="UTF-8"?>
<SystemUserList>
  <authority>system</authority>
  <UserID>User03</UserID>
</SystemUserList>
```



d.

```
<?xml version="1.0" encoding="UTF-8"?>
<SystemUserList>
  <UserID>User03</UserID>
  <authority>system</authority>
</SystemUserList>
```

**Select any 1 option.**

Correct answer : **d**

Using an XSLT stylesheet, a text strings not in "XML Document," elements not belonging to XSLT1.0 namespace, or HTML elements can be output directly into transformation results. This XSLT stylesheet identifies the node where the value of the authority attribute of the UserID element is "system," and outputs the UserID element and the authority attribute transformed into an element. Use the xsl:element element to transform the authority attribute to an element, and designate the element name in the name attribute. The output order will be in the order described in the template.

Accordingly, the correct transformation result is d.

---

### Question 40

---

Select which of the following is a well-formed XML document.



a.

```
<Product_Information ProductID="X01-00001" Inventory="10">
```



b.

```
<Product_Information ProductID="X01-00001" Inventory="10">
<Product_Name>XML Certification Exam Workbook 1</Product_Name>
</Product_Information>
```



c.

```
<Product_Information ProductID="X01-00001" Inventory="10">
<Product_Name>XML Certification Exam Workbook 1</Product_Name>
</Product_Information Price="3000" Tax_Category="Tax Excluded">
```



d.

```
<Product_Information ProductID="X01-00001"
Inventory="2007/04/01 10"
Inventory="2007/04/02 5" >
<Product_Name>XML Certification Exam Workbook 1</Product_Name>
</Product_Information>
```

**Select any 1 option.**

Correct answer : b

For an XML document to be a well-formed document, it must meet the rules of the XML1.0 specification. These rules are summarized as follows:

- At least one element exists. Only one root element exists within a single XML document.
- A start tag is always paired with a respective end tag, in a nested structure.
- Attributes are described in a start tag.
- Several attributes may be described for a single element. However, attributes cannot be described using the same name.

...and so forth

Since a has not an end tag, it is not a well-formed XML document. b is a well-formed XML document. Because c has an attribute description in an end tag, it is not a well-formed XML document. For d, above, two "Inventory" attributes have been described; therefore, it is not a well-formed XML document.

Accordingly, only b is a well-formed XML document.

---

### Question 41

---

When "XML Document" is read by an XML processor, what value does the entity reference "&food" replace? Which of the following is the correct answer?

Assume that the XML processor is able to read "food.txt."

"XML Document"

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE data [
<!ELEMENT data (#PCDATA|food)*>
<!ELEMENT food (#PCDATA)>
<!ENTITY food SYSTEM "food.txt">
]>
<data>I like to eat &food; </data>
```

「food.txt」

```
<?xml version="1.0" encoding="UTF-8"?>
<food>pasta</food>
```



a. food.txt



b. pasta



c.

```
<?xml version="1.0" encoding="UTF-8"?>
<food>pasta</food>
```



d. <food>pasta</food>

**Select any 1 option.**

Correct answer : **d**

The contents of an external file can be imported in an XML document using an entity declaration. If the content of the external file is described in text, any content is acceptable; however, if the external file content includes tags, the rules for well-formed documents must be followed. A text declaration may be described in order to designate the character encoding for the external file.

The "&entityname" portion in the XML document is exchanged for the external file content (except for the text declaration portion)

Accordingly, the correct answer is d.

---

### Question 42

---

Which two of the following are correct description when double quote ("") is included in an attribute value?



a.

Enclose the attribute value in single quotes

```
<Element1 Attribute1=' "Value 1"' />
```



b.

Enclose the attribute value in double quotes

```
<Element1 Attribute1=" "Value 1" "/>
```



c.

Replace the double quote (") with the predefined entity reference "&quot;"

```
<Element1 Attribute1="&quot;Value1&quot;" />
```



d.

Since double quote (") is defined as characters that enclose the attribute value, they cannot be used as an attribute value

**Select any 2 options.**

Correct answer : **a, c**

To describe double quotes (") as an attribute value, use any of the following methods:

- Enclose the attribute value in single quotes <Element1 Attribute1=' "Value1' />

- Replace double quotes ("") with the predefined entity reference "&quot;" <Element1 Attribute1="&quot;Value1" />

In addition to the above, you can also make use of the Unicode double quote character code "0x0022", using the character reference "&#x22".

```
<Element1 Attribute1="&#x22;Value1" />
```

Accordingly, the correct answers are a and c.

---

### Question 43

---

Select which of the following is correct as a definition adding a "Mobile" element to the "Personal\_Information" element defined in the given "XML Schema Document".

"XML Schema Document"

```
<xs:element name="Personal_Information" type="personalInfoType" />
<xs:complexType name="personalInfoType">
  <xs:sequence>
    <xs:element ref="Name" />
    <xs:element ref="Date_of_Birth" />
    <xs:element ref="Hobbies" minOccurs="1" maxOccurs="30" />
  </xs:sequence>
</xs:complexType>
<xs:element name="Name" type="xs:string" />
<xs:element name="Date_of_Birth" type="xs:string" />
<xs:element name="Hobbies" type="xs:string" />
```



a.

```
<xs:element name="Personal_Information" type="newPersonalInfoType" />
<xs:complexType name="newPersonalInfoType">
  <xs:complexContent>
    <xs:restriction base="personalInfoType">
      <xs:sequence>
        <xs:element ref="Mobile" />
      </xs:sequence>
    </xs:restriction>
  </xs:complexContent>
</xs:complexType>
<xs:element name="Mobile" type="xs:string" />
```



**b.**

```
<xs:element name="Personal_Information" type="newPersonalInfoType" />
<xs:complexType name="newPersonalInfoType">
<xs:complexContent>
<xs:restriction base="personalInfoType">
<xs:sequence>
<xs:element ref="Name" />
<xs:element ref="Date_of_Birth" />
<xs:element ref="Hobbies" minOccurs="1" maxOccurs="30" />
<xs:element ref="Mobile" />
</xs:sequence>
</xs:restriction>
</xs:complexContent>
</xs:complexType>
<xs:element name="Mobile" type="xs:string" />
```



**c.**

```
<xs:element name="Personal_Information" type="newPersonalInfoType" />
<xs:complexType name="newPersonalInfoType">
<xs:complexContent>
<xs:extension base="personalInfoType">
<xs:sequence>
<xs:element ref="Mobile" />
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:element name="Mobile" type="xs:string" />
```



**d.**

```
<xs:element name="Personal_Information" type="newPersonalInfoType" />
<xs:complexType name="newPersonalInfoType">
<xs:complexContent>
<xs:extension base="personalInfoType">
<xs:sequence>
<xs:element ref="Name" />
<xs:element ref="Date_of_Birth" />
<xs:element ref="Hobbies" minOccurs="1" maxOccurs="30" />
<xs:element ref="Mobile" />
</xs:sequence>
```

```
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:element name="Mobile" type="xs:string" />
```

**Select any 1 option.**

Correct answer : **c**

First, designate the name of the new complex type using the name attribute of the complexType element to define the complex type extension. Designate for the child element the complexContent element that shows the element content is a complex type. Since this is an extension, designate the extension element, describe the model group as the child element, and describe the element to be added as the model group child element. If an attribute is to be added, describe the attribute definition after the model group.

Accordingly, c is the correct definition.

---

**Question 44**

---

Select which of the following correctly describes the purpose of using XML namespace.

- a.** Defines the XML document data structure.
- b.** Performs operations on XML Data from the application.
- c.** Transforms XML documents to HTML documents.
- d.** Avoids having conflicting elements of the same name but different meaning in a single XML document.

**Select any 1 option.**

Correct answer : **d**

Elements having the same name may overlap when using multiple XML vocabularies developed within an industry in a single XML document. In such cases, XML namespace is used to avoid conflicts.

---

**Question 45**

---

Select which of the following is the correct value for the ATT attribute when the following XML document is read by an XML processor?

"XML Document"

```
<?xml version="1.0"?>
<!DOCTYPE config [
<!ELEMENT config (name, user)>
<!ELEMENT name (#PCDATA)>
<!ELEMENT user (#PCDATA)>
<!ATTLIST config ATT CDATA "FALSE">
]>
<config ATT="TRUE">
<name>test.ini</name>
<user>taro</user >
</config>
```

- a. NULL value
- b. "TRUE"
- c. "FALSE"
- d. None of the above; throws an error

**Select any 1 option.**

Correct answer : b

With the attribute list declaration (ATTLIST), the default value when the ATT attribute is omitted is "FALSE;" however, in this example, it is clearly designated that ATT="TRUE" within the XML document. Therefore, the ATT attribute value is "TRUE."

Accordingly, the correct answer is b.

---

### Question 46

---

Given "XML Document" below, select the namespace to which the BirthDay element belongs.

"XML Document"

```
<List xmlns="urn:example:Data"
      xmlns:Data01="urn:example:data01">
  <Data01:data>
    <Name age="30">TaroYamada</Name>
    <BirthDay xmlns="">1977-03-19</BirthDay>
  </Data01:data>
</List>
```

- a. urn:example:Data
- b. urn:example:data01
- c. urn:example:Data、urn:example:data01
- d. The BirthDay element does not belong to a namespace

**Select any 1 option.**

Correct answer : **d**

In "XML Document," two namespaces are declared using the List element. The first namespace is default "urn:example:Data," while the second namespace is "urn:example:data01;" the namespace prefix is "Data01." Because a namespace prefix is not attached to the BirthDay element, the default namespace is applied. However, the BirthDay element is described using the start tag "xmlns=''", by means of which a "default namespace cancel" is enacted. Thus, the BirthDay element no longer belongs to a namespace.

Accordingly, the correct answer is d.

---

### Question 47

---

Select the correct description that fits in \_\_\_\_\_ (1) \_\_\_\_\_ of "XSLT Stylesheet" to obtain the transformation result "X01-0001X01-0002X01-0003X01-0004" when "XSLT Stylesheet" is applied to the given "XML Document".

"XML Document"

```
<?xml version="1.0" encoding="UTF-8" ?>
<ProductList>
  <ProductName ProductID="X01-0001">XML SchemaProblemSet1</ProductName>
  <ProductName ProductID="X01-0002">XML SchemaProblemSet2</ProductName>
  <ProductName ProductID="X01-0003">XSLTProblemSet1</ProductName>
```

```
<ProductName ProductID="X01-0004">XSLTProblemSet2</ProductName>
</ProductList>
```

"XSLT Stylesheet"

```
<?xml version="1.0" encoding="UTF-8" ?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
  <xsl:output method="text" />
  <xsl:template match="/">
    <xsl:apply-templates select="ProductList/ProductName" />
  </xsl:template>
  <xsl:template match="ProductName">
    _____ ( 1 ) _____
  </xsl:template>
</xsl:stylesheet>
```

"Transformation Results"

X01-0001X01-0002X01-0003X01-0004

- a. `<xsl:value-of select="ProductList/ProductName/@ProductID" />`
- b. `<xsl:value-of select="ProductList/ProductName/ProductID" />`
- c. `<xsl:value-of select="@ProductID" />`
- d. `<xsl:value-of select="ProductID" />`
- e. There is no correct template for outputting Transformation Results

**Select any 1 option.**

Correct answer : **c**

Use the `xsl:value-of` element to acquire the element node and attribute node values for "Transformation Results." Here, you will acquire the "ProductID" attribute node value. You can acquire the attribute node value by designating "@attribute node" in the select attribute of the `xsl:value-of` element.

Accordingly, the correct answer is c.

---

### Question 48

---

Select which two of the following are correct with respect to the occurrence of element "a" and a child element defined by the following element type declaration. Assume child elements "w", "x", "y", and "z" are empty elements.

"Element Type Declaration"

```
<!ELEMENT a ( ( w | x )+ , ( y , z )* )>
```



a.

```
<a>
<w/>
<y/>
<z/>
</a>
```



b.

```
<a>
<w/>
<x/>
<z/>
<y/>
</a>
```



c.

```
<a>
<x/>
<y/>
<z/>
</a>
```



d.

```
<a>
<x/>
<z/>
<y/>
</a>
```

**Select any 2 options.**

Correct answer : **a, c**

Under this element type declaration, 1) the "( w | x )+" section defines a single occurrence for either child element w or child element x, and 2) the "( y , z )\*" section defines 0 or more occurrences for child element y and child element z in the order described (child element y, child element z). The content for element a occurs in the order 1), 2). a and c fulfill the conditions for 1) and 2). b and d differ from the occurrence order for element y and element z, and are therefore erroneous.

Accordingly, the correct answers are a and c.

---

### Question 49

---

Select which of the following is a valid XML document with respect to the external subset DTD file "item.dtd" below.

"item.dtd"

```
<?xml version="1.0" encoding="UTF-8"?>
<!ELEMENT ProductInformation (ProductName,Price)>
<!ELEMENT ProductName (#PCDATA)>
<!ELEMENT Price (#PCDATA)>
```



a.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE ProductInformation SYSTEM "item.dtd">
<ProductInformation>
  <Price/>
</ProductInformation>
```



b.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE ProductInformation SYSTEM "item.dtd">
<ProductInformation>
  <ProductName/>
</ProductInformation>
```



c.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE ProductInformation SYSTEM "item.dtd">
<ProductInformation>
  <ProductName>
    <Price/>
```

```
</ProductName>  
</ProductInformation>
```



**d.**

```
<?xml version="1.0" encoding="UTF-8"?>  
<!DOCTYPE ProductInformation SYSTEM "item.dtd">  
<ProductInformation>  
  <ProductName/>  
  <Price/>  
</ProductInformation>
```



**e.**

```
<?xml version="1.0" encoding="UTF-8"?>  
<!DOCTYPE ProductInformation SYSTEM "item.dtd">  
<ProductInformation>  
  <Price/>  
  <ProductName/>  
</ProductInformation>
```

**Select any 1 option.**

Correct answer : **d**

In "item.dtd," the "ProductInformation" element has "ProductName" and "Price" as child elements, with the "ProductName" element and "Price" element defined so as to occur in that order. The XML document that meets this definition is d.

Accordingly, the correct answer is d.

---

### Question 50

---

Select which of the following XML Schema definitions always results in the content of "ProductGenre" being "Bag".



**a.**

```
<xss:element name="ProductGenre"  
  type="xss:string" default="Bag" />
```

**b.**

```
<xss:element name="ProductGenre"  
    type="xss:string" fixed="Bag" />
```

**c.**

```
<xss:element name="ProductGenre"  
    type="xss:string" use="Bag" />
```

**d.**

```
<xss:element name="ProductGenre"  
    type="xss:string" optional="Bag" />
```

**Select any 1 option.**

c	c	a	b	d	d
a				d	d
c	a	a			d
d	b	a	b		
c	a	b	c		
b		d	a	c	d
	a	c	a		c
		b	c		a
a			d	c	b
a	b		d	b	
		d	e		b
c		b	d	a	
c			b	c	
c		b		d	d
a	d	b	d	a	
c		c	d	b	d
c	a		c		d

Correct answer : **b**

The name attribute and type attribute can be designated in the element element, as well as the default attribute or the fixed attribute; however, the use attribute or optional attribute cannot be designated. The default attribute is used to designate a default value. If the element is an empty element, the value

designated by the default attribute is applied. In the case where element content has been designated, the designated value is applied. On the other hand, the fixed attribute is used to designate a fixed value. As with the default attribute, if the element is an empty element, then the value designated by the fixed attribute is used; however, if the element content is to be designated, then the same value as that of the fixed attribute must be designated. The default attribute and the fixed attribute cannot be designated at the same time.

Accordingly, the correct answer is b.

---

1. A JSP page needs to set the property of a given JavaBean to a value that is calculated with the JSP page. Which of the following `jsp:setProperty` attributes must be used to perform this initialization?(Choose 3)

- a.value
- b.property
- c.name
- d.attribute
- e.id

2. Where is JSP executed?

- a.Both in Server Machine and Client Machine
- b.Depends upon configuration
- c.Client machine
- d.Server machine

3. Which of the following are true about MVC architecture?(Choose 3)

- a.Servlet forms the controller part
- b.Ease of maintenance and promotes reusability
- c.JSPs are the target of all requests
- d.Servlets are the target of all requests
- e.JSP forms the controller part

4. Identify model component in an MVC pattern.

- a.Browser
- b.ActionServlet
- c.JSP
- d.Data Bean

5. Which of the following statement is correct?

- a.You can override init() method but you should not.
- b.You override init() method to fetch init params and execute an initial code.
- c.You override init() method to set an init param
- d.You override init() method to cleanup database connection

6.Select the correct flow of Servlet lifecycle

- a.Loading->Instantiation->Initialization->Execution->Destroy
- b. Loading->Execution ->Instantiation->Initialization ->Destroy
- c. Loading->Initialization ->Instantiation ->Execution->Destroy
- d. . Loading->Initialization ->Instantiation ->Execution->Destroy

7.\_\_\_\_ is a collection of actions that encapsulate some functionality to be used from within a JSP page.

- a.Tag library descriptor
- b.URI
- c.Presentation
- d.Tag library

8.A serializable object for transferring data over the network is an example of which of the following design pattern?

- a.Assembler
- b.Session Façade
- c.Transfer Object
- d.Network Object

9.Which of the following statements are True?(Choose 2)

- a.A JSP must contain some Java code
- b.JSP executes faster than HTML
- c.A JSP can contain only HTML
- d.A JSP is executed at server and plain HTML is sent back to the client browser

10. Which of the following statements is TRUE?

- a.A servlet is a JSP file with embedded Java
- b. A servlet is a java program with embedded HTML
- c.None of the listed options
- d.A JSP is a Java program with embedded HTML

11.Which of the following statements are TRUE?(Choose 3)

- a.The purpose of EL is to make a JSP script free
- b.EL is evaluated at client machine
- c.EL stands for Extended Language

- d.EL is enabled is a JSP by default
- e.EL is a simple and powerful replacement of Standard Actions

12.How will you access a servlet context initialization parameter named “company-name”?

- a.\${init.company-name}
- b. \${init['company-name']}
- c. \${initParam["company-name"]}
- d.\${contextParam.company-name}

13.Using multiple JSP components to construct your view is an example of

- a.ViewHelper Pattern
- b.Service Locator
- c.Pattern Proxy Pattern
- d.Composite View Pattern

14.In an Expression Language \${8/0}-displays Infinity

- True
- False

15.When declaring listner in the DD, which sub-elements of the <listener> element are required(Choose all that apply)

- a.<listener-class>
- b.<listener-type>
- c.<listener-name>
- d.<listener-class-name>

16. Which of the following can store attributes?(Choose 3)

- a.ServletResponse
- b. HttpServletRequest
- c. ServletContext
- d. HttpSession

17. What is the return type of getAttribute() method of HttpServletRequest?

- a.Object
- b.String
- c.Attribute
- d.None of the above

18. Which of the following are used to retrieve the value associated to the parameter name provided within the <init-param>tag?

- a.getServletContext().getInitParameter(paramname)
- b.getServletConfig().getInitParameter(paramname)
- c.getServletContext().getParametr(paramName)
- d.getServletConfig().getParameter(paramName)

19. Init parameter can be called from servlet constructor.

- True
- False

20. Where is JSP translation and compilation carried?

- Deployment

21. Writer object for response

- response.getWriter()
- response.getWriter.getOutputStream()

22. Java bean are Java classes with getter and setter property

- True
- False

23. EL implicit and JSP are same

- True
- False

24. Session shutdown formally

- Session.invalidate

25. Binary stream can be sent after servlet processing

- True
- False

26. Which scope to use, so that all JSPs can access the resource?

- Request
- Session
- Application
- Page

27. Which is MVCs strut framework controller?

- ActionServlet
- Data bean
- JSP

- None of these

28.Which is the default scope of <jsp:usebean> and <jsp:getProperty> actions?

- a.Page
- b.session
- c.request
- d.application

29.The requested resource is returned in a message body of a HTTP response.

- True
- False

30.You are designing a complex webapp that uses multi-tier architechture.The application must provide UI interfaces for HTML as well as XML and should be maintained.Which design pattern would you use?

- a.Business Delegate
- b.MVC
- c.Data Access Object
- d.Data Transfer Object

31. Which statements about ServletContext initialization parameters are true?

- a.They should be used for data that changes rarely.
- b. They should be used for data that changes frequently.
- c.They can be accessed using ServletContext.getParameter().
- d.They can be accessed using ServletContext.getInitParameter().
- e.They should be used for data that is specific to a particular servlet.
- f. They should be used for data that is specific to a entire web application.

32."Your servlet class depends on a utility class named com.abc.TaxUtil.Where would you keep the TaxUtil.class file?

- a.WEB-INF
- b.WEB-INF/classes        (Question was not the exact one but answer was this)
- c.WEB-INF/lib
- d.WEB-INF/jars
- e.WEB-INF/classes/com/abc

33. To get value of address request parameter?

- \${param.address}

34. Some question on active and passive resource(Choose 3)

35. Front Controller properties

36. Which is not JSP implicit object?(Choose 3)

- Request scope
- Session
- Out
- context

1) Which is correct?

- a) Override init() to cleanup db connection
- b) Override init() to set an initparam
- c) we can override init() but don't override
- d) **To fetch initParam and execute an initial code**

2) Singleton is

- a. **Creational**
- b. Structural
- c. Behavioral

3) How to set a header to response

- a. **HTTPServletResponse.setHeader("n","v");**
- b. HttpServletResponse.setHeader("n");
- c. HttpServletResponse.setHeader("v");
- d. Cannot do it

4) JSTL core iteration custom tags(choose 2)

- a. Body of tag may contain ELCODE, but no scripting code
- b. **Iteration over arrays, collection, map and tags**
- c. Iteration over map but only key of object map
- d. Mapping may be used in tag body used
- e. **When looping over collection a loop statement**

5) HttpSession s=.....

```
s.setAttribute("x","xv");
```

```
s.invalidate();  
res.getWriter().print(s.getAttribute("x"));  
output?
```

- a. Value=null
- b. illegalStateException**
- c. InvalidSession
- d. Value=xv

6)true(Choose 3)

- a. <jsp:include>-static
- b. Bad practice to include one JSP:include
- c. <%@include %>-static**
- d. Through JSP include HTML can be included**
- e. Through JSP include JSP alone can be included**

7)Scripting allowed in JSP by default(**True/false**)

8)Service() How many times called in life?

- a. None
- b. Once for every req**
- c. Once
- d. None if init() is overridden

9)<taglib>

```
<taglib-uri>http://mytaglib.com</taglib-uri>  
<taglib-loc>http://your.com</taglib-loc>  
</taglib>
```

- a. <taglib-include> to be used instead of <taglib-loc>
- b. Invalid syntax of <taglib-uri>
- c. Malformed xml
- d. The value of <taglib-loc> cannot be an absolute URI

10)Servletconfig comes into picture

- a. After init()
- b. After service()
- c. After constructor
- d. After servlet loaded**

11)Servlet gets binary stream for writing an image or other binary type to **HTTPServletResponse**

- a. **Getoutputstream()**
- b. **getBinary Stream()**
- c. **getwriter()**
- d. **getPrintWriter()**

12)When control transfer from p1.jsp to p2.jsp,the scope of the data in p1.jsp will be available in p2?

- a. Yes
- b. No
- c. Yes but in some conditins no
- d. No but in some conditions yes**

13)Business tier denotes (Choose 3)

- a. BusinessDelegate**
- b. Session Façade**
- c. Transfer Object**
- d. Service to worker
- e. DAO

14)Servlet life cycle

15)true?

- a. JSP alone serves client request**
- b. None
- c. JSP cannot stand alone
- d. Servlet request to make JSP more efficient

16)To handle business logic of a web app is in

- a. AJAX
- b. Servlets**
- c. DB
- d. JSP

17)servlet as main() as entry(T/F)?

18)JSp active resource

- a. Processing capability at server mac**
- b. Processing capability at client mac
- c. Java script along with HTML
- d. None

19)Scriptlet code syntax error in which part of JSP life cycle is identified

- a. Compilation**

- b. Translation
- c. Execution
- d. Container doesnot mind scriptcode syntax error

20)Design pattern—shielding clients from important of business services

- a. MVC
- b. MVC2
- c. Business delegate**
- d. Transfer object

21)NOT MVC

- a. JSF
- b. Tiles**
- c. Struts
- d. SPRING

22)if age=31 ,wht will be the output of \${PARAM AGE ge 25}?

- a. 31
- b. 25
- c. True**
- d. 1

23)JSP executed at

- a. client
- b. server**
- c. both

24)EL implicit=JSP implicit objects(T/F)

25)Presentation tier pattern?

- a. DAO
- b. FC**
- c. Server locator
- d. Session Facade

**26)Servlet A calls servlet B of same container but different applications ,now data can be accessed in servlet B through**

- a. REQUEST**
- b. RESPONSE
- c. CONTAINER

- d. SESSION
1. How should servlet developers handle the HttpServlet's service() method when extending HttpServlet?
- They should override the service() method in most cases.
  - They should call the service() method from doGet() or doPost()
  - They should call the service() method from the init() method.
  - They should override at least one doXXX() method(such as doPost()).**
2. Cookie is \_\_\_\_\_
- - Servlet Attribute
  - A plain text that resides on client machine**
  - An encrypted file sent to the server by client
3. Which statements about disabling scripting elements are true?
- You can't disable scripting via the DD.
  - You can only disable scripting at the application level.
  - You can disable scripting programmatically by using the isScriptingEnabled page directive attribute.
  - You can disable scripting via the DD by using the <scripting-invalid> element.**
4. Question
- \${param[0]}**
  - \${param.[0]}
  - \${param['0']}**
  -
5. Singleton is \_\_\_\_\_
- Behavioral pattern
  - Creational**
  - Structural
  - Integration
6. getInitParameterNames() returns
- String
  - String[]
  - Enumeration**
  - ArrayList
7. Significance of 'errorPage' in page directive?
- The error in current page leads to errorPage value.
  - 
  - 
  -
8. Java Beans consists of getter and setter methods. **True**

9. Init() can be overridden. **True**

10. Jsp:param

11. Which is best for business logic?

- a. **Servlet**
- b. JSP
- c. Ajax
- d. DataBase

12. Model 1 architecture is used for large applications. **False**

13. Which of following is true?

- a. Jsp is independent of servlet code
- b. Servlet is independent of JSP page
- c.
- d.

14. What related to sendredirect() is true?

- a. When response is committed, it causes IllegalAccessException
- b.
- c.
- d.

15. Which of the following related to POST are true?

- a. POST can send unlimited data
- b. POST cannot send binary data
- c.
- d.

16. Eliminate duplicate code... transfer object

17. Construct a pattern of multiple views... Composite view

18. ... View delegate

19.

- a. Scriptlet
- b. Expression
- c. Directive
- d.
- e.

20. "When is it not possible to call the sendRedirect() method of response object?"

Select one correct answer from the following." 1

- a. After creating a connection to the Database.
- b. After the response is already committed.**
- c. After iterating through the resultSet object
- d. After opening an I/O stream

21. For including "text/plain" in jsp directive...

a. < ..... contentType="text/plain">

22. Listener for HttpSession persists..

a. HttpSessionBindingListener

b. HttpSessionListener

c.

d.

23. How do you get information about init parameter?

a. <init-param>blah</init-param>

b. ServletContext().getInitParameter();

c.

d.

24. HttpSession sess=ServletConfig.getSession();

Int counter=sess.getAttribute("counter");

ServletConfig sc=sess.setAttribute("counter",counter++);

Check the options?

**1. Which collection class allows you to access its elements by associating a key with an element's value, and provides synchronization?**

a. java.util.SortedMap

b. java.util.TreeSet

c. java.util.Hashtable

d. None

Ans---c

**2. Suppose that you would like to create an instance of a new *Map* that has an iteration order that is the same as the iteration order of an existing instance of a *Map*. Which concrete implementation of the *Map* interface should be used for the new instance?**

a. TreeMap

b. HashMap

c. LinkedHashMap

d. The answer depends on the implementation of the existing instance.

Ans ----c

**3. Which loop automatically iterates over the specified object and reads values one-by-one ?**

a. For

- b. For Each
- c. Iterator
- d. ListIterator

Ans ----d

**4. Which of the following can be used only with List?  
(Choose more than one)**

- a. For
- b. For Each
- c. Iterator
- d. ListIterator

Ans ---d,a

**5. Which of the following are Iterator Interface methods?**

- a. hasNext()
- b. remove()
- c. nextToken()
- d. next()
- e. hasMoreElements()

ans ----a,b,d

**6. Which class does not override the *equals()* and *hashCode()* methods, inheriting them directly from class Object?**

- a. java.lang.String
- b. java.lang.Double
- c. java.lang.StringBuffer
- d. java.lang.Character

ans --c

**7. Which of the following can be used to traverse the list in either direction, modify the list during iteration and obtain the iterator's current position in the list**

- a. For
- b. Iterator
- c. For Each
- d. ListIterator

Ans ---d

**8. Which of the following can read elements by specifying the index using the get() method**

- a. For
- b. Iterator
- c. For Each
- d. ListIterator

Ans ----a

**9. A collection is a container that groups multiple elements into multiple units**

- a. True
- b. False

Ans ----b

**10. Choose the correct description of method keyset()**

- a. Returns a set with all keys contained in the map
- b. Returns a collection with all the values contained in this map
- c. Returns a set view of the mappings contained in this map
- d. Returns a collection with all the values contained in this map

Ans ----a

**11. Which of the following is Thread Safe ?**

- a. Hash Table
- b. Hash Map

c. Tree Map

d. None

Ans----a

**12. Which map interface stores the values in sorted order according to key**

a. Hash Map

b. Hash Table

c. Tree Map

d. None

Ans ---c

**13.Which collection class allows you to grow or shrink its size and provides indexed access to its elements, but whose methods are not synchronized?**

a. java.util.HashSet

b. java.util.LinkedHashSet

c. java.util.List

d. java.util.ArrayList

ans ---d

**14.Which interface does *java.util.Hashtable* implement?**

a. Java.util.Map

b. Java.util.List

c. Java.util.HashTable

d. Java.util.Collection

Ans----a

**15.Which interface provides the capability to store objects using a key-value pair?**

a. java.util.Map

b. Java.util.Set

c. Java.util.List

d. `Java.util.Collection`

Ans-----a

**16.What will be the output of the program?**

```
importjava.util.*;
class I
{
    public static void main (String[] args)
    {
        Object i = new ArrayList().iterator();
        System.out.print((i instanceof List)+",");
        System.out.print((i instanceof Iterator)+",");
        System.out.print(i instanceofListIterator);
    }
}
```

- a. Prints: false, false, false
- b. Prints: false, false, true
- c. Prints: false, true, false
- d. Prints: false, true, true

Ans-----c

**17.**

```
publicclassTest
{
    privatestaticfloat[] f = newfloat[2];
    publicstaticvoid main (String[] args)
    {
        System.out.println("f[0] = " + f[0]);
    }
}
```

- a.  $f[0] = 0$
- b.  $f[0] = 0.0$
- c. compile time error

d. run time error

ans ---b

**18.What will be the output of the program?**

```
TreeSet map = new TreeSet();
map.add("one");
map.add("two");
map.add("three");
map.add("four");
map.add("one");
Iterator it = map.iterator();
while (it.hasNext() )
{
    System.out.print(it.next() + " " );
}
```

- a. one two three four
- b. four three two one
- c. four one three two
- d. one two three four one

Ans---c

**19. What will be the output of the program?**

```
importjava.util.*;
class H
{
    public static void main (String[] args)
    {
        Object x = new Vector().elements();
        System.out.print((x instanceof Enumeration)+",");
        System.out.print((x instanceof Iterator)+",");
        System.out.print(x instanceofListIterator);
    }
}
```

- a.Prints: false,false,false
- b.Prints: false,false,true
- c.Prints: false,true,false
- d.Prints: true,false,false

Ans-----d

**20 .Which two statements are true about comparing two instances of the same class, given that the *equals()* and *hashCode()* methods have been properly overridden?**

1. If the *equals()* method returns true, the *hashCode()* comparison == must return true.
2. If the *equals()* method returns false, the *hashCode()* comparison != must return true.
3. If the *hashCode()* comparison == returns true, the *equals()* method must return true.
4. If the *hashCode()* comparison == returns true, the *equals()* method might return true.

a.1 and 4  
c.3 and 4

b.2 and 3  
d.1 and 3

**21.What will be the output of the program?**

```
public class Test
{
    private static int[] x;
```

```
public static void main(String[] args)
{
    System.out.println(x[0]);
}
a.0
b.null
c.Compile Error
d.NullPointerException at runtime
```

Ans----d

**22. You need to store elements in a collection that guarantees that no duplicates are stored and all elements can be accessed in natural order. Which interface provides that capability?**

- |                  |                        |
|------------------|------------------------|
| a.java.util.Map  | b.java.util.Set        |
| c.java.util.List | d.java.util.Collection |

Ans----b

**23. Which collection class allows you to associate its elements with key values, and allows you to retrieve objects in FIFO (first-in, first-out) sequence?**

- |                       |                           |
|-----------------------|---------------------------|
| a.java.util.ArrayList | b.java.util.LinkedHashMap |
| c.java.util.HashMap   | d.java.util.TreeMap       |

Ans----b

**24. Which is valid declaration of a float?**

- |                  |                   |
|------------------|-------------------|
| a.float f = 1F;  | b.float f = 1.0;  |
| c.float f = "1"; | d.float f = 1.0d; |

Ans -----a

**25.**

```
/* Missing Statement ? */
public class foo
{
    public static void main(String[]args) throws Exception
    {
        java.io.PrintWriter out = new java.io.PrintWriter();
        new java.io.OutputStreamWriter(System.out,true);
        out.println("Hello");
    }
}
```

**What line of code should replace the missing statement to make this program compile?**

- a. No statement required.
- b. import java.io.\*;
- c. include java.io.\*;
- d..import java.io.PrintWriter;

Ans -----a

**26. The Collection interface is the base interface for \_\_\_\_\_**

- a. Set
- b. List
- c. ArrayList
- d. Linked List
- e. Map

ans---- a,b,e

**27. The Map is the base interface for \_\_\_\_\_.**

- a. TreeMap
- b. HashMap
- c. LinkedHashMap
- d. ArrayList
- e. LinkedList

ans ----a,b

**28. Which of the following statements are true?**

- a. The Collection interface is the root interface for manipulating a collection of objects.
- b. The Collection interface provides the basic operations for adding and removing elements in a collection.
- c. The AbstractCollection class is a convenience class that provides partial implementation for the Collection interface.
- d. Some of the methods in the Collection interface cannot be implemented in the concrete subclass. In this case, the method would throw `java.lang.UnsupportedOperationException`, a subclass of `RuntimeException`.
- e. All interfaces and classes in the Collections framework are declared using generic type in JDK 1.5.
- f. All the above

ans -----f

**29. Which of the following data types does not implement the Collection interface?**

- a. HashSet
- b. TreeSet
- c. ArrayList
- d. LinkedList
- e. Map

ans ----e

**30.If two objects o1 and o2 are equal, what are the values for o1.equals(o2) and o1.hashCode() == o2.hashCode()?**

- a. true true
- b. true false
- c. false true
- d. false false

ans ----b

**31.Given:**

```
interface A { void x(); }  
class B implements A { public void x() { } public void y() { } }  
class C extends B { public void x() { } }
```

**And:**

```
java.util.List<A> list = new java.util.ArrayList<A>();
```

```
list.add(new B());
list.add(new C());
for (A a:list) {
    a.x();
    a.y();
}
```

**What is the result?**

- A. The code runs with no output.
- B. An exception is thrown at runtime.
- C. Compilation fails because of an error in line 20.
- D. Compilation fails because of an error in line 21.
- E. Compilation fails because of an error in line 23.
- F. Compilation fails because of an error in line 25.

**32.Given:**

```
import java.util.*;
public class PQ {
    public static void main(String[] args) {
        PriorityQueue<String> pq = new PriorityQueue<String>();
        pq.add("carrot");
        pq.add("apple");
        pq.add("banana");
        System.out.println(pq.poll() + ":" + pq.peek());
    }
}
```

**What is the result?**

- A. apple:apple
- B. carrot:apple
- C. apple:banana
- D. banana:apple
- E. carrot:carrot
- F. carrot:banana

**33.Given:**

```
importjava.util.*;
public class WrappedString {
private String s;
publicWrappedString(String s) { this.s = s; }
public static void main(String[] args) {
HashSet<Object>hs = new HashSet<Object>();
WrappedString ws1 = new WrappedString("aardvark");
WrappedString ws2 = new WrappedString("aardvark");
String s1 = new String("aardvark");
String s2 = new String("aardvark");
hs.add(ws1); hs.add(ws2); hs.add(s1); hs.add(s2);
System.out.println(hs.size()); } }
```

**What is the result?**

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4
- F. Compilation fails.
- G. An exception is thrown at runtime.

**34.importjava.util.\*;**

```
classKeyMaster {
publicint i;
publicKeyMaster(int i) { this.i = i; }
publicboolean equals(Object o) { return i == ((KeyMaster)o).i; }
publicinthashCode() { return i; }
}
public class MapIt {
```

```

public static void main(String[] args) {
    Set<KeyMaster> set = new HashSet<KeyMaster>();
    KeyMaster k1 = new KeyMaster(1);
    KeyMaster k2 = new KeyMaster(2);
    set.add(k1); set.add(k1);
    set.add(k2); set.add(k2);
    System.out.print(set.size() + ":");

    k2.i = 1;
    System.out.print(set.size() + ":");

    set.remove(k1);
    System.out.print(set.size() + ":");

    set.remove(k2);
    System.out.print(set.size());
}
}

```

**What is the result?**

- A. 4:4:2:2
- B. 4:4:3:2
- C. 2:2:1:0
- D. 2:2:0:0
- E. 2:1:0:0
- F. 2:2:1:1
- G. 4:3:2:1

**35.Given:**

```
import java.util.*;
```

```

public class LetterASort {
    public static void main(String[] args) {
        ArrayList<String> strings = new ArrayList<String>();
        strings.add('aAaA');
        strings.add("AaA");
        strings.add('aAa');
    }
}

```

```
strings.add("AAaa");
Collections.sort(strings);
for (String s: strings) { System.out.print(s + " ");}
}
```

**What is the result?**

- A. Compilation fails.
- B. aAaAaAaAAaaAaA
- C. AAaaAaAaAaaAaA
- D. AaAAAaaaAaAaAa
- E. aAaAaAaAaAAAaa
- F. An exception is thrown at runtime.

**36. Given:**

```
11. public static void append(List list) { list.add("0042"); }
12. public static void main(String[] args) {
13. List<Integer>intList = new ArrayList<Integer>();
14. append(intList);
15. System.out.println(intList.get(0));
16. }
```

**‘What is the result?’**

- A. 42
- B. 0042
- C. An exception is thrown at runtime.
- D. Compilation fails because of an error in line 13.
- E. Compilation fails because of an error in line 14.

**37. With generics the compiler has more information about the types of the objects, so explicit casts don't have to be used and the compiler can produce type safe code. What implications have the generics for the runtime performance of the program which uses them?**

**Choose the correct answer:**

- A. With the generics the compiler can optimize the code for used types. This and the omission of the casts are the reasons why the code compiled with the generics is quicker than the one compiled without.
- B. The usage of generics has no implications for the runtime performance of the compiled programs.
- C. The improved flexibility and type safety means that the compiler has to generate concrete implementation from the generic template for each used type. This means that applications start a bit slower.

**38. Given:**

```
public void addStrings(List list)
{
    list.add("foo");
    list.add("bar");
}
```

**What must you change in this method to compile without warnings?**

- A. add this code after line 11:

```
list = (List<String>) list;
```

- B. change lines 12 and 13 to:

```
list.add<String>("foo");
```

```
list.add<String>("bar");
```

- C. change the method signature on line 11 to:

```
public void addStrings(List<? extends String> list) {
```

- D. change the method signature on line 11 to:

```
public void addStrings(List<? super String> list) {
```

- E. No changes are necessary. This method compiles without warnings.

**39. Given:**

```
import java.util.*;
public class Test {
    public static void main(String[] args) {
        List<String> strings = new ArrayList<String>();
        // insert code here
    }
}
```

**Which four, inserted at line 5, will allow compilation to succeed?  
(Choose four.)**

- A. String s = strings.get(0);
- B. Iterator i1 = strings.iterator();
- C. String[] array1 = strings.toArray();
- D. Iterator<String> i2 = strings.iterator();
- E. String[] array2 = strings.toArray(new String[1]);
- F. Iterator<String> i3 = strings.iterator<String>();

**40. Collections declared with generic data type ensures that the collections hold only elements of particular data type.**

- a. True
- b. False

**41. Collection can be used to store primitive data**

- A. True
- B. False

**42. ArrayList can be traversed using (Select two options )**

- A. foreach
- B. for loop

C. While loop

D. Indexes

**43. select a valid syntax for creating a HashSet**

A. Set setName=new Set();

B. HashSethashSet = new HashSet();

C. Set setName = new HashSet();

D. Set setName = new Set[];

**44. Which is not a HashSetmethod**

A. booleanadd(Object element)

B. Iterator<E>iterator()

C. intsize()

D. Object[] toArray()

**45. Which of the following is not an ArrayList method (select two)**

A. void add(intindex,Object element)

B. booleanaddAll(intindex,Collection c)

C. booleanadd(intindex,Object element)

D. void addAll(intindex,Collection c)

**46. Which is the valid syntax of for-each loop**

A. for (Object o : collection)  
System.out.println(o);

B. for (Object o..collection)

System.out.println(o);

C. for (Object o, collection)

System.out.println(o);

D. for (Object o; collection)

System.out.println(o);

**47. You need to store elements in a collection that guarantees that no duplicates are stored and all elements can be accessed in natural order. Which interface provides that capability?**

A. java.util.Map

B. java.util.Set

C. java.util.List

D. java.util.Collection

**48. Which is not the sub-interface of public interface Collection{}**

A. BeanContext

B. BeanContextServices

C. AbstractSet

D. SortedSet

**49. toArray() method returns**

A. String

B. Object[]

C. boolean

D. int

**50. Iterator iterator() method returns**

A. All the collection elements contained in a specific Collection

B. An array containing all the elements in the collection

C. The total number of elements in the collection

D. An iterator over the elements in the collection

1. Art of organizing, controlling and revising the developers moduel is –SCM
2. Error and Exception is a subclass- Throwable
3. Valid xml descriptors-sql,formatter,core
4. JDBC connection what are the classes- java.sql,javax.sql
5. Importing a tag library file in jsp- <@taglib>
6. To correct a scenario Serilizable.
7. Scenario on Jsp include-<@include>
8. Interfarce can have only –public,static,final and not private,native
9. Declaration tag should be <%! %>
10. Parser without modifying the content is –SAX parser
11. XML can be transformed by – check it later
12. How call a servlet from a form- action=path of servlet/servletname
13. Int i=1;  
    If(i>0)  
    I=3;  
    Switch(i){  
        Case 1:  
        Case 2:  
        Case 0:  
        Break;  
        Case 3: s.op.(3);  
        Default: s.o.p(4)  
        Break;  
    Ans-3,4
14. 1.Jsp is text file with static and jsptage  
    2.Jsp is for presentation logic and servlet for BO- both are true
15. 1.Tld is a xml with description of entire library and tags  
    2. didn't remember – both are true
16. There should be atleast one element –ans:<!Element elemen(element-content+)>
17. Request object is implicit in- ans:HttpServletRequest
18. HttpSession implicit object in jsp- ans: sessioin
19. where to declare a object to use in entire session-ans: session.setAttribute()
20. how to remove a attribute-ans: removeAttribute(String name)
21. In Expression language, how get a parameter name userId: ans-\${param.userId}
22. int i=10;  
  
    If(((i++)>12)&&(++i<15)){

s.o.p(i);

elses.o.p(i);

ans-11

23. Best practices for Collection- use addAll() for copying, use generic types

24. Return type of Iterator's next() method is – Object

25. Performing specific styles on set of page elements is done by-Div

26. scenario for updating customer phone,address- create a view

27. when updating view should reflect into original db automatically- trigger

28. What are filter attributes are-<init>,<filter-class>,<context>,<config>,<name>ans: don't know

29. how to call a stored procedure of oracle database by JDBC - ans: callable Statement

30. what are not attributes of meta tag- htt-equiv,value,name,content- ans: value

31. (Scenario) what exception raised when number divided by zero: ans: divide zero exception(None of above)

32. Need of alt attribute in img tag- ans: if image is not displayed alt tag value will get displayed

33. Varray(1,2,3,4,5,6,7)

34. which are synchronized- Hashtable,hashmap,arraylist,vector-ans: Hash table,vector

35. PI/Sql –ans: plsql block can be anonymous&named, plsql block have declare&begin&exception

36. tools used for testing – ans: Junit,emma

37. Rais\_application\_error- ans: complies correctly

38. Can we use select statement with max, min in updatebefore trigger- ans: trigger fails.

39. <%!java.util.Date date=new DATe()%>

<%=date.getHours()%>:<%=date.getMinute()%>:<%=date.getSeconds()%>

Ans: time in hh:mm:ss format

40. how use variable all servlets&jsp pages- ans: getServletContext().setAttribute(),  
request.getSession().setAttribute()

41. In xml how to specify the attribute order- ans: <xsl:sequence>

42. In outer joins result will include all rows of first table and not second tables rows which fails condition- ans: true

43. Join performce better than sub-query- ans: true;

44. HttpServletRequest is sub interface of- ServletRequest

46. super class a protected method and child class overriding the method, what should be the access specifier- ans: protected or default.

47. Valid package name-ans: com.org.examle, home\_test, pack123

48. Stored procedure can be called on client side and server side: true/false

50

What is the data type of m in the following code?	String type	int Type	set1 type	Object type	4
<pre>import.java.util.*; public class set1 { public static void main (String [] args) { Set s= new HashSet(); s.add(20); s.add("abc"); for(____ m.s) System.out.println(m); } }</pre>					
Tags for using JavaBeans with JSP?	<jsp:useBean><jsp:setProperty> and <jsp:getProperty>	<jsp:useBean> and<jsp:include>	<jsp:useBean> and<jsp:plugin>	<jsp:setProperty> and <jsp:getProperty> and <jsp:forward>	1
Which method can be used to submit form data that should not be exposed for viewing?	POST	GET	REQUEST	PUT	1
How do you separate ASP.NET code from the user interface?	Using Custom Controls	Using User Controls	Using Code-Behind Forms	Using ASP.NET web pages	3
What will be the output for following code? <pre>public class Exe3 { public static void main (String [] args) { try { int i=10; int j=1/0; return; }</pre>	welcome	error	None	compilation error	4
Which of the following assemblies can be stored in Global Assembly Cache?	Friend Assemblies	Private Assemblies	Public Assemblies	Shared Assemblies	4



Identify the code snippet <pre>declare EmpNAME; begin SELECT ENAME INTO EmpNAME FROM Emp WHERE EmpNo=101172; dbms_output.put_line(EmpName); end;</pre> <p>What will be the output of the above code?</p>	Error	ENAME of EmpNO 101172			2
The result of 10.987+"30.765" is  .	10.9873.765	10.98730. 765	10.987		2
What does the LOCAL argument in the DECLARE CURSOR statement denote?	The LOCAL cursor will be implicitly deallocated when the batch, stored procedure or trigger terminates	Specifies that cursor can be available only in the batch, stored procedure or trigger in which the cursor was created	The LOCAL cursor will have to be explicitly deallocated when the batch, stored procedure or trigger terminates	Specifies that cursor can be available to all local resources	1,2
Select two runtime exceptions.	NullPointerException	IOException	ArrayIndexOutOfBoundsException	SQLException	1,3
Culture & UICulture properties of a page class can have different culture values. State True or False.	TRUE	FALSE			2

<p>Which of the following statements is correct about the C#.NET program given below if a value "6" is input to it? using System.</p> <pre>namespace IndiabixConsoleApplication { class MYProgram { static void Main(string [] args) { int index; int val = 44; int [] a= new int[5]; try { Console.WriteLine("Enter a number"); index=Convert.ToInt32(Console.ReadLine()); } a[index]=val; } catch(FormatException e)</pre>	It will output: Bad Format	It will output: Bad Format Remaining Program	It will output: Index out of bounds Remaining Program	It will output: Remaining Program	3
<p>Consider you are developing shopping cart application you have to store details of items purchased by each customer in intermediate memory before storing purchase details in actual database permanently note that number of different items purchased by customer is not definite it may vary.n How do you implement given requirement using java considering best performance of the application?</p>	Implement using Arrays	None of the listed options	Implement using File APIs	Implement using Collection APIs	4
<p>Which of the following statements are correct?</p>	<p>All objects created from a class will occupy equal number of bytes in memory</p>	<p>A class can contain only instance data and member function</p>	<p>A class is a blueprint or a template according to which objects are created</p>	<p>Instance members of a class can be accessed only through an object of that class</p>	1,2,4

Select correct naming convention used during class declaration.	Class name should be nouns	Class name can be java valid keyword	Should be simple and descriptive	Class name starts with lower case	1,3
<pref.tag1> <%=result %> </pref.tag1> Which of the following are valid for the <body-content> tag of tag1?	empty	scriptless	tag dependant	JSP	2
interface B { public void bM1(); public void bM2(); }  abstract class A implements B { public abstract void aM1(); public abstract void aM2(); public void bM1(){}; }  public class Demo extends A { }  In above scenerio class Demo must override which methods?	public void aM1(){};	All the listed options	public void bM2(){};	public void aM2(){};	2
Which of the following statements are correct?	Argument that uses param keyword must be the last argument of variable argument list of a method	Pass by reference eliminates the overhead of copying large data	An argument passed to the ref parameter need not be initialized	Variable passed as out arguments need to be initialized prior to being passes	1,2
Which of the following Listener is used to track number of active sessions or users?	HttpSessionBindingListener	ServletRequestListener	HttpSessionListener	ServletRequestListener	3

Which statements are true about hash Tables?	The key can be the null reference	The value cannot be the null reference	The key cannot be the null reference	The value can be the null reference	2,3
gen has written a JSP Code in which he is calling the getMessage() function which is returning a value "hello world". You have to identify which code should he use to get this?	<pre>&lt;html&gt; &lt;%! String message="he llo world", String getMessage() { return message;} %&gt; Message for you:&lt;% getMessage() %&gt; &lt;/html&gt;</pre>	<pre>&lt;html&gt; &lt;% String message="he llo world", String getMessage() { return message;} %&gt; Message for you:&lt;% getMessage() %&gt; &lt;/html&gt;</pre>	<pre>&lt;html&gt; &lt;%String message="hello world", String getMessage(){ return message;} %&gt; Message for you:&lt;%=getMess age() %&gt; &lt;/html&gt;</pre>	<pre>&lt;html&gt; &lt;% String message="h ello world", String getMessage( ){ return message;} %&gt; Message for you:&lt;%=get Message() %&gt; &lt;/html&gt;</pre>	4
Views are a powerful mechanism for customizing the way your data is presented to users. They can be used to enhance security and streamline complex table relationships. Views that create static results can still be modified using _____ which allow you to define how the underlying tables are modified ensuring your data integrity.	Functions	Triggers	Stored Procedure	Cursors	2
Which object of JSP holds reference to javax.servlet.http.HttpSession object?	session	response	request	PageContext	1

<p>Consider you are maintaining ABC company database. ABC company database tables are accessed by 1000 users initially when it was designed from last two years there was tremendous increase in number records count also number of users who are accessing the database tables to fetch results. Users of ABC company database are reporting problem that query processing is taking more time when they execute query against the database tables. What will the right solution you will suggest in such scenarios in order to increase database query performance?</p>	Create index	Create function	Create stored procedure	Create trigger	3
<p>Which statements are true about large varchar?</p>	<p>A sql_variant cannot contain a large varchar data type</p>	<p>Large varchar columns can be specified as a key column in an index</p>	<p>Large varchar columns are the only columns that can be used as partitioning key columns</p>	<p>Large varchar columns cannot be used as partitioning key columns</p>	1,4
<p>What will be the output for following code?</p> <pre>public class CompareStrings{ public static void main(String [] args){ if(" string ".trim() == "string") System.out.println("both strings are equal"); else System.out.println("both strings are not equal"); } }</pre>	<p>both strings are not equal</p>	<p>compilation error</p>	<p>String operator cannot compare using == operator</p>	<p>both strings are equal</p>	1

<pre> public class Threads {     public static void main(String[]args)     {         new Threads().go();     }     public void go()     {         Runnable r = new Runnable()         {             public void run()             {                 System.out.print("Run");             }         };         Thread t= new Thread(r);         t.start();         t.start();     } } </pre>	<p>An exception is thrown at runtime</p>	<p>The code executes normally and prints "Run"</p>	<p>Compilation fails</p>	<p>The code executes normally but nothing is printed</p>	<p>1</p>
<p>Consider the following code with line number given below:</p> <p>Line 4: &lt;%! int a=6; %&gt;</p> <p>Line 5: &lt;%! int b=8; %&gt;</p> <p>Line 6: Result is &lt;%!=a*b; %&gt;</p> <p>Which of the following are true with respect to the above code segment?</p>	<p>It will compile successfully and print 48</p>	<p>Line 6 is invalid</p>	<p>Line 4 is invalid</p>	<p>Line 5 is invalid</p>	<p>2</p>
<p>JAXP stands for:</p>	<p>Java API for XML Processing</p>	<p>Java API for eXtensible Processing</p>	<p>None</p>	<p>Java API for eXtensive Processing</p>	<p>1</p>

<p>Ronald has observed that his Web application has some HTML tags or features that all the Web browsers do not support. If the client's browser does not support the application may or may not run or may generate undesired output in the Web Browser of the client. Therefore Ronald wants to identify the type of browser and other specific information about the client that sends the request to the Web application before invoking the servlet. Which of the following options will help Ronald provide this functionality?</p>	<p>By modifying the web deployment descriptor</p>	<p>By programming filters</p>	<p>By creating security constraints</p>	<p>By implementing the listeners</p>	<p>2</p>
<p>During translation the scriptlet code is copied inside:</p>	<p>Scriptlet code gets no space in the generated scriplet</p>	<p>The service method of the generated servlet</p>	<p>The init() method of the generated servlet</p>	<p>The doGet() method of the generated servlet</p>	<p>2</p>
<p>Which of the following options can be used by the controller to destroy a session of a web application immediately?</p>	<p>By using the setMaxInactiveInterval() method period to 60 seconds</p>	<p>By using the destroy() method</p>	<p>By using the invalidate() method</p>	<p>By setting the session-timeout parameter in the web.xml file to 1 minute</p>	<p>3</p>
<p>Which of the following statements are true?</p> <p>Statement A: Arrays have a fixed upper bound, but nested tables are unbounded.</p> <p>Statement B: Second, arrays must have consecutive subscripts and nested tables are dense, but they can be sparse(have non-consecutive subscripts).</p>	<p>Both A and B are false</p>	<p>Both A and B are true</p>	<p>A is true and B is false</p>	<p>A is false and B is true</p>	<p>2</p>
<p>Code to get the value of "address" request parameter is:</p>	<p><code> \${param.address}</code></p>	<p><code> \${request.address}</code></p>	<p><code> \${values.address}</code></p>	<p></p>	<p>1</p>

<p>What will be the output for following code?</p> <pre>public class VariableDec1 {     public static void main(String[]args) {         int i=32;         char c=65;         char a=c+i;         System.out.println(a);     } }</pre>	None	a	Compilation Error	97	3
<p>Consider Vijay is developing a web application. Which method he can use to get a collection of elements of same type(for example paragraph tags) in JAVA Script?</p>	None	getElementsById()	getElementByName()	getElementByTagName()	4
<p>What will be the output for following code?</p> <pre>public MethodOverloading {     int m=10,n;     public void div(int a) throws Exception {         n=m/a;         System.out.println(n);     }     public void div(int a,int b) {         n=a/b;     } } public static void main(String[]args) throws Exception {     MethodOverloading o= new     MethodOverloading();     o.div(0);     o.div(10,2); }</pre>	It will print ArithmeticException and prints 5	None	It will print 5	It will give ArithmeticException	4
<p>How does SOAP enable creation &amp; usage of Web services?</p>	Provides a robust mechanism to Data & Structure over the web	Uses proprietary means of describing data	Enables messaging over HTTP	Uses standard means of describing data	1,3,4

<p>What does the following code denote?</p> <pre>var orderedCustomers= from customer in Customers where customer.Grade == "Premium" orderby customer.Name select customer.Name; select one or more;</pre>	<p>The following code is an example of LINQ query</p>	<p>The following code shows the syntax for Filtering data</p>	<p>The following code is an example of Database query</p>	<p>The following code shows the syntax for Ordering data</p>	<p>1,2,4</p>
<p>Which JSTL code snippet can be used to perform URL rewriting?</p> <p>Select one:</p>	<pre>&lt;a href='&lt;c:link value="cogni zant.jsp"/'&gt;</pre>	<pre>&lt;a href='&lt;c:u rl value="co gnizant.jsp "/'&gt;</pre>	<pre>&lt;a href='&lt;c:link url="cognizant.js p"/'&gt;</pre>		<p>2</p>
<p>Consider you are developing an ATM application for ABC Bank using java application. Several account holders of ABC Bank have opted for add-on cards. There is a chance that two users may access the same account at same time and do transaction simultaneously knowingly or unknowingly from different ATM machine from same or different bank branches. As developer you have to ensure that when one user login to account until he finishes his transaction account should be locked to other users who are trying access the same account. How do you implement given requirement programmatically using java?</p>	<p>Using object serialization</p>	<p>None</p>	<p>Using object deserialization</p>	<p>Using Thread Synchronization</p>	<p>4</p>
<p>InputStream is the class used for stream of characters</p> <p>State True or False.</p>	<p>TRUE</p>	<p>FALSE</p>			<p>2</p>

What does the following code denote?	Inheritance	Overriding	Encapsulation	Overloading	1
<pre>public class Contact {     public string Name { get;set; }     public string Email { get;set; }     public string Address { get;set; } }  class Customer:Contact {     public string Gender { get;set; }     public decimal income { get;set; } }</pre>					
What are the Tools & plugs-ins commonly used in testing java application code?	ANT	EMMA	JUnit		2,3
What are the benefits of using a stored procedure?	Efficient reuse of code	Reduced network traffic	Efficient compilation	Precompiled execution, hence faster	1,2,4
Given that URL-rewriting must be used for session management, identify the query string attribute used when URL-rewriting.	jsessionid	containerid	sessionid	servletid	1
Mention some of the important functions of Servlet Filter.	Modifying the request or response	allowing all the users	None of the listed options	Security Checks	1,4
consider you are creating a cursor. Choose the correct sequence of steps to work with cursors?	Declare,Fetch , Open Fetch	Open,Fetch,Close	Declare,Open,Fetch,Close	Open, Declare,Fetch,Close	3
What is the use of ServletConfig interface?	A servlet configuration object used by a servlet container to pass information to a servlet during initialization	All of the listed options	The ServletConfig object is contained within the ServletContext object	Defines an object to provide client request information to a servlet	2

<pre> &lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;taglibxmlns="http://java.sun.com/xml/ns/j2ee"   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"   xsi:schemaLocation="http://java.sun.com/xml/ns/j2ee/web-jsptaglibrary_2_0.xsd" version="2.0"&gt;    &lt;tlib-version&gt;2.0&lt;/tlib-version&gt;   &lt;short-name&gt;SimpleTagForLearning&lt;/short-name&gt; </pre>	<pre> &lt;%@ taglib prefix="pre" uri="testuri" %&gt;&lt;html&gt;&lt;head&gt; &lt;title&gt; Demo &lt;/title&gt;&lt;/head&gt;&lt;body&gt; &lt;title&gt; Demo &lt;/title&gt;&lt;/body&gt; &lt;%@ taglib prefix="pre" uri="testuri" %&gt;&lt;html&gt;&lt;head&gt; &lt;title&gt; Demo &lt;/title&gt;&lt;/head&gt;&lt;body&gt; &lt;title&gt; Demo &lt;/title&gt;&lt;/body&gt; </pre>	<pre> &lt;%@ taglib prefix="pre" uri="testuri" %&gt;&lt;html&gt;&lt;head&gt; &lt;title&gt; Demo &lt;/title&gt;&lt;/head&gt;&lt;body&gt; &lt;title&gt; Demo &lt;/title&gt;&lt;/body&gt; </pre>	<pre> &lt;%@ taglib prefix="pre" uri="testuri" %&gt;&lt;html&gt;&lt;head&gt; &lt;title&gt; Demo &lt;/title&gt;&lt;/head&gt;&lt;body&gt; &lt;title&gt; Demo &lt;/title&gt;&lt;/body&gt; </pre>
<p>Which complex type specifies that the elements should always be in the order specified?</p>	<pre> &lt;xs:complexType   name="CountryInfo"&gt;&lt;xs:choice&gt;&lt;xs:element     name="countryName"     type="xs:string"/&gt; &lt;xs:element     name="state"     type="xs:integer"/&gt;&lt;/xs:choice&gt;&lt;/xs:complexType&gt; </pre>	<pre> &lt;xs:complexType   name="CountryInfo"&gt;&lt;xs:all&gt;&lt;xs:element     name="countryName"     type="xs:string"/&gt; &lt;xs:element     name="state"     type="xs:integer"/&gt;&lt;/xs:all&gt;&lt;/xs:complexType&gt; </pre>	<p>None of the listed options</p> <pre> &lt;xs:complexType   name="CountryInfo"&gt;&lt;xs:sequence&gt;&lt;xs:element     name="countryName"     type="xs:string"/&gt; &lt;xs:element     name="state"     type="xs:integer"/&gt;&lt;/xs:sequence&gt;&lt;/xs:complexType&gt; </pre>

Which statements about JDBC are true?	JDBC is an API to access relational databases, spreadsheets and flat files	JDBC is an API to bridge the object-relational mismatch between OO programs and relational databases	JDBC has 5 types of Drivers	JDBC stands for Java DataBase Connectivity	1,2,4
What is the significance of the @ Register directive in a ASP.NET web page?	The directive is used to register a web page	The directive is used to register a user control	The directive is used to register a web site	The directive is used to register an application	2
As per Java Class names should be nouns , in mixed case with first letter of each internal word capitalized. Try to keep your class names simple and descriptive. State True or false.	TRUE	FALSE			1
Which of the following keywords ensures that a method cannot be overridden?	final	protected	abstract	static	1
Given a Filter class definition with this method: 21. public void doFilter(ServletRequest request, 22. Servletresponse response, 23. filterChain chain) 24. throws ServletException, IOException { 25. // insert code here 26. }	request.doFilter(request,response);	chain.doFilter(request,response);	request.forward(request,response);	chain.forward(request,response);	2
Which code line should you insert at line 25 to properly invoke the next filter in the chain, or the target servlet if there are no more filters?					

Which of the following statements are correct?	Pass by reference eliminates the overhead of copying large data	An argument passed to a ref parameter need not be initialized first	Variable passed as out arguments need to be initialized prior to being passed	Argument that uses params keyword must be the last argument of variable argument list of a method	1,4
<pre>public class MethodSigExample { public int test(String s, int i) { int x=i+s.length(); return x; } }</pre> <p>During refactoring method signature can be changed using the option: Select one:</p>	Refractor> move method	Refractor> Extract method	Refractor> Change Method Signature	Refractor> move	3
<p>What will be the output of the following Java Script code whrn the button is clicked?</p> <pre>&lt;body&gt; &lt;script type="text/javascript"&gt; function displayMessage(){} document.write("Displaying message by using javaScript"); } &lt;/script&gt; &lt;button type="button" onclick="DISPLAYMESSAGE()"&gt; Display Message&lt;/button&gt;  &lt;/body&gt;</pre> <p>Select one:</p>	It will print the message "Displaying message by using javaScript"	It will display some error message on browser	It will not print the message	None	3
What is the syntax of Expression Language in a JSP page?	\${expr}	\${"expr"}	\${[expr]}	#{expr}	1

Which statements are applicable to Web services?	The information is passed back & forth through HTTP	The data transfer is XML based	The communication protocol most often used for Web Services is SOAP	The information is passed back & forth through TCP/IP	1,2,3,4
Which two statements are true? Select one or more:	Deadlocked threads release once their sleep() method's sleep duration has expired	If a piece of code is capable of deadlock, you cannot eliminate the possibility of deadlock by inserting invocation s of Thread.yield();	The JVM implementation guarantees that multiple threads cannot enter into a deadlocked state	It is possible for more than two threads to deadlock at once	2,4
When one method is overridden in sub class the access specifier of the method in sub class should be equal as method in super class. State true or false.	TRUE	FALSE			2
Which of the following options represents the presentation logic to provide the data of the model in the MVC design pattern?	View	Connector	Controller	Model	1
Which parser reads small chunk of document at a time, parses it, generate an events and then reads another chunk of document?	DOM	None	XML	SAX	4
XYZ Company database tables are accessed by several users but few users want to do positional row updates or deletes operation on databases tables based on business requirement. What will the right solution you will implement in such scenario?	Use Cursors	Use database Trigger	Use Views	Use database Indexes	1

You are developing dynamic web application using JSP. Which attribute of page directive specifies the list of classes imported in the JSP file?	extends	<b>import</b>	session	language	2
What are the benefits of using a stored procedure?	Efficient compilation	Reduced network traffic	Precompiled execution, hence faster	Efficient reuse of code	2,3,4
Request implicit object is which of the following type?	ServletHttpRequest	<b>HttpServletRequest</b>	ServletRequest	HttpServletRequest	2
What will be the output of following code? <pre>try {     System.out.println("Executing try"); } System.out.println("after try"); catch(Exception ex) {     System.out.println("Executing catch"); }</pre>	Executing try Runtime Exception	Executing try after try Executing catch	Runtime Exception	<b>Compile Time Exception</b>	4
You being a software developer needs to develop a web application for your organization. You decided to use servlets to create the web application. While you are creating the servlet you feel the need to write the code for the initialization of the servlet. This is needed to initialize the servlet with the required data after the servlet instance has been created. How will you perform this task?	By overriding the service method in the servlet class	<b>By overriding the init method in the servlet class</b>	By overriding the doGet method in the servlet class	By overriding the destroy method in the servlet class	2
What is the use of attributes in HTML tags?	Attribute is a type of tag	Which represents the content to be displayed in the page	None	<b>Provides additional behaviour to the tag</b>	4

Whenever a request goes from the client to the server some additional information other than the request is also passed to the server. This additional information is in the form of a _____.	footer	header	Session ID	Application ID	3
Select the advantages of using coding conventions in java application development.	all of the listed options	Improves easy maintenance	improves easy understanding	Improves Readability of the software	1
which of the following statements are true?  Statement A: index by table is also known as associative arrays. It lets you to look up elements using arbitrary numbers and strings for subscript values.  Statement B: Nested tables hold an arbitrary number of elements. they use sequential numbers as subscripts.	A is true, B is false	Both are true	Both are false	A is false, B is true	2
XYZ company database has SALES table which captures all department sales information. You have been asked to create department wise summarized total sales report from SALES table. Which of the following correct option will fetch you meaningful result?	None	Use Aggregate function along with WHERE clause in query to retrieve result	Use Aggregate function along with GROUP BY clause in query to retrieve result	Use Aggregate function along with ORDER BY clause in query to retrieve result	3
Which statements are applicable to Web services?	The information is passed back & forth through HTTP	The data transfer is XML based	The communication protocol most often used for Web Services is SOAP	The information is passed back & forth through TCP/IP	1,2,3,4
A filter configuration object used by a servlet container to pass information to a filter during initialization. State true or false.	TRUE	FALSE			1

Which attribute of the page directive indicates that the JSP engine can handle more than one request at a time when its value is set to true?	info	isThreadSafe	extends	autoflush	2
What will be the output for following code? <pre>public class Compare { public static void main(String[]args) { String s= new String("abc"); String s1= new String("abc"); System.out.println(s.compareTo(s1)); } }</pre>	Zero("0")	FALSE	None	TRUE	1
What are the benefits of Logging?	None	Debug application issues easily	Detect compiler errors easily	Trouble Shoot performance problems	2,3,4
Consider you are developing a JDBC application, where you have to retrieve Employee table schema information like table columns name, columns field length and data type etc. Which API you will use to retrieve table schema information?	ResultSetMetaData	DataSource	Statement	ResultSet	1
Which of the following is applicable to Servlet Containers?	These are responsible for managing the lifecycle of servlets, mapping a URL to a particular servlet and ensuring that the URL requester has got the correct access right	These are specialized web servers, which support servlet execution	These are also referred to as web containers or web engines	All of the listed options	4

Select the benefits of versioning the software in java application development.	Formatting	Branching and merging	Synchronization	Backup and Restore	2,3,4
Which statement creates DocumentBuilderFactory instance?	DocumentBuilderFactory f=BuilderFactory.newInstance();	None	DocumentBuilderFactory f=new DocumentBuilderFactory();	DocumentBuilderFactory f=DocumentBuilderFactory.newInstance();	4
What will be the output for following code? <pre>import java.util.*; public class StringTokenizer { public static void main(String[]args) { String s="India is a\n developing country";  StringTokenizer o= new StringTokenizer(s); System.out.println(o.countTokens()); } }</pre>	6	5	4	None	2
What will be the output of the following code snippet? <pre>&lt;% page language="java"%&gt; &lt;html&gt; &lt;head&gt;&lt;/head&gt; &lt;body&gt; &lt;%java.util.Date now= new java.util.Date();%&gt; &lt;H1&gt;&lt;%=now.getHours()%&gt;:&lt;%=now.getMinutes()%&gt;:&lt;%=now.getSeconds()%&gt;&lt;/H1&gt; &lt;/body&gt; &lt;/html&gt;</pre>	It will display the current time as hh:mm:ss	It will display the date and time	It will display the date as mm:dd:yy	It will display the time as hh:mm:ss	1
Which of the following is the deployment descriptor file of a web application? Assuming that the name of the Web application is BankApp.	BankApp.xml	WebApp.xml	deployment.xml	web.xml	4
Choose a valid package name in JAVA.	123pack	outerpack_innerpack	com.sun.eng	pack123	2,3,4

What does the following listing denote? <configuration> <system.web> <pages theme="Website"/> </system.web> </configuration>	Registering a skin in web.config	Registering a theme in web.config	Registering a MasterPage in web.config	Registering a StyleSheetTheme in web.config	2
In Java script, for accessing first paragraph tag in the document which of the statement is used?	document.getElementsByTagName("p")[0]	document.getElementsByTagName("p")	document.getElementsByTagName("p")[0]	None	1
How to divide the page into two rows when we are using frameset?	By using colspan	By using rows=50%,50%	By using rowspan	By using cols=50%,50%	2
What is the correct syntax of the declaration which defines the XML version?	<?xml version="1.0" />	<?xml version="1.0"?>	None	<xml version="1.0" />	2
Identify the code snippet DECLARE var_num1 number:=50; var_num2 number; BEGIN var_num2 :=200; DECLARE var_mult number; var_num1 number:=100; --LINE 1  BEGIN var_mult :=var_num1*var_num2; END; dbms_output.put_line(var_num1); END;	Compilation Fails	Compilation Fails due to error in line 1	Runs without any output	Compiles, executes and prints 50	4
What will be the output of the above code assume serveroutput is on					
Try can be followed with either catch or finally.State true or false.	TRUE	FALSE			1

<p>You are developing a trigger which should ensure that no negative value is inserted in employee table's Age column. you have created a trigger as follows</p> <pre>create or replace trigger Age Verify before insert on employee for each row when(new.EmpAge&lt;0) begin RAISE_APPLICATION_ERROR(-20000,'no negative age followed'); end; / Identify error if any in the above trigger, and give the solution.</pre>	<p>The order of Arguments passed to RAISE_APPLICATION_ERROR(-20000,'no negative age allowed') OR is wrong</p>	<p>Replacing RAISE_APPLICATION_ERROR(-20000,'no negative age allowed'); to RAISE_APPLICATION_ERROR(-20000,"no negative age allowed"); will give the desired output</p>	<p>No problem in the trigger. It gives the desired result</p>	<p>4</p>
<p>Which of the following code line will destroy a session?</p>	<p>session.isAlive=false;</p>	<p>session.invalidate();</p>	<p>session.isNew(false);</p>	<p>session.removeSession();</p> <p>2</p>
<p>Which of the following are true about protected access specifier?</p>	<p>All members of abstract class are by default protected</p>	<p>Protected is default access modifier of a child class</p>	<p>A class can be declared as protected</p>	<p>If one class is having protected method then the method is available for subclass which is present in another package</p> <p>1</p>
<p>Which of the following is not an attribute of meta tag?</p>	<p>content</p>	<p>name</p>	<p>http-equiv</p>	<p>value</p> <p>4</p>

<p>In Thread implementation making method synchronized is always better in order to increase application performance rather than using synchronize block to synchronize certain block of statements written in java inside the method. State true or false.</p>	TRUE	FALSE			1
<p>What will be the output for following code?</p> <pre>public class Variabledec { public static void main(String[]args){ boolean x=true; int a; if(x) a=x?2:1; else a=x?3:4; System.out.println(a); } }</pre>	2	4	3	1	1
<p>Consider the following statements;</p> <p>Statement A: The PreparedStatement object enables you to execute parameterized queries.</p> <p>Statement B: The SQL query can use the placeholders which are replaced by the INPUT parameters at runtime.</p> <p>Which of the following option is true with respect to the above statements?</p>	A is false and B is true	Both are true	Both are false	Both are false	2
<p>Consider Vijay is developing web page using HTML. Which method he can use for sending large amount of data on submitting the form?</p> <p>I. POST II. GET</p>	I	Both I & II	II	None	1

How can you force garbage collection of an object? 1. Garbage collection cannot be forced 2. Call System.gc() 3. Call Runtime.gc() 4. Set all references to the object to new values(null, for example).	1	4	3	2	1
How to drop all tables from recycle bin?	DROP DBA_RECYCLEBIN	Cannot drop tables from Recycle Bin	PURGE RECYCLEBIN	DROP ALL_TABLE_RECYCLEBIN	3
Which of the following variable represents the uncaught throwable object that resulted from a call to the error page?	application	exception	config	request	2
Under which two circumstances do you design database triggers?	To replicate built-in constraints in the Oracle server such as primary key and foreign key	To guarantee that when a specific operation is performed, related actions are performed	To duplicate the functionality of other triggers	For centralized, global operations that should be fired for the triggering statement, regardless of which user or application issues the statement	2,4
public class MethodSigExample { public int test(String s, int i) { int x= i+s.length(); return x; } }	Refractor> move	Refractor> move method	Refractor> Change Method Signature	Refractor> Extract method	3
During refactoring method signature can be changed using the option:					
When comparable interface is used which method should be overridden?	compareWith	compare	compareTo	comparator	3

<pre><code>SELECT e.EMPLOYEE_ID,e.LAST_NAME,e.DEPARTMENT_ID,d.DEPARTMENT_NAME FROM EMP e, DEPARTMENT d WHERE e.DEPARTMENT_ID=d.DEPARTMENT_ID;</code></pre> <p>In the statement, which capabilities of a SELECT statement are performed?</p>	Selection, Intersection, Join	Selection, Projection, Join	Intersection, Projection, Join	Difference, Projection Join	2
<p>What will be the output for following code?</p> <pre><code>public class While { static int i; public static void main(String[]args){ System.out.println(i); while(i&lt;=5){ i++; } System.out.println(i); } }</code></pre>	6,0	0,5	0,6	compilation error	3
<p>XYZ company database has Customer personal Information. View table using which customer can update their personal information like address, phone number fields when user updates address and phone number fields in view table. We need to take care of updating address and phone number fields in underlying database base table automatically. What right solution do you suggest to implement this requirement?</p>	Implement using Stored Procedures	Implement using triggers	Implement using cursors	Implement using functions	2
<p>DIV tag creates linebreaks similar to paragraph tags.State true or false.</p>	TRUE	FALSE			2

Which complex type signifies that only one of the child elements can appear?	<pre> &lt;xs:complexType   name="CountryInfo"&gt;&lt;xs:sequence&gt;     &lt;xs:element       name="countryName"       type="xs:string"/&gt;     &lt;xs:element       name=""states"       type="xs:integer"/&gt;   &lt;/xs:sequence&gt;&lt;/xs:complexType&gt;</pre>	<pre> &lt;xs:complexType   name="CountryInfo"&gt;&lt;xs:all&gt;&lt;xs:element     name="countryName"     type="xs:string"/&gt;&lt;xs:element     name=""states"     type="xs:integer"/&gt;&lt;/xs:all&gt;&lt;/xs:complexType&gt;</pre>	None	2
What will be the output of the below query? select instr('My SQL World','a') from dual;	Query contains error	Prints 14	Prints 6	Prints 0
How will you access a servlet context initialization parameter named "company-name"?	<code> \${initParam["company-name"]}</code>	<code> \${init.companyname}</code>	<code> \${contextParam.company-name}</code>	<code> \${init['company-name']}</code>
"Variables in Java Script should be declared with data types". State true or false.	TRUE	FALSE		2
Which method removes the attribute with the given name from the ServletContext interface?	<code> void clearAttribute(String name)</code>	<code> void removeAttribute( Object name)</code>	<code> void removeAttribute( String name)</code>	<code> void flushAttribute(String name)</code>

<p>A Web application developed for an institution requires insertion of a header file comprising the logo and institution name. Identify the correct JSP tag from the options given below to add the logo and institution name to all the pages of the Web application. Select one:</p>	<pre>&lt;%@ page import="Header.html"%&gt;</pre>	<pre>&lt;form method="post" action="Header.htm l"&gt;</pre>	<pre>&lt;jsp:forward page="Header.ht ml"&gt;</pre>	<pre>&lt;%@ include file="Header. html"%&gt;</pre>	4
<p>In which of these following getAttribute() and setAttribute() method has defined?</p>	<p>ServletResponse</p>	<p>HttpListener</p>	<p>ServletRequest</p>	<p>HttpSession</p>	3,4
<p>How to divide the page into two equal halves when we are using frameset?</p>	<p>By using colspan</p>	<p>By using rowspan</p>	<p>By using cols=50%.50%</p>	<p>By using rows=50%.50%</p>	3,4
<pre>Examine the PL/SQL Block declare result Number; num1 Number:=&amp;number1; num2 Number:=&amp;number2; begin select num1/num2 into result from dual; dbms_output.put_line('Result is ' result); exception when ZEROS_DIVIDE then dbms_output.put_line('Exception Occured Divide by Zero'); end; /</pre> <p>What will be the output of the above code when user passes the value for NUM1 as 0 and NUM2 as 10?</p>	<p>compilation fails</p>	<p>Result is 0</p>	<p>Exception occurred divide by zero</p>	<p>Result is 10</p>	2
<p>Consider you are developing web application. Which of the following option is valid in JSP for importing the package?</p>	<pre>&lt;%@ page session="true "%&gt;</pre>	<pre>&lt;%@ page import="j ava.util.*" %&gt;</pre>	<pre>&lt;%@ include autoFlush="java. util.*%"&gt;</pre>	<pre>&lt;%@ include import="java. util.*%"&gt;</pre>	2

<p>Consider the following statements:</p> <p>Statement A: When tags are implemented with tag handlers written in Java, each tag in the library must be declared in the TLD with a tag element.</p> <p>Statement B: The tag element contains the tag name, the class of its tag handler, information on the tag's attributes and information on the variables created by the tag.</p> <p>Which of the following is true about these statements?</p>	A is true and B is false	Both are true	A is false, B is true	Both are false	2
<p>In JavaScript, for reading the contents inside the first paragraph tag which statement is used?</p>	<code>document.getElementsByTagName("p")[0].innertext()</code>	None	<code>document.getElementsByTagName("p[0]").innertext()</code>	<code>document.getElementsByTagName("p").innertext()</code>	1
<p>Which of the following is valid declaration in JSP using declaration tag?</p>	<code>&lt;%@ String name="Anand" %&gt;</code>	<code>&lt;%= public String name="Anand";%&gt;</code>	<code>&lt;% String name="Rocky"%&gt;</code>	<code>&lt;%! String name="Rocky";%&gt;</code>	4
<p>Predict output of Expression Language <code>\$ 7*k}</code> if k is null:</p>	Null	7	Error		1
<p>What are the major areas PMD tool scans java code?</p>	Possible performance bottlenecks	Coding Standards	Violation of best practice	All the listed options	4
<p>What part of database trigger determines the number of times the trigger body executes?</p>	Trigger type	Trigger event	Trigger timing	Trigger body	1

What will be the output for following code? <pre>public class Exception1{ public static void main(String args[]){ int i=1,j=1; try{ i++; j--; if(i/j &gt; 1) i++; }catch(AirthmeticException 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); }</pre>	print 34	print 1	print 034	print 3	3
XYZ Company database tables are accessed by several users but for few users need to be provided provision for updating information like address, phone number, email address in secured manner without providing direct access to underlying database base tables. What will the right solution you will implement in such scenerio to meet requirement?	Use database functions	Create views	Use database trigger	User cursors	2
Which of the following tag is used to specify the initialization parameters in the web.xml file?	<url-pattern>	<servlet-mapping>	<servlet>	<init-param>	4
Choose valid expression language statement for accesssing textfield elements whose name is userid.	<code>#{param.userid}</code>	request.getParameter("userid")	<code>#{param.userid}</code>	None	1
Filters can create responses by themselves. State true or false.	TRUE	FALSE			2

John wants to see how many employees are there whose salary is above average. Which of the following query will help John to achieve this task?	Select count(*) from emp where sal > (select avg(sal)) from emp;	Select count(*) from emp where sal exist (select avg(sal)) from emp);	Select count(*) from emp where sal > (select Average(sal)) from emp);	Select count(*) from emp where sal > (select max(sal)) from emp);	1
_____ are small amounts of data sent by a program to the browser and stored on the user's machine to be retrieved later.	Session variables	Application variables	Cookies	Objects	3
Consider you are maintaining XYZ company database. XYZ database tables are accessed by several users to fetch daily reports by joining multiple tables found each user writes query which is more than 100 line of SQL statement and submits to server for processing in order to fetch results. This is really increasing the network traffic and also response time. What will be the right solution you will implement in such scenarios in order to increase performance?	Create Stored Procedure	Create view	Create Trigger	Create index	1
What does XSL stands for?	Extensible StyleSheet Language	Extensible Style Language	Extensive StyleSheet Language	None	1
Which parser is a W3C standard?	SAX	DOM	XHTML	None	2
You are developing a web application using Servlets. You have to use filters so that the web container intercepts the incoming requests before it is forwarded to the servlet. Which of the following method is called for every request intercepted by the filter?	doGet	destroy	init	doFilter	4

<p>Smith is developing an application using Java Server Pages. The name of the component that he has created is "Emp". He has included the following statement in her application:</p> <pre>&lt;jsp:setProperty name="Emp"property=* /&gt;</pre> <p>What would be the result of the above code?</p>	<p>It will give run time error</p>	<p>It will iterate over the current ServletRequest parameters and setting each matched property to the value of matching parameter</p>	<p>It will iterate over the current ServletRequest parameters and would not set any property to the value of matching parameter</p>	<p>It will iterate over the current ServletRequest parameters and getting each property to the value of matching parameter</p>	<p>2</p>
<p>Which method of JSP is equivalent to service method of servlet?</p> <p>Consider the development scenario where you have created Employee class with implementation code and as per the project requirement you have to ensure that developer in team reusing code written in Employee class only using inheritance by extending the employee class but not by creating the instance of Employee object directly. Please suggest the solution to implement given requirement?</p>	<p>service()</p>	<p>_jspService()</p>	<p>jsp_Service()</p>	<p>jspService()</p>	<p>2</p>
<pre>public class Person {     private String name;     public Person(String name) { this.name = name; }     public boolean equals(Person p)     {         return p.name.equals(this.name);     } }</pre> <p>Which statement is true?</p>	<p>Make Employee class methods public</p>	<p>Make Employee class methods private</p>	<p>Make Employee class with final keyword</p>	<p>Make Employee class with abstract keyword</p>	<p>4</p>

Consider you are developing a JDBC application, where you have to retrieve quarterly report from database by executing database store procedure created by database developer. Which statement API you will use to execute store procedure and retrieve resultSet information?	PreparedStatement	None	CallableStatement	Statement	3
Translation and Compilation of JSP happens during:	Deployment	Execution	None	Undeployment	1
Enumeration is having remove() method. State true or false.	TRUE	FALSE			2
If your JDBC connection is in auto-commit mode, which it is by default, then every SQL statement is committed to the database upon its completion. State true or false.	TRUE	FALSE			1
What are the types of refactoring?	Method Level	Logical Structure	Class Level Structure	Physical Structure	1,3,4
Which of the following statements is correct about an Exception?	It occurs during linking	It occurs at run-time	It occurs during compilation	It occurs during Just-In-Time Compilation	2
Consider the following code for an HTML form.  <form action=?/servlet/Login?> <input type=?text? name=?username? value=?enter username?/?> <input type=?submit? name=?sbutton? value=?signin!..?/?> </form>  Which of the following happens upon pressing the submit button in the above form?	A request is sent with HTTP method GET	A request is sent with HTTP method POST	The parameter username is the only parameter passed to the web server in the request	The parameter username and sbutton are passed to the web server in the request URL	1,4
Which of the following statements is incorrect about delegate?	Delegates are object oriented	Delegates are reference types	Only one method can be called using a delegate	Delegates are type-safe	3

select the right coding best practices followed while using java Collections.	Copy collections into other collections by calling addAll() methods instead using iterator to copy each collection element	Use for loop instead of iterator	Use Collections with generic with same type of data	All the listed options	1,3
Which of the following is an empty tag in HTML?	 	<input>	<h1>	<a>	1
Which of the following used by container to validate a custom tag in a JSP page?	Tag Library Descriptor	web.xml	Xmlspy	Xerces	1
identify the type of variable declared VARIABLE City Vatchar2(20).	Host Variable	Bind Variable	Invalid Variable declaration	Global Variable	2
BufferedWriter constructor CAN ACCEPT FileWriter Object as a parameter. state true or false.	TRUE	FALSE			1
Which of the following are used for executing client side script?	JSP	Servlets	JavaScript	VBScript	3,4
An art of identifying, organizing, controlling and verifying the modification to the software work products built by the developer.	HCM	SDLC	SVN	SCM	4
Method keySet() in Map returns a set view of the keys contained in that map. State true or false.	TRUE	FALSE			1
Consider you are developing java application in a team consists of 20 developers and you have been asked to develop class by Name ProgrammerAnalyst and to ensure that other developers in team use ProgrammerAnalyst class only by creating object and team member should not be given provision to inherit and modify any functionality written in ProgrammerAnalyst class using inheritance. how do you achieve this requirement in development scenerio?	Declare the Programmer Analyst class as final	Declare the ProgrammerAnalyst class as abstract	None of the listed options	Declare the Programmer Analyst class as private	1

<p>sam is writing a web application program. he has implemented ServletcontextListener interface in his web application program. Which method of ServletContextlistener interface he should use to perform startup activities foe web application?</p>	initiateConte xt()	start()	init()	contextInitial ized()	4
<p>How can you execute a stored procedure in the database?</p>	Call method run() on a ProjectComm and Object	Call method executePr ocedure() on a Statement Object	Call method execute() on a StoredProcedure Object	Call method execute() on a CallableProc edure Object	4
<p>Which statement is true about Java server pages?</p>	Used to build dynamic web pages	all of the listed options	Platform dependent	HTML files with special tags that contain java source code to generate dynamic content	1,4
<p>Consider a development scenerio where you want to write the object data into persistence storage devices (like file,disk etc.). using which of the below concept you can achieve the given requirement?</p>	Deserializatio n	Finalizatio n	Serialization	Synchronizat ion	3
<p>An ObjectInputStream deserializes objects previously written using an ObjectOutputStream. state true or false.</p>	TRUE	FALSE			1
<p>You have a row level BEFORE UPDATE trigger on the EMP table. This trigger contains a SELECT statement on the EMP table to ensure that the new salary value falls within the minimum and maximum salary for a given job title. What happens when you try to update a salary value in the EMP table?</p>	The Trigger fails because you cannot use the minimum and maximum functions in a BEFORE UPDATE trigger	The Trigger fails because a SELECT statement on the table being updated is not allowed	The Trigger fires successfully	The trigger fails because it needs to be a row level AFTER UPDATE trigger	3

<p>Consider the following statements:</p> <p>Statement A: A resource is passive when it does not have any processing of its own.</p> <p>Statement B: The content of a passive resource does not change.</p> <p>Which of the following is true about these statements?</p>	<p>A is true and B is false</p>	<p>Both are true</p>	<p>A is false, B is true</p>	<p>Both are false</p>	<p>2</p>
<p>What will be the output for following code?</p> <pre>public class CompareStrings{     public static void main(String [] args){         String a= new String("string");         String s= new String("string");         if(a == s)             System.out.println("both strings are equal");         else             System.out.println("both strings are not equal");     } }</pre>	<p>compilation error</p>	<p>both strings are not equal</p>	<p>both strings are equal</p>	<p>Strings cannot be compared using == operator</p>	<p>2</p>
<p>Which of the following statements are true?</p> <p>Statement 1: When a thread is sleeping as a result of sleep(), it releases its locks.</p> <p>Statement 2: The Object.wait() method can be invoked only from a synchronized context.</p>	<p>Stmt 1 is true and stmt 2 is false</p>	<p>Both are true</p>	<p>Stmt 2 is true and stmt 1 is false</p>	<p>Both are false</p>	<p>3</p>

Which of the following describes JSP life cycle management?	none	loading invoking, destroy. user should manage this life cycle	invoking,destroy, web browser manages this life cycle	Translation & compilation, Instantiation, initialization, service destroy container manages this life cycle	4
How do you declare a tag library within a JSP page to use custom tags?	By using unique variable	By using scriptlet	By using taglib directive	By using path to the tag handler	3
What will be the output of below query? <code>select to_CHAR(sysdate+(10/400),'HH:MI:SS') from dual;</code>	query contains error	adds 10 minutes to the current timestamp	adds 10 days to the current timestamp	adds 10 seconds to the current timestamp	2
"Consider Vijay is developing web page using HTML. Which method he can use for sending data security on submitting the form? I. POST II. GET"	II	I	Both I & II	None	2
Automatic page refresh can be done by using refresh Meta Tag. State true or false.	TRUE	FALSE			1
Consider the following deployment descriptor(web.xml) file: <code>&lt;session-config&gt; &lt;session-timeout&gt; 30 &lt;/session-timeout&gt; &lt;/session-config&gt;</code> Then, in the Servlet program code setMaxInactiveInterval(600)(seconds)for the session object is invoked. After how long would session expire?	30 minutes	10 minutes	gives illegalStateException	None	1

Which attribute of the @ Register directive indicates the name you want to associate with the user control for the current page?	TagName	Src	Cntrl	TagPrefix	4
Which of the following is a marker interface used for object serialization?	Externalization	Runnable	Serialization	None	4

1. Which of the following method will you call on Request Dispatcher object to send the control to a servlet/JSP.

  - forward()
  - redirect()
  - send()
  - redirect()
2. Choose the different categories of GoF design patterns.

  - Behavioural
  - Structural
  - Notional
  - Empirical
  - Creational
3. Which of the following is NOT a Container feature?

  - JSP support
  - Application Controller
  - Servlet lifecycle manager
  - Multithreading support
4. <servlet>

```
<servlet-name>Servlet1</servlet-name>
<servlet-class>myPackage.myServlet</servlet-class>
</servlet>
```

With respect to above code segment which of the following statements are true?

  - It tells the container where to find the servlet
  - This code belongs to the deployment descriptor
  - It is a mapping between URL and a servlet
  - It is a mapping between servlet name and fully qualified name of the class
5. A developer for the company web site has been told that users may turn off cookie support in their browser. What must the developer do to ensure that these customers can still use the web application?

  - The developer can ignore this issue. Web containers are required to support automatic URL rewriting when cookies are not supported.
  - The developer must add the string id=<sessionid> to the end of every URL to ensure that the conversation with the browser can continue.
  - The developer must ensure that every URL is properly encoded using the appropriate URL rewriting APIs.
  - The developer must provide an alternate mechanism for managing sessions and abandon the HttpSession mechanism entirely.

6. Which of the following element is used to specify useful information about an initialization parameter of a servlet in the deployment descriptor?
- param-description
  - info
  - init-param-info
  - description
7. A JSP page needs to set the property of a given JavaBean to a value that is calculated with the JSP page. Which of the following `jsp:setProperty` attributes must be used to perform this initialization?
- value
  - property
  - name
  - attribute
  - id
8. During translation the scriptlet code is copied inside \_\_\_\_\_.
- the init method of the generated servlet.
  - the `doGet()` method of generated servlet.
  - the service method of generated servlet.
  - Scriptlet code gets no place in generated servlet.
9. You need to identify the browser type from which client request is forwarded and perform action before further processing takes place in business logic. which is the best way to achieve this?
- Use composite view pattern
  - Use multiple if-else conditions in your business logic
  - Use business delegate pattern
  - Use filter class(Intercepting filter pattern)

10. Given in a single JSP page:

```
<%@taglib prefix='java' uri="myTags"%>  
<%@taglib prefix='JAVA' uri="moreTags"%>
```

Which of the following are true?

- The prefix 'java' is reserved.
- For the tag usage `<java:tag1/>`, the tag1 must be unique in the union of tag names in 'myTags' and 'moretags'.
- The URI 'myTags' must be properly mapped to a TLD file by the web container.
- A translation error occurs because the prefix is considered identical by the web container.

11. Which of the following statements are true?

- `ServletContext` is one per application.
- `ServletConfig` is one per web application.
- `ServletContext` is one per servlet.
- `ServletConfig` is one per servlet.

**12. Which one of the following is true?**

- A java bean cannot be accessed through JSP scriptlet
- Methods in a java bean are always private
- Variables in java bean are always public
- A java bean cannot be accessed through JSP standard action

**13. Select correct EL codes to print the first element of an array named employeeArray.**

- \${employeeArray["0"]}
- \${employeeArray.[0]}
- \${employeeArray[0]}
- \${employeeArray.[0"]}

**14. Where is JSP executed?**

- Both in Server Machine & Client machine
- Depends upon configuration
- Client Machine
- Server machine

**15. Servlet A receives a request that forwards to servlet B within another web application in the same web container. Servlet A needs to share data with servlet B and that data must not be visible to other servlets in A's web application. In which object can the data that A shares with B be stored?**

- HttpSession
- ServletContext
- HttpSessionResponse
- HttpServletRequest

**16. The XYZ company has decided to port their web application to a new J2EE 1.5 container. While reviewing the application, a developer realizes that in multiple places within the current application, nearly duplicate code exists that finds enterprise beans. Which pattern should be used to eliminate this duplicate code?**

- Transfer Object
- Business delegate
- front controller
- Service Locator

**17. Which of the following are true about MVC architecture?**

- Servlet forms the controller part
- Ease of maintenance and promotes reusability
- JSPs are the target of all requests
- Servlets are the target of all requests
- Jsp forms the controller part

**18. What is the default HTTP method?**

- HEAD
- GET
- POST
- PUT

**19. Identify model component in an MVC pattern.**

- Browser
- ActionServlet
- JSP
- Data Bean

**20. Which of the following statement is correct?**

- You can override init() method but you should not
- You can override init() method to fetch the init params and execute an initial code
- You can override init() method to set an init param
- You can override init() method to cleanup database connection

**21. Which of the following statements are true with regards to URL rewriting?**

- None of the listed options
- Server sends a text file to the client machine for maintaining session
- You encrypt the URL for security purposes
- You manually append sessionid to URL

**22. If no file name is specified in the URL, which tag is used to config default page for the web site in web.xml?**

- <welcome-list><welcome-file>default1.jsp<welcome-file><welcome-file>default2.jsp<welcome-file></welcome-list>
- <welcome><welcome-file>default1.jsp<welcome-file><welcome-file>default2.jsp<welcome-file></welcome>
- <welcome-file-list><welcome-file>default1.jsp<welcome-file><welcome-file>default2.jsp<welcome-file></welcome-file-list>
- <file-list><welcome-file>default1.jsp<welcome-file><welcome-file>default2.jsp<welcome-file></file-list>

**23. Choose the servlet code fragment that gets a binary stream for writing an image or other binary type to the HttpServletResponse?**

- java.io.PrintWriter out= new PrintWriter(response.getWriter());
- ServletOutputStream out= response.getOutputStream();
- ServletOutputStream out= response.getBinaryStream();
- java.io.PrintWriter out= response.getWriter();

**24. Front Controller is a presentation tier pattern. State True or false.**

- True
- False

**25. Which of the following EL implicit objects is not a Map?**

- headerValues
- pageContext
- requestScope
- initParam

26. ServletConfig comes into picture \_\_\_\_\_

- after service() runs
- after servlet is loaded
- after constructor runs
- after init() runs

27. \_\_\_\_\_ is a runtime, container-managed object that evaluates custom actions during the execution of a JSP page.

- URI
- Tag library descriptor
- Tag library
- tag handler

28. user provided the value 31 in a textbox named "age". What will be the output of \${param.age ge 25}?

- 31
- 1
- 25
- True

29. Select the correct flow of Servlet lifecycle.

- Loading-> Instantiation -> Initialization -> Execution -> Destroy
- Loading-> Execution ->Instantiation -> Initialization -> Destroy
- Loading-> Initialization ->Instantiation -> Execution -> Destroy
- Loading-> Initialization ->Instantiation -> Execution -> Destroy

30. Given the JSP code:

```
<% request.setAttribute("foo","bar"); %>
```

and the Classic tag handler code:

```
5. public int doStartTag() throws JspException {
```

```
6. //insert code here
```

```
7. // return int
```

```
8. }
```

Assume there are no other "foo" attributes in the web application. Which invocation on the pageContext object, inserted at line 6, assigns "bar" to the variable x?

- String x= (String) pageContext.getRequestedScope("foo");
- String x= (String) pageContext.getAttribute("foo");
- String x= (String) pageContext.getRequest().getAttribute("foo");
- It is NOT possible to access the pageContext object from within doStartTag.

31. Attribute value stored in context memory( ServletContext object) is by default thread safe. State true or false.

- true
- false

32. \_\_\_\_\_ is a collection of actions that encapsulate some functionality to be used from within a JSP page.

- Tag library descriptor
- URI
- Presentation
- Tag library

33. A serializable object for transferring data over the network is an example of which of the following design pattern?

- Assembler
- Session Facade
- Transfer Object
- Network Object

34. param attribute of <jsp:setProperty> is used to perform which of the following tasks?

- Fetching a parameter from request object and setting it as a bean property
- Setting a parameter in request object
- fetching a parameter from application object and setting it as a bean property
- fetching a parameter from session object and setting it as a bean property

35. Which of the following statements are true?

- A JSP must contain some java code
- JSP executes faster than HTML
- A JSP can contain only HTML
- A JSP is executed at server and plain HTML is sent back to the client browser.

36. Which of the following statement about EL access operator is true?

- Anywhere the .(dot) operator is used, the [] could be used
- There are some situations where the .9dot) operator must be
- Anywhere the [] operator is used, the .(dot) could be used
- If the .(dot) operator is used to access a bean property but the

37. Which of the following is used to import a class in a jsp file?

- <%@page import="java.util.List'%>
- None
- <%@ import file="java.util.List"%>
- <%@import.java.util.List %>

38. In an HTTP request browser information is sent in \_\_\_\_\_.

- the initial request line
- browser information is not sent to the server
- the payload
- the header

39. Init params are accessible in Servlet constructor. State True or false.

- true
- false

40. Which of the following statement is true?

- A servlet is a JSP file with embedded Java
- A servlet is a java program with embedded HTML
- None
- A JSP is a java program with embedded HTML

41. Which of the following HTTP method puts or replaces a document on the server?

- PUT
- GET
- TRACE
- POST

42. Which of the following statements are true?

- The purpose of EL is to make a JSP Script free
- EL is evaluated at client machine
- EL stands for Extended language
- EL is enabled in JSP by default
- EL is a simple and powerful replacement of Standard Actions

43. How Instantiation and Initialization of Servlet is done?

- By Servlet itself
- By JSP
- By Container
- None

44. Which of the following statement is true?

- ServletConfig is unique for each servlet
- ServletContext is unique for each servlet
- ServletContext is common for all the servlet
- ServletConfig is common for all the servlet

1. StringBuffer i=new StringBuffer("welcome")

StringBuffer j=new SrtingBuffer("welcome")

If(i==j))

Sop("equals");

else

Sop("not equal");

ans = not equal..

2. how to divide a page into two rows?

a) rowspan b) colspan c)rows="50%50%" d)cols="50%50%"

ans: c

3. HTML is not used for programming logic. Ans:true

4. Filters can generate auto-response : true/False? ans false

5. Long l=100;

sysout(l);

ans:error

6. i=12

j=13

k=++i-j--;

ans : 13,12,0

7. div has automatic line break as of para tag.

ans:true

8. how print the request address?

a) \${request.address} b) \${param.address} ans:b

9. scripting should be done in header part

10. Servet first time instantiation this is lazy loading ans:true

11. large data should be sent in Post method.

12. which reads only small chunk of data **ans:SAX**

13. synchronize **ans: hashtable, vector.**

14. interface hav only function & behaviour not implementation **code** **ans:true**

15. PMD tool check Violation, code standards, all **ans:all**

16. xml version first line **ans:<? xml version="1.0" ?>**

17. how to name a package?**ans:com.pack.sun, pack123, pack\_123**

18. person don't want to share the content ? **WEB\_INF**

19. servlet life cycle **\*init \*service \*destroy with and without parameter(destroy(),destroy(ServletContext)).**

20. atm there are two users who have add on cards...how to ensure that one's transaction starts after another one completes his transac...

**ans...thread synchronization**

21. which is more secure comparing get and post? **Ans: post**

22. what part of trigger determines the number of times d trigger body is executed?

a)trigger type b) trigger timing c)trigger body d)trigger event **ans:a**

23. Grant ALL

on orders,suppliers TO PUBLIC.

identify the errors in the oracle statement?

24. how wil u transform d xml document? **XSTL**

25. select instr('my java world','q') from dual;

**ans.....0**

27.How 2 declare a tag library to use custom tags?

**ans...by using taglib directive**

28.what is d use of versioning in s/w?

**ans...Branching and merging,backup and restore,synchronization**

29. try should be followed either by catch or finally **ans:true.**

```
Q-1) import javax.servlet.http.*;  
  
      public class SessionListener implements HttpSessionListener  
  
      {  
  
line1--    public void sessionCreated() {  
  
            System.out.println(" Session Created: ");  
  
            }  
  
line 2--    public void sessionDestroyed() {  
  
            System.out.println(" Session Destroyed:");  
  
            }  
  
      }
```

which one in wrong(check box):

(1) line one :method does not contain correct argument

- (2) line two: method does not contain correct argument
- (3) import statement doesnot implement HttpSessionListener interface
- (4) all method of HttpSessionListener should not implement in this code

ANS: according to me option 1 and 2 both wrong

because correct syntax is:

```
public class SessionListener implements HttpSessionListener  
{  
    public void sessionCreated(HttpSessionEvent event) {  
        System.out.println(" Session Created: ");  
    }  
    public void sessionDestroyed(HttpSessionEvent event) {  
        System.out.println(" Session Destroyed:");  
    }  
}
```

(Q-2) <%@page contentType="text/html" %>

```
<html>  
<body>  
<%! int a=6;%> //line--4  
<% int b=8;%> //line--5  
result <%=a*b;%> //line--6  
</body>  
</html>
```

options:

- (1)line 4 is not correct syntax
- (2)line 5 is not correct syntax

(3)code compile sucessfully and display 48

(4)line 6 is not correct syntax

Answer---4

(Q--3)purpose of JSP Expression:

options:

(1)Declare variables;

(2)write block of java code

(3)print something on screen

(4)import java class and other jsp file ,html page

Answer: 3

(Q--4) which one is correct:

(1)you can override init() method to set on init param

(2)you can override init() method to clean up database connection

(3)you can override init() method to fetch init param & execute initial code

(4)you can override init() method but you should not do

Answer:---3

(Q--5)import attribute of page directive use :

(1)to import other jsp page and other html file

(2)to import java class & package

(3)to import taglib and other custom tag

(4)any one of the above

Answer:2(but not confirm;;;;)

(Q--6) you are employee of ABC company & your client has dissabled cookie what u will do:

(1)you will use URL rewriting

(2)you ignore and leave on container to decide it(container take care it)

(3) you enable session tracking management for JSP pages if the client has disabled cookies

Answer :1

(Q--7) which of the following method is over- ridden

- (1)JSPInit()
- (2)JSPDestroy()
- (3)\_JSPService()
- (4) none of these

Answer: 1 & 2 but not confirm

(Q--8) Which of the following correctly defines JSP technology ?

- (1) JSP page is a text-based document that describes how to process a request to create a response.
- (2) JSP page is a text-based document that describes how to process a response to create a request.
- (3) JSP page is a xml-based document that describes how to process a request to create a response.
- (4) JSP page is a xml-based document that describes how to process a response to create a request.

Answer:I am confused in option 1 & 2 plz check it

(Q--9)

Your web application requires the ability to load and remove web files

Which two HTTP methods are used to perform these actions? (Choose two.)

- 1. PUT
- 2. POST
- 3. DELETE
- 4. REMOVE
- 5. DESTROY

answer---1 & 3

(q-10) question on jsp tag <jsp:setProperty> set bean with bean name is employeeName & bean value is 10

which is employeed in int

Select Two:

- (1) <jsp:setproperty name="employeeName " property="\*"/>
- (2) <jsp:setbean name="employeeName " property="employeeid" value =10/>
- (3) <%beanobject.setEmployeeId(int id);%>
- (4) <%beanobject.setEmployeeId(String id);%>

answer ---1 & 3

1. Syntax of <c:url>

2. Where library descriptor file stored?

- a. META-INF/tlds
- b. META-INF/
- c. WEB-INF/
- d. WEB-INF/tlds

3. True or false \${8/0}=infinity —Ans:true

4. <pre:tag1>

```
<%=name%>
</pre:tag1>
a. jsp
b. Tagdependant
c. Empty
d. Scriptless
```

5. Your servlet class extends.....

- a. HttpServlet
- b. Servlet
- c. GenericServlet

6. Which implicit object is used unique identifier user....

- a. Request
- b. Response
- c. Application
- d. Session**

7. How you can set session timeout for 2 minutes??

Answer:

- a. <session-timeout>2</session-timeout>**
- b. Session.setMaxInactiveSession(120);**

8. Which listener is used when session is created??

**Answer:HttpSessionListner**

9. Which listener attribute is used for listerner tag??

**Answer: <listener-class>**

10. Which used for print el \${var}

**Answer : <c:url value="">**

11. Choose the right

- Answer : a. <jsp:include page="">**
- b. <%@ include file="" %>**

Translation and compilation is done at..

- a. Execution
- b. Deployment**
- c. Undeployment
- d. None of the above

12. Which is used when cookies not used in session management?

**Answer: url rewriting not cookies**

13. Which is used to extract the values of request parameter address?

**Answer: \${param.address}**

14. Feature not contained in container

- a. Servlet life manager
- b. Session management
- c. **Application controller**
- d. Multithreading support

15. You have created a web application that you license to real estate brokers. The webapp is highly customizable including the email address of the broker, which is placed on the footer of each page. This is configured as a context parameter in the deployment descriptor:

```
<context-param>
<param-name>footerEmail</param-name>
<param-value>joe@estates-r-us.biz</param-value>
</context-param>
```

Which EL code snippet will insert this context parameter into the footer?

```
<a href='mailto:${footerEmail}'>Contact me</a>
<a href='mailto:${initParam@footerEmail}'>Contact me</a>
<a href='mailto:${initParam.footerEmail}'>Contact me</a>
<a href='mailto:${contextParam@footerEmail}'>Contact me</a>
<a href='mailto:${contextParam.footerEmail}'>Contact me</a>
```

16. Select two options to retrieve first value in request variable

Answer: `request.getParameter("...");`  
`Request.getParameterValues(..)[0];`

17. How to access the variables fort in variable name using EL

Answer:  `${name["fort"]}`  
 `${name.fort}`

18. Which header is header used to retrieve the info of "User-agent"?

Answer: `response.getHeader("User-Agent");`

1. do get method syntax ..? ans : do get (`HttpServletRequest request, HttpServletReponse response`)

2. request is the object of..?

Ans: `HttpServletRequest`

3. EL consider null values as zero..? ans: true //not sure

4. `<%! a=6%>`

`<%b=3%>`

`<%a=5%>`

What is the result of <%=a\*b%>

Ans: 15

5.how will u send cookie in response..?

Ans: response.addCookie(new cookie(" ", " "))

6.where is the <servlet-name> element is present in DD.

Ans: in <servlet> tag and in <servlet-mapping> tag

7.which methods can be overridden in JSP..?

Ans: JSPinit(); and JSPdestroy();

8.if servlet class implements single thread model then what will happen..?

Ans: only one thread will run for servlet

9.if session variable s is not in session and \${true and s[0]}...? Ans: false [bcoz EL will not throw any Null Pointer exception , it will consider it as 0 or False]

10.httpsession session= request.getsession(true);

Session.setattribute(" ", " ")

setmaxInactivesession(0);

if(session.is New())

{

-----//getattribute...

}

Else

{

-----

}

Ans: nothing will display,session will expire.... // not sure

13. what is the return type of getattribute method..? ans: object

14.one question was that there were two custom tags Tag1 and Tag2(which is extending from Tag1) of which Body content should not be empty. They have asked how we can implement these tags in our code and they have given options of different possibilities.

Ans: //Not sure just go through it once

<tag1>

<tag2>

Addsgada

</tag2>

</tag1>

16.What is the default scope of useBean?

Ans: Page //not sure

20. question: Which are true[choose any two]

Ans:

a.ServletCongig is one per Servlet

B. SERVLETCONTEXT IS ONE PER APPLICATION

21. Which argument we pass to Servlet Init method?

Ans: ServletConfig

2. implicit objects -application, exception, PageContext

3. ServletConfig- One per Servlet, Servletcontext one per application

7. You have created a web application that you license to real estate brokers.The webapp is highly customizable including the email address of the broker, which is placed on the footer of each page. This is configured as a context parameter in the deployment descriptor:

<context-param>

<param-name>footerEmail</param-name>

<param-value>[joe@estates-r-us.biz](mailto:joe@estates-r-us.biz)</param-value>

</context-param>

Which EL code snippet will insert this context parameter into the footer?

```
<a href='mailto:${footerEmail}'>Contact me</a>  
<a href='mailto:${initParam@footerEmail}'>Contact me</a>  
<a href='mailto:${initParam.footerEmail}'>Contact me</a>  
<a href='mailto:${contextParam@footerEmail}'>Contact me</a>  
<a href='mailto:${contextParam.footerEmail}'>Contact me</a>
```

8. How to store java primitive types in session? **longattribute**

9. Select two option to retrieve first value in request variable

```
request.getParameter("...");  
Request.getParameterValues("...")[0];
```

18.getStream() of HttpServletResponse is object of **ServletInputStream/PrintWriter/etc**

19.switch case for JSTL **<c:when>**

24. to start a servlet we need- **listener**

1.model1 separates view and control:**false**

2.el implicit objects and jsp implicit objects are same:**false**

3.credit card-post

4.jsp expression is used to-**print**

5.business tier components-**Business delegates, Transfer objects, Session facade**

6.deouples-**business delegate, business application**

7.singleton-**creational design pattern**

8.xml,html-**mvc**

9.for loop <int i=3;i++>- **the value of i is 3.**

10.init param can be accessed inside the servlet constructor-**false**

11<%!..!>,<%@..@>-**declaration syntax**

13 structure of http request- **get/uri/http/1.1**

15.not related to session-filter

16.<c:when>-for switching

17.sendRedirect()-after commit exception returned(refer when sendredirect() is used)

19. setattribute&get attribute -http sesssion,servlet context,servlet request

20.el -scriptless,simple & powerful,

21.getParameterNames(String[])-enumeration.

22.Singleton-creational.

1.model1 used for large applications;false

2.object of getwriter is printwriter

4.Servlet can declare a constructor-false

10.userdefined servelets extends-servlet

11.complex multiple views which pattern-composite delegate

15.which acts as a controller-servlet

**1. Which collection class allows you to access its elements by associating a key with an element's value, and provides synchronization?**

- a. java.util.SortedMap
- b. java.util.TreeSet
- c. java.util.Hashtable
- d. None

**2. Suppose that you would like to create an instance of a new *Map* that has an iteration order that is the same as the iteration order of an existing instance of a *Map*. Which concrete implementation of the *Map* interface should be used for the new instance?**

- a. TreeMap
- b. HashMap
- c. LinkedHashMap
- d. The answer depends on the implementation of the existing instance.

**3. Which loop automatically iterates over the specified object and reads values one-by-one ?**

- a. For
- b. For Each
- c. Iterator
- d. ListIterator

**4. Which of the following can be used only with List?  
(Choose more than one)**

- a. For
- b. For Each
- c. Iterator
- d. ListIterator

**5. Which of the following are Iterator Interface methods?**

- a. hasNext()
- b. remove()
- c. nextToken()
- d. next()
- e. hasMoreElements()

**6. Which class does not override the *equals()* and *hashCode()* methods, inheriting them directly from class Object?**

- a. java.lang.String
- b. java.lang.Double
- c. java.lang.StringBuffer
- d. java.lang.Character

**7. Which of the following can be used to traverse the list in either direction, modify the list during iteration and obtain the iterator's current position in the list**

- a. For
- b. Iterator
- c. For Each

d. ListIterator

**8. Which of the following can read elements by specifying the index using the get() method**

- a. For
- b. Iterator
- c. For Each
- d. ListIterator

**9. A collection is a container that groups multiple elements into multiple units**

- a. True
- b. False

**10. Choose the correct description of method keyset()**

- a. Returns a set with all keys contained in the map
- b. Returns a collection with all the values contained in this map
- c. Returns a set view of the mappings contained in this map
- d. Returns a collection with all the values contained in this map

**11. Which of the following is Thread Safe ?**

- a. Hash Table
- b. Hash Map
- c. Tree Map
- d. None

**12. Which map interface stores the values in sorted order according to key**

- a. Hash Map
- b. Hash Table
- c. Tree Map
- d. None

**13. Which collection class allows you to grow or shrink its size and provides indexed access to its elements, but whose methods are not synchronized?**

- a. java.util.HashSet
- b. java.util.LinkedHashSet
- c. java.util.List
- d. **java.util.ArrayList**

**14.Which interface does *java.util.Hashtable* implement?**

- a. **Java.util.Map**
- b. Java.util.List
- c. Java.util.HashTable
- d. Java.util.Collection

**15.Which interface provides the capability to store objects using a key-value pair?**

- a. **java.util.Map**
- b. Java.util.Set
- c. Java.util.List
- d. Java.util.Collection

**16.What will be the output of the program?**

```
import java.util.*;
class I
{
    public static void main (String[] args)
    {
        Object i = new ArrayList().iterator();
        System.out.print((i instanceof List)+",");
        System.out.print((i instanceof Iterator)+",");
        System.out.print(i instanceof ListIterator);
    }
}
```

- a. Prints: false, false, false
- b. Prints: false, false, true
- c. Prints: false, true, false**
- d. Prints: false, true, true

**17. public class Test**

```
{  
    private static float[] f = new float[2];  
    public static void main (String[] args)  
    {  
        System.out.println("f[0] = " + f[0]);  
    }  
  
}
```

- a. f[0] = 0
- b. f[0] = 0.0
- c. compile time error
- d. run time error

**18.What will be the output of the program?**

```
TreeSet map = new TreeSet();  
map.add("one");  
map.add("two");  
map.add("three");  
map.add("four");  
map.add("one");  
Iterator it = map.iterator();  
while (it.hasNext() )  
{  
    System.out.print( it.next() + " " );  
}
```

- a. one two three four
- b. four three two one
- c. four one three two
- d. one two three four one

**19. What will be the output of the program?**

```

import java.util.*;
class H
{
    public static void main (String[] args)
    {
        Object x = new Vector().elements();
        System.out.print((x instanceof Enumeration)+","");
        System.out.print((x instanceof Iterator)+","");
        System.out.print(x instanceof ListIterator);
    }
}

```

- a.Prints: false,false,false
- b.Prints: false,false,true
- c.Prints: false,true,false
- d.Prints: true,false,false

**21. What will be the output of the program?**

```

public class Test
{
    private static int[] x;
    public static void main(String[] args)
    {
        System.out.println(x[0]);
    }
}

```

- a.0
- b.null
- c.Compile Error
- d.NullPointerException at runtime

**22. You need to store elements in a collection that guarantees that no duplicates are stored and all elements can be accessed in natural order. Which interface provides that capability?**

a.java.util.Map

~~b.java.util.Set~~

c.java.util.List

d.java.util.Collection

**23. Which collection class allows you to associate its elements with key values, and allows you to retrieve objects in FIFO (first-in, first-out) sequence?**

a.java.util.ArrayList  
c.java.util.HashMap

b.java.util.LinkedHashMap  
d.java.util.TreeMap

**24. Which is valid declaration of a float?**

a.float f = 1F;  
c.float f = "1";

b.float f = 1.0;  
d.float f = 1.0d;

**25.**

```
/* Missing Statement ? */
public class foo
{
    public static void main(String[]args)throws Exception
    {
        java.io.PrintWriter out = new java.io.PrintWriter();
        new java.io.OutputStreamWriter(System.out,true);
        out.println("Hello");
    }
}
```

**What line of code should replace the missing statement to make this program compile?**

- a. No statement required.
- b. import java.io.\*;
- c. include java.io.\*;
- d..import java.io.PrintWriter;

**26. The Collection interface is the base interface for \_\_\_\_\_**

- a. Set
- b. List
- c. ArrayList
- d. Linked List
- e. Map

**27. The Map is the base interface for \_\_\_\_\_.**

- a. TreeMap
- b. HashMap
- c. LinkedHashMap
- d. ArrayList
- e. LinkedList

**28. Which of the following statements are true?**

- a. The Collection interface is the root interface for manipulating a collection of objects.
- b. The Collection interface provides the basic operations for adding and removing elements in a collection.
- c. The AbstractCollection class is a convenience class that provides partial implementation for the Collection interface.
- d. Some of the methods in the Collection interface cannot be implemented in the concrete subclass. In this case, the method would throw `java.lang.UnsupportedOperationException`, a subclass of `RuntimeException`.
- e. All interfaces and classes in the Collections framework are declared using generic type in JDK 1.5.
- f. All the above

**29. Which of the following data types does not implement the Collection interface?**

- a. HashSet
- b. TreeSet
- c. ArrayList
- d. LinkedList
- e. Map

**30. If two objects o1 and o2 are equal, what are the values for o1.equals(o2) and o1.hashCode() == o2.hashCode()?**

- a. true true
- b. true false
- c. false true
- d. false false

**31. Given:**

```
import java.util.*;  
public class PQ {  
    public static void main(String[] args) {  
        PriorityQueue<String> pq = new PriorityQueue<String>();  
        pq.add("carrot");  
        pq.add("apple");  
        pq.add("banana");  
        System.out.println(pq.poll() + ":" + pq.peek());  
    }  
}
```

**What is the result?**

- A. apple:apple
- B. carrot:apple

- C. apple:banana
- D. banana:apple
- E. carrot:carrot
- F. carrot:banana

**32.Given:**

```
import java.util.*;  
public class WrappedString {  
    private String s;  
    public WrappedString(String s) { this.s = s; }  
    public static void main(String[] args) {  
        HashSet<Object> hs = new HashSet<Object>();  
        WrappedString ws1 = new WrappedString("aardvark");  
        WrappedString ws2 = new WrappedString("aardvark");  
        String s1 = new String("aardvark");  
        String s2 = new String("aardvark");  
        hs.add(ws1); hs.add(ws2); hs.add(s1); hs.add(s2);  
        System.out.println(hs.size()); } }
```

**What is the result?**

- A. 0
- B. 1
- C. 2
- D. 3**
- E. 4
- F. Compilation fails.
- G. An exception is thrown at runtime.

**33.import java.util.\*;**

```
class KeyMaster {  
    public int i;  
    public KeyMaster(int i) { this.i = i; }  
    public boolean equals(Object o) { return i == ((KeyMaster)o).i; }  
    public int hashCode() { return i; }  
}  
public class MapIt {
```

```

public static void main(String[] args) {
    Set<KeyMaster> set = new HashSet<KeyMaster>();
    KeyMaster k1 = new KeyMaster(1);
    KeyMaster k2 = new KeyMaster(2);
    set.add(k1); set.add(k1);
    set.add(k2); set.add(k2);
    System.out.print(set.size() + ":");
    k2.i = 1;
    System.out.print(set.size() + ":");
    set.remove(k1);
    System.out.print(set.size() + ":");
    set.remove(k2);
    System.out.print(set.size());
}
}

```

**What is the result?**

- A. 4:4:2:2
- B. 4:4:3:2
- C. 2:2:1:0
- D. 2:2:0:0
- E. 2:1:0:0
- F. 2:2:1:1
- G. 4:3:2:1

**34.Given:**

```

import java.util.*;
public class LetterASort {
    public static void main(String[] args) {
        ArrayList<String> strings = new ArrayList<String>();
        strings.add('aAaA');
        strings.add("AaA");
        strings.add('aAa');
        strings.add("AAaa");
        Collections.sort(strings);
        for (String s: strings) { System.out.print(s + " "); }
    }
}

```

```
}
```

```
}
```

**What is the result?**

- A. Compilation fails.
- B. aAaA aAa AAaa AaA
- C. AAaa AaA aAa aAaA
- D. AaA AAaa aAaA aAa
- E. aAa AaA aAaA AAaa
- F. An exception is thrown at runtime.

**36. Given:**

```
11. public static void append(List list) { list.add("0042"); }
12. public static void main(String[] args) {
13. List<Integer> intList = new ArrayList<Integer>();
14. append(intList);
15. System.out.println(intList.get(0));
16. }
```

**‘What is the result?’**

- A. 42
- B. 0042
- C. An exception is thrown at runtime.
- D. Compilation fails because of an error in line 13.
- E. Compilation fails because of an error in line 14.

**38. Given:**

```
public void addStrings(List list)
{
    list.add("foo");
    list.add("bar");
}
```

**What must you change in this method to compile without warnings?**

- A. add this code after line 11:  

```
list = (List<String>) list;
```
- B. change lines 12 and 13 to:

- ```
list.add<String>("foo");
list.add<String>("bar");
```
- C. change the method signature on line 11 to:
- ```
public void addStrings(List<? extends String> list) {
```
- D. change the method signature on line 11 to:
- ```
public void addStrings(List<? super String> list) {
```
- E. No changes are necessary. This method compiles without warnings.

**39. Given:**

```
import java.util.*;
public class Test {
    public static void main(String[] args) {
        List<String> strings = new ArrayList<String>();
        // insert code here
    }
}
```

**Which four, inserted at line 5, will allow compilation to succeed?**

**(Choose four.)**

- A. String s = strings.get(0);
- B. Iterator i1 = strings.iterator();
- C. String[] array1 = strings.toArray();
- D. Iterator<String> i2 = strings.iterator();
- E. String[] array2 = strings.toArray(new String[1]);
- F. Iterator<String> i3 = strings.iterator<String>();

**40. Collection can be used to store primitive data**

- A. True
- B. False

**42. ArrayList can be traversed using (Select two options )**

- A. foreach
- B. for loop
- C. While loop

D. Indexes

**43. select a valid syntax for creating a HashSet**

- A. Set setName=new Set();
- B. HashSet hashSet = new HashSet();
- C. Set setName = new HashSet();
- D. Set setName = new Set[];

**44. Which is not a HashSet method**

- A. boolean add(Object element)
- B. Iterator<E> iterator()
- C. int size()
- D. Object[] toArray()

**45. Which of the following is not an ArrayList method (select two)**

- A. void add(int index, Object element)
- B. boolean addAll(int index, Collection c)
- C. boolean add(int index, Object element)
- D. void addAll(int index, Collection c)

**46. Which is the valid syntax of for-each loop**

- A. for (Object o : collection)  
    System.out.println(o);
- B. for (Object o..collection)  
    System.out.println(o);
- C. for (Object o,collection)  
    System.out.println(o);
- D. for (Object o;collection)

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

**47. You need to store elements in a collection that guarantees that no duplicates are stored and all elements can be accessed in natural order. Which interface provides that capability?**

- A. ~~java.util.Map~~
- B. **java.util.Set**
- C. **java.util.List**
- D. **java.util.Collection**

**48. Which is not the sub-interface of public interface Collection{}**

- A. BeanContext
- B. BeanContextServices**
- C. AbstractSet
- D. SortedSet

**49. toArray() method returns**

- A. String
- B. Object[]**
- C. boolean
- D. int

**50. Iterator iterator() method returns**

- A. All the collection elements contained in a specific Collection
- B. An array containing all the elements in the collection
- C. The total number of elements in the collection
- D. An iterator over the elements in the collection**

- 1- What is abbreviation of jaxp?  
**Java api for xml processing**
- 2- Do we have remove attribute in enumeration?  
**yes**
- 3- Which method of jsp can be overridden?  
**a-\_jspservice() b-\_jsplInit() c-jspdestroy()** **Ans:a**
- 4- Which is a w3 standard?  
**Ans:DOM**
- 5- Which has better performance joins or subqueries?  
**Ans:joins**

6- Which text is not parsed in xml?

Ans:CDATA

8-Does HTML contain program logic?

Ans : NO.

7- select (2+3\*4/2-5) from dual; ans:3

10- String s1=new String("abc");  
String s2=new String("abc");  
System.out.println(s1.compareTo(s2)); ? ans:0

11- StringBuffer i=new StringBuffer("welcome")  
StringBuffer j=new StringBuffer("welcome")  
If(i.equals(j))  
Sop("i equals j");  
If(i.equals(i))  
Sop("i equals i"); ans:I equals i

12- Integer a=new Integer(2);  
Integer b=new Integer(2);  
System.out.println(a==b); ? ans:false

13- httpserlvetrequest is \_\_\_\_ a) HttpRequestsub interface)it's not a sub interface c)HttpServlet  
ans:c

15- Jsp after processing what will it return to client a)jsp b)html c)source servlet d)compiled servlet  
ans:d

16- Many users accesssing lots of tables each using more than 100 lines of code.

What is the best option?

- 1.View
- 2.Index
- 3.Stored Procedure ans:2

18- try{  
int i=10;  
int j=i/0;  
return;  
}  
catch()  
{  
Sop("welcome");  
}  
SOP(j);  
What happens?  
1.prints welcome  
2.Runtime-error  
3.Compilation error ans:3

20- how to divide a page into two rows?  
a) rowspan b) colspan c)rows="50%50%" d)cols="50%50%" **ans:c**

21- why expression language is used in JSP page? **Ans:c**  
a) write java code b) import files c) print statements d) declare variables

22- how to disable all triggers? **ans: alter table <table-name> disable all triggers**

23- form action to what attributes will be redirected to next page.. **ans:d**

- a) get
- b) post
- c) the parameter is added in httprequest
- d) the parameter along with submit is added to request

24- which creates container of webpage **ans:1**

- i) DIV
- ii) Span

26- whether we have to specify datatype in java Script? **Ans: not required**

27- <p:data>

```
<%=new Date()%>  
<p:data/> ans:c
```

What is the body of the custom tag?

- a) Scriptless
- b) expression language
- c) JSP

28- Filters can generate auto-response : true/False? **Ans:false**

29-JDBC statements are included in which package? **Ans:java.sql.\***

30- Which reference object in jsp is used in Http servlet Response

- a) session
- b) context
- c) request
- d) response **ans:d**

31- how to import a package into JSP? **Ans: a**

- a) < @ page import="java.util.\*";>

b) < @include import="java.util.\*">  
c) < @import="java.util.\*";>

32- line 1 : String string1 =new String("Hi");

line 2: String string2 =String1;

line 3: String1= new String("hello");

line 4: String2= new String("world");

In which line garbage collection takes place? **Ans:line4**

33- which is a build school? **Ans:a**

a) ANT b)pmd c)cmd

**1.A package is a collection of**

a) Classes

b) Interfaces

c) Editing tools

**d) Classes & interfaces**

**2)Which of the following classes is used to perform basic console input/output?**

**a) System**

b) Security manager

c) Math

d) Runtime

**3) Which of the following is true about this variable declaration?**

**private static int i = 3;**

a) The value of i is shared among all instances of the class in which it is declared

b) i may only be accessed within the class in which it is declared.

c) i may only be updated by a static method

**d) both a & b**

4). `class simple{`

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

`{`

`int a[10];`

`System.in.read(a[1]);`

`}`

`}`

What happens when the above code is processed?

- a) the second element of the array is read in
- b) there will be a compile time error
- c) the first element of the array is read in
- d) there will be a runtime error

5). Which modifier or modifiers should be used to denote a variable that should not be written out as a part of its classes, persistent states?

- a) private
- b) protected
- c) transient
- d) private transient.

6) How can you force garbage collection of an object?

- a) You cannot force garbage collection
- b) call `System.gc()`
- c) call `System.gc()`, passing in a reference to the object to be garbage collected
- d) set all references to the object to new values (null for example)

7). Which of the following statements are true?

1. We cannot use abstract classes to instantiate objects directly.
2. The abstract method of an abstract class must be defined in its subclass

3. We cannot declare abstract constructors

4. We may declare abstract static methods

- a) 1 is true
- b) 2 is true
- c) 1 & 2 are true
- d) 1,2 & 3 are true**

8). A catch clause may catch exceptions of which type?

- a) Throwable**
- b) Error type
- c) Exception type
- d) All the above

9). Which exception is thrown by the read() method of InputStream Class?

- a) IOException**
- b) ReadException
- c) FileNotFoundException
- d) Exception

10)What java statement is used to completely abort the execution of a loop

- a) Continue
- b) goto
- c) exit
- d) break**

**interface i**

{

**void show();**

```
void set();  
void just();  
}  
  
class x implements i  
{  
    public void set()  
    {}  
    public void just()  
    {}  
}
```

what happens when above code is processed?

- a) no output
- b) runtime error
- c) compilation error
- d) none of the above

2)A static method can be accessed by

- a) Another static method only
- b) By static and instance methods
- c) Global Java functions
- d) Cannot be accessed at all

3).The following is not implemented in Java

- a) Method overloading
- b) Method overriding
- c) Operator overloading

**4) Arrays in Java are**

- a) Homogenous and of fixed size
- b) Growing size and heterogeneous
- c) Homogenous but is on growing size
- d) None of the above

**5) The Stream which understands primitive types for input is**

- a) DataOutputStream
- b) FileInputStream
- c) FileOutputStream
- d) DataInputStream

**6) When we see a 'catch' block in Java, it is compulsory to have**

- a) finally block
- b) throws block
- c) try block
- d) Not to have any compulsory block

**7). The finally block in Exception handling of Java is**

- a) Mandatory and guaranteed execution code
- b) Optional but guaranteed execution code
- c) Not to be used for suction in classes
- d) Not a facility at all.

**8). An interface differs from a class because**

- a) Class always has code, interface may have code
- b) Class is meant for instantiation and extension, interface is meant for implementation and declaration
- c) Class is for runtime, Interface is only for Design Time
- d) Instance methods can be overridden in classes but not in interfaces.

**9)Default access specifier for a class in Java is**

- a. Public
- b. Private
- c. Friendly
- d. Protected

**10)A final class can be inherited (T/F) false**

**1)Which Class is the superclass of all Java classes**

- a) Class
- b) Object
- c) String
- d) Super

**2). \_\_\_\_\_ is the modifier is used to avoid a class to be inherited**

- a) abstract
- b) final
- c) static
- d) none of the above.

**3)Which of the following is the operator used to generate an exception programmatically**

- a) throws
- b) throw
- c) catch
- d) try

**4). In a pure java class the method is Static block is called before the main() method**

- a) True
- b) False
- c) Ignore

d) Ignore

5). \_\_\_\_\_ is the Root Class of all Exception classes

a) Exception

b) Error

c) Throws

**d) Throwable**

6) What is the modifier that for a method, so that only one thread can access it at a time, in a multi-threading context

a) Final

**b) Synchronized**

c) Abstract

d) Static

7) To implement Runnable, a class needs to implement the method

a) run()

b) CreateThread()

c) main()

d) None of the above

8) To implement JDBC in your program, you must import

a) java.awt package

b) java.applet package

**c) java.sql package**

d) java.net package

9) Integer is a \_\_\_\_\_

a) Keyword

**b) Wrapper Class**

c) Data Type

d) Constructor

10). Commit() and RollBack() are methods belonging to which of the following classes?

a) Driver

b) Connection

c) Statement

d) ResultSet

1) What keyword is used to prevent an object from being serialized?

A.private

B.volatile

C.protected

D.transient

E.None of the above.

2) Select the order of access modifiers from least restrictive to most restrictive.

A.public,private,protected, default

B.default,protected,private,public

C.public, default,protected,private

D.default,public,protected,private

E.public,protected, default,private

3). Which access modifier allows you to access method calls in libraries not created in Java?

A public

B. static

C. native

D. transient

E. volatile

4) The keyword extends refers to what type of relationship?

- A. "is a"
- B. "has a"
- C. "was a"
- D. "will be a"
- E. None of the above.

5) Given the following code, what will be the outcome?

```
public class Funcs extends java.lang.Math {  
    public int add(int x, int y) {  
        return x + y;  
    }  
    public int sub(int x, int y) {  
        return x - y;  
    }  
    public static void main(String [] a) {
```

```
        Funcs f = new Funcs();
```

```
        System.out.println(""+ f.add(1, 2));
```

```
}
```

```
}
```

- A. The code compiles but does not output anything.
- B. "3" is printed out to the console.
- C. The code does not compile.**
- D. None of the above.

**6)What variables are substitute in java for the global variables**

- a)Instance variables
- b)static variables**
- c)public variables
- d)final variables

**7)A \_\_\_\_\_ is a part of JVM that loads all classes that are required for the execution of the java program.**

- a) JRE
- b) bytecode loader
- c) class verifier
- d) classloader**

**8). Which one of the following interface is used to call a stored procedure from java**

- a) StoredCall
- b) CallProcedure
- c) CallableStatement**
- d) None of the above

**9)From OO point of view which of the following is better for creating a thread**

a) Instantiate Thread class

b) extend from Thread class

c) extend from Runnable

d) implement Runnable

10) forName() method of the class Class is

a) exactly like import statement

b) is used to load the class (dynamically) at runtime

c) finds the name of the class given the .class file

d) all of the above

1. Art of organizing, controlling and revising the developers moduel is - SCM

2. Error and Exception is a subclass- Throwable

3. Valid xml descriptors- sql,formatter,core

4. JDBC connection what are the classes- java.sql, javax.sql

5. Importing a tag library file in jsp- <@taglib >

6. To correct a scenario Serilizable.

7. Scenario on Jsp include- <@include>

8. Interfce can have only - public, static, final and not private, native

9. Declaration tag should be <%! %>

10. Parser without modifying the content is - SAX parser

11. XML can be transformed by - check it later

12. How call a servlet from a form- action= path of servlet/servletname

13. Int i=1;

If(i>0)

I=3;

Switch(i){

Case 1:

Case 2:

Case 0:

Break;

Case 3: s.op.(3);

Default: s.o.p(4)

Break;

Ans-3,4

14. 1.Jsp is text file with static and jsp tage

2.Jsp is for presentation logic and servlet for BO- both are true

15. 1.Tld is a xml with description of entire library and tags

2. didn't remember – both are true

16. There should be atleast one element –ans:<!Element elemen(elment-content+)>

17. Request object is implicit in- ans:HTTPServletRequest

18. HttpSession implicit object in jsp- ans: session

19. where to declare a object to use in entire session-ans: session.setAttribute()

20. how to remove a attribute-ans: removeAttribute(String name)

21. In Expression language, how get a parameter name userId: ans-\${param.userId}

22. int i=10;

```
If(((i++)>12)&&(++i<15)){  
    s.o.p(i);  
    else s.o.p(i);  
}
```

ans-11

23. Best practices for Collection- use addAll() for copying, use generic types

24. Return type of Iterator's next() method is – Object

25. Performing specific styles on set of page elements is done by-Div

26. scenario for updating customer phone,address- create a view

27. when updating view should reflect into original db automatically-trigger

28. What are filter attributes are-<init>,<filter-class>,<context>,<config>,<name>

29. how to call a stored procedure of oracle database by JDBC - ans: callable Statement

30. what are not attributes of meta tag- http-equiv,value,name,content- ans: value

31. (Scenario) what exception raised when number divided by zero: ans: divide zero exception(none of above)

32. Need of alt attribute in img tag- ans: if image is not displayed alt tag value will get displayed

34. which are synchronized- Hashtable,hashmap,arraylist,vector-ans: Hash table,vector

35. PI/Sql –ans: plsql block can be anonymous&named, plsql block have declare&begin&exception

36. tools used for testing – **ans: Junit,emma**

37. Rais\_application\_error- **ans: complies correctly**

38. Can we use select statement with max, min in updatebefore trigger- **ans: trigger fails.**

39. <%!java.util.Date date=new DATe() %>

<%=date.getHours()%>:<%=date.getMinute()%>:<%=date.getSeconds()%>

**Ans: time in hh:mm:ss format**

40. how use variable all servlets& jsp pages- **ans: getServletContext().setAttribute(),  
request.getSession().setAttribute()**

41. In xml how to specify the attribute order- **ans: <xs:sequence>**

**42. In outer joins result will include all rows of first table and not second tables rows which fails  
condition- ans: true**

**43. Join performce better than sub-query- ans: true;**

44. HttpServletRequest is sub interface of- **ServletRequest**

46. super class a protected method and child class overriding the method, what should be the access specifier- **ans: protected or default.**

47. Valid package name-**ans: com.org.examle, home\_test, pack123**

1. How would you retrieve the value of a header named “User-Agent”? (right)

  - a. String header = request.getRequestHeader("User-Agent");
  - b. String header = request.getHeader("User-Agent");
  - c. String header = request.getIntHeader("User-Agent");
  - d. String header = request.getAttribute("User-Agent")
2. The method **getWriter()** of **HttpServletResponse** returns an object of type  
\_\_\_\_\_ (right)

  - a. HttpServletResponse
  - b. ServletOutputStream
  - c. ServletInputStream
  - d. PrintWriter
3. Which of the following methods are not implemented by the **RequestDispatcher** interface?  
(right)

  - a. dispatch()
  - b. redirect()
  - c. forward()
  - d. include()
4. What is the return type of **getAttribute()** method of **HttpServletRequest**? (right)

  - a. Object
  - b. String
  - c. Attribute
  - d. None of the above
5. Which statements about session timeouts are true? (Choose all that apply.) (right)

  - a. Session timeout declarations made in the DD (web.xml) can specify time in seconds.
  - b. Session timeout declarations made in the DD (web.xml) can specify time in minutes.
  - c. Session timeout declarations made programmatically can specify time only in seconds.
  - d. Session timeout declarations made programmatically can specify time either in minutes or seconds.
6. If there are more than one text box with the same name in a form, then how will you retrieve the first value of the text box? (choose all possible options) (right)

  - a. request.getParameter("textBoxName");
  - b. request.getParameterValues("textBoxName")[0];
  - c. request.getHeader("textBoxName");
  - d. request.getAttribute("textBoxName");
7. Consider the following servlet code segment:

```
 HttpSession session = request.getSession(true);
 session.setAttribute("name", "Cognizant");
 session.setMaxInactiveInterval(0);
 if (session.isNew()) {
```

```
System.out.println(session.getAttribute("name"));
} else { System.out.println(session.isNew());
}
```

What is the output of the above code segment ? (right)

- a. Displays "Cognizant" always
- b. Displays "false" always
- c. Depends on whether the session is newly created or not
- d. None of the above

8. Which of the following are valid inorder to set the session timeout period as 2 minutes? (right)

- a. <session-timeout>2</session-timeout>
- b. <session-timeout>120</session-timeout>
- c. session.setMaxInactiveInterval(2);
- d. session.setMaxInactiveInterval(120);

9. How will you send a cookie as response? Which sets a cookie "name" with the value "Cognizant" in a Servlet(right)

- a. response.setCookie("name", "Cognizant");
- b. response.sendCookie("name", "Cognizant");
- c. response.addCookie(new Cookie("name", "Cognizant"));
- d. response.setCookie(new Cookie("name", "Cognizant"));

10. Which of the following are used to retrieve the value associated to the parameter name provided within the <init-param> tag? (right)

- a. getServletContext().getInitParameter(paramName);
- b. getServletConfig().getInitParameter(paramName);
- c. getServletContext().getParameter(paramName);
- d. getServletConfig().getParameter(paramName);

11. Which of the following are true? (right)

- a. ServletConfig is one per servlet
- b. ServletConfig is one per web application
- c. ServletContext is one per servlet
- d. ServletContext is one per application

12. Which of the following are true?

- a. Context initialization parameters can be declared using <init-param>
- b. <servlet-mapping> is a sub-element of <servlet>
- c. <load-on-startup> is a sub-element of <servlet>
- d. <servlet-name> is a sub-element of both <servlet> and <servlet-mapping>

13. Which of the following can store attributes?

- a. ServletResponse
  - b. HttpServletRequest
  - c. ServletContext
  - d. HttpSession
14. Which **HTTP** methods are used to show the client what the server is receiving? (right)
- a. GET
  - b. PUT
  - c. TRACE
  - d. OPTIONS
15. When declaring a listener in the DD, Which sub-elements of the <listener> element are required? (Choose all that apply.) (right)
- a. <listener-name>
  - b. <listener-type>
  - c. <listener-class>
  - d. <listener-classname>
16. Given that request is an **HttpServletRequest**, which snippets create a session if one doesn't exist? (Choose all that apply.) (right)
- a. request.getSession();
  - b. request.getSession(true);
  - c. request.getSession(false);
  - d. request.getNewSession();
17. If a servlet is invoked using the **forward()** or **include()** method of **RequestDispatcher**, which methods of the servlet's request object can access that request attributes set by the container? (Choose all that apply.) (right)
- a. getCookies()
  - b. getAttribute()
  - c. getRequestPath()
  - d. getRequestAttribute()
18. You need to store a java long primitive attribute, called **customerOID**, into the session scope. Which two code snippets allow you to insert this value into the session? (Choose two.) (right)
- a.  

```
long customerOID=45L;  
session.setAttribute("customerOID",new Long(customerOID));
```
  - b.  

```
long customerOID=45L;
```

```

session.setAttribute("customerOID",customerOID);

c.

long customerOID=45L;

session.setNumericAttribute("customerOID",new Long(customerOID));

d.

long customerOID=45L;

session.setLongAttribute("customerOID",customerOID);

```

19.

```

<%! int a=6; %>
<% int a=5; %>
<% int b=3; %>
Result is <%= a*b %>

```

What is the result of the above code segment? (right)

- a. Compilation error
- b. Will display 18
- c. Will display 15
- d. None of the above

20. Which of the following are valid?

- a. <% = 2\*3 %>
- b. <%= (8\*3) %>
- c. <%= 3>5 %>
- d. <%= int a=3; %>

21. Which of the following attributes of page directive are invalid? (right)

- a. isELIgnored
- b. session
- c. language
- d. isScriptingEnabled

22. Which of the following is used to import a class in a JSP file? (right)

- a. <% page import = " java.util.List" %>
- b. <%@ import file="java.util.List" %>
- c. <%@ import java.util.List %>
- d. None of the above

23. Which of the following describes the JSP life cycle process best?

- a. JSP page is translated to a servlet, servlet is loaded into memory, code is compiled, instance is created

- b. JSP page is translated to a servlet, code is compiled, servlet is loaded into memory, instance is created.
- c. JSP is compiled, JSP page is translated to a servlet, code is loaded, instance is created.
- d. JSP is loaded into memory, Code is compiled, instance is created.

24. Which of the following are JSP implicit objects?

- a. `pageContext`
- b. `application`
- c. `requestScope`
- d. `exception`

25. Which of the following are valid? (right)

- a. `<jsp:include page="Header.jsp"/>`
- b. `<jsp:include file="Header.jsp"/>`
- c. `<%@include file="Header.jsp"%>`
- d. `<%@include page="Header.jsp"%>`

26. Assume a class named Employee which has a property called “`emplId`” which is of type int.

“`employee`” is an attribute instance of Employee. Which of the following are legal ways of setting the `emplId` field to Also assume that there is a parameter called “`emplId`” with the value 10 available to the jsp as a request parameter? (right)

- a. `<jsp:setProperty name="employee" property="emplId"/>`
- b. `<jsp:setProperty property="emplId" value="10"/>`
- c. `<jsp:setProperty name="employee" property="*"/>`
- d. `<jsp:setProperty name="employee" property="emplId" param="emplId"/>`

27. How will you retrieve the first value of request parameter “`fname`”? (Choose all options that apply) (right)

- a.  `${param.fname}`
- b.  `${requestParams.fname}`
- c.  `${requestScope.fname}`
- d.  `${paramValues.fname[0]}`

28. How will you access a servlet context initialization parameter named “company-name”? (right)

- a.  `${init.company-name}`
- b.  `${init['company-name']}`
- c.  `${initParam["company-name"]}`
- d.  `${contextParam.company-name}`

29. Consider the following servlet code segment:

```
Map map = new HashMap();
map.put("a", "1");
map.put("b", "2");
map.put("c", "3");
map.put("d", "4");
request.setAttribute("map", map);
String[] names = {"a", "b", "c", "d"};
request.setAttribute("names", names);
```

What does \${map[names[0]]} return?

- a. a
  - b. Nothing will be displayed
  - c. 1
  - d. None of the above
30. Which of the following EL implicit objects is not a Map?
- a. requestScope
  - b. initParam
  - c. headerValues
  - d. pageContext

31.

```
<pref:tag1>
<%= result %>
</pref:tag1>
```

Which of the following are valid for the <body-content> tag of tag1?

- a. JSP
  - b. empty
  - c. scriptless
  - d. tag dependant
32. Using c to represent the JSTL library, which of the following produces the same result as <%=>? (Select one)
- a. <c:var out=\${var}>
  - b. <c:out value=\${var}>
  - c. <c:out var="var">
  - d. <c:expr value=var>
33. Which attribute of <c:if> specifies the conditional expression? (Select one).
- a. cond
  - b. check
  - c. expr
  - d. test
34. Which JSTL code snippet can be used to perform URL rewriting?
- a. <a href='<c:url url="cognizant.jsp"/>'>
  - b. <a href='<c:link url="cognizant.jsp"/>'>
  - c. <a href='<c:url value="cognizant.jsp"/>'>
  - d. <a href='<c:link value="cognizant.jsp"/>'>
35. Which is the most efficient way of ensuring thread safety for session attributes which are being set and accessed in a servlet?
- a. Synchronize on the doGet() or doPost() method of the servlet

- b. Make the Servlet implement SingleThreadModel
  - c. Synchronize on the HttpSession object
  - d. Display a message on every web page instructing the user not to open a new browser window.
36. Which of the following are true?
- a. Making a servlet extend ThreadSafeServlet can ensure thread safety for all attributes set in the servlet
  - b. Local variables are thread safe
  - c. Servlet class instance variables are thread safe
  - d. Context attributes can be set in the deployment descriptor
37. Which of the following listeners are invoked when a session is created?
- a. HttpSessionBindingListener
  - b. HttpSessionListener
  - c. HttpSessionAttributeListener
  - d. HttpSessionAttributeListener
38. Select the one design patterns which is a **Presentation Tier pattern**
- a. Service Locator
  - b. DAO
  - c. Front Controller
  - d. Session façade
39. You need to restrict the number of active database connections at a time to 1. Which is the best **design pattern to apply?**
- a. DAO
  - b. Front Controller
  - c. Intercepting Filter
  - d. Singleton
40. Identify model component in an **MVC** pattern
- a. JSP
  - b. Data Bean
  - c. ActionServlet
  - d. Browser
41. Using multiple JSP components to construct your view is an example of
- a. ViewHelper Pattern
  - b. Service Locator
  - c. Pattern Proxy Pattern
  - d. Composite View Pattern
42. How many times is the **init()** method called during the life of the servlet ?
- a. Only once

- b. Once for every request
- c. None if the init() method is over-ridden
- d. None

43. In Expression Language \${8 / 0} – displays Infinity (state true/false)

- a. True
- b. False

44. **POST** method is considered to be idempotent method (state true/false)

- c. True
- d. False

45. You need to identify the browser type from which client request is forwarded and perform action before further processing takes place in business logic. Which is the best way to achieve this?

- a. Use a filter class (Intercepting filter pattern)
- b. Use multiple if-else conditions in your business logic
- c. Use Business Delegate pattern
- d. Use composite view pattern

d

Q1) You are developing dynamic web application using Web. Which attribute of page directive specifies the list of classes imported in the JSP file?

Select one:

- a. session
- b. extends
- c. import ✓
- d. language

Ans: import

Q2) Consider the following statements:

Statement A: The PreparedStatement object enables you to execute parameterized queries

Statement B: The SQL query can use the placeholders which are replaced by the INPUT parameters at runtime.

Which of the following options is True with respect to the above statements ?

Ans: A- True

B- True

(stmt A: PreparedStatement objects can be used for SQL statements with no parameters, you probably use them most often for SQL statements that take parameters. The advantage of using SQL statements that take parameters is that you can use the same statement and supply it with different values each time you execute it.

Dynamic SQL statements are stored in character strings built by your program at run time. Such strings must contain the text of a valid SQL statement or PL/SQL block. They can also contain placeholders for bind arguments. A *placeholder* is an undeclared identifier, so its name, to which you must prefix a colon, does not matter. For example, PL/SQL makes no distinction between the following strings:

```
'DELETE FROM emp WHERE sal > :my_sal AND comm < :my_comm'  
'DELETE FROM emp WHERE sal > :s AND comm < :c')
```

Q3) DIV tags creates line breaks similar to paragraph tags. True or False.

Ans: true

<DIV> and </DIV> tags function like <P> and </P> tags, except that a *line space* is inserted before a <P> tag but *not* before a <DIV> tag, and a *line space* is inserted after a </P> tag but *not* after a </DIV> tag.

Q4) What is the syntax of Expression Language in a JSP page?

Ans: \${expression}

Q5) Which of the following keyword ensures that a method cannot be overridden?

Ans: Final

Q6) What will be the output for following code?

Public class Compare

{

```
    Public static void main (String [] args)
    {
        String s = new String("abc");
        String s1 = new String("abc");
        System.out.println(s.compareTo(s1));
    }
}
```

Ans: Zero ("0")

Q7) When comparable interface is used which method should be overridden?

Select one:

- a. compareTo
- b. comparator
- c. compareWith
- d. compare

Ans: compareTo

Q8) Request Implicit Object is which of the following type.

Select one:

- a. HttpServletRequest
- b. HttpRequest
- c. ServletRequest
- d. ServletHttpRequest



Ans: HttpServletRequest

Q9) Variables in java script should be declared with data types. True or False

Ans: False

Q10) What will be the output of the following code snippet ?

```
<% page language = "java">  
<html>  
<head></head>  
<body>  
<%java.util.Date now = new java.util.Date();%>  
<H1><%=now.getHours()%>:<%=now.getMinutes()%>:<%=now.getSeconds()%></H1>  
</body>  
</html>
```

Ans: It will display the current time as hh:mm:ss

Q11) Consider Vijay is developing web page using HTML. Which method can be used for sending large amount of data on submitting the form ?

Ans: Post

Q12) Whenever a request goes from the client to the server some additional information other than the request is also passed to the server. The additional information is in the form of a \_\_\_\_\_?

Ans: Session ID

Q14) Which of the following is not an attribute of meta tag ?

Ans: Value

Q15) Which of following variable represents the uncaught throwable object that resulted from a call to the error page ?

Select one:

- a. Exception ✓
- b. Request
- c. Application
- d. Config

Ans: Exception

Q16) Under which two circumstances do you design database triggers?

Ans:

- (i) To guarantee that when a specific operation is performed, related actions are performed.
- (ii) For centralized, global operations that should be fired for the triggering statement, regardless of which user or application issues the statement.

Q17) What will be the output for following code ?

```
Import java.util.*;  
  
Public class StringTokenizer  
{  
  
    Public static void main(String[] args)  
    {  
  
        String s = "India is a\n developing country";  
        StringTokenizer o = new StringTokenizer (s);  
        System.out.println(o.countTokens());  
    }  
}
```

Ans: 5

Q18) What will be the output of following code?

```

Try
{
    System.out.println("Executing try");
}

System.out.println("After try");

Catch(Exception ex)

{
    System.out.println("Executing catch");
}

```

Ans: Compilation error.

Q19) Given a Filter class definition with this method:

```

21: public void doFilter(ServletRequest request,
22: ServletResponse response,
23: FilterChain chain)
24: throws ServletException,IOException{
25://insert code here
26:}

```

Which should you insert at line 25 to properly invoke the next filter in the chain, or the target servlet, If there are no more filters?

Ans: chain.doFilter(request,response)

Q20) A filter configuration object used by a servlet container to pass information to a filter during initialization. True or false

**Ans: true**

**Question 20**  
Not yet answered  
Marked out of 1.00  
Flag question

A filter configuration object used by a servlet container to pass information to a filter during initialization.  
State True or False.

Select one:

- True
- False

Answer: True

**Question 21**

Not yet answered

Marked out of 1.00

Flag question

Consider you are developing shopping cart application you have to store details of items purchased by each customer in intermediate memory before storing purchase details in actual database permanently note that number of different items purchased by customer is not definite it may vary. How do you implement given requirement using java considering best performance of the application?

Select one:

- a. None of the listed options
- b. Implement using file API's
- c. Implement using Collection API's.
- d. Implement using Arrays

Answer: c

**Question 22**

Answer saved

Marked out of 1.00

Flag question

What is the use of attributes in HTML tags?

Select one:

- a. Attribute is a type of tag
- b. None of the listed options
- c. Provides additional behaviour to the tag
- d. Which represents the content to be displayed in the page

Answer: C

**Question 23**

Not yet answered

Marked out of 1.00

Flag question

In which of these following getAttribute() and setAttribute() method has defined?

Select one or more:

- a. HttpSession
- b. ServletResponse
- c. HttpListener
- d. ServletRequest

Answer: HttpSession, Servlet Request

**Question 24**

Not yet answered

Marked out of 1.00

Flag question

XYZ company database has Customer personal information View table using which customer can update their personal information like address, phone number fields when user updates address and phone number fields in view table. We need to take care of updating address and phone number fields in underlying database base table automatically. What right solution do you suggest to implement this requirement?

Select one:

- a. Implement using triggers
- b. Implement using Stored Procedures
- c. Implement using Cursors
- d. Implement using functions

Answer: a

**Question 25**

Not yet answered

Marked out of 1.00

Flag question

Which of the following options represents the presentation logic to provide the data of the model in the MVC design pattern?

Select one:

- a. View
- b. Model
- c. Controller
- d. Connector

Answer: View

**Question 26**

Not yet answered

Marked out of 1.00

Flag question

In Thread implementation making method synchronized is always better in order to increase application performance rather than using synchronize block to synchronize certain block of statements written in java inside the method.

State True or False.

Select one:

- True
- False

Answer: false

**Question 27**

Not yet answered

Marked out of 1.00

Flag question

Which of the following code line will destroy a session?

Select one:

- a. session.isNew(false)
- b. session.isAlive = false;
- c. session.removeSession()
- d. session.invalidate()

Answer: Session.invalidate

**Question 29**

Not yet answered

Marked out of 1.00

Flag question

What will be the output of the below query?

```
select instr('My SQL World','a') from dual;
```

Select one:

- a. Prints 14
- b. Prints -1
- c. Prints 6
- d. Prints 0
- e. Query contains error

Answer: d

**Question 30**

Not yet answered

Marked out of 1.00

Flag question

What is the correct syntax of the declaration which defines the XML version?

Select one:

- a. <?xml version="1.0"?>
- b. <xml version="1.0" />
- c. None of the listed options
- d. <?xml version="1.0" />

Answer: A

**Question 32**

Not yet answered

Marked out of 1.00

Flag question

Which statement creates DocumentBuilderFactory instance?

Select one:

- a. DocumentBuilderFactory f=new DocumentBuilderFactory();
- b. DocumentBuilderFactory f= BuilderFactory.newInstance();
- c. DocumentBuilderFactory f=DocumentBuilderFactory.newInstance();
- d. None of the listed options

Answer: C

**Question 33**

Not yet answered

Marked out of 1.00

Flag question

Which of the following is the deployment descriptor file of a web application? Assuming that the name of the Web application is BankApp.

Select one:

- a. BankApp.xml
- b. WebApp.xml
- c. web.xml
- d. deployment.xml

Answer: C

**Question 34**

Answer saved

Marked out of 1.00

Flag question

&lt;pref:tag1&gt;

&lt;%= result %&gt;

&lt;/pref:tag1&gt;

Which of the following are valid for the &lt;body-content&gt; tag of tag1?

Select one:

- a. JSP
- b. scriptless
- c. tag dependant
- d. empty

Answer: a

**Question 35**

Not yet answered

Marked out of 1.00

Flag question

What will be the output for following code?

```
public class While {  
    static int i;  
    public static void main(String[] args){  
        System.out.println(i);  
        while(i<=5){  
            i++;  
        }  
        System.out.println(i);  
    }  
}
```

Select one:

- a. 0,6
- b. 6,0
- c. compilation error ✓
- d. 0,5

Answer: a

**Question 36**

Not yet answered

Marked out of 1.00

Flag question

Consider you are developing a JDBC application, where you have to retrieve Employee table schema information like table columns name, columns field length and data type etc. Which API you will use to retrieve table schema information?

Select one:

- a. DataSource
- b. ResultSetMetaData
- c. ResultSet ✓
- d. Statement

Answer: ResultSetMetadata

**Question 37**

Not yet answered

Marked out of 1.00

Flag question

Select the benefits of versioning the software in java application development.

Select one or more:

- a. Formatting ✓
- b. WinZIP ✓
- c. Backup and Restore ✓
- d. Branching and merging
- e. Synchronization ✓

Answer: all

**Question 38**

Not yet answered

Marked out of 1.00

Flag question

Which complex type signifies that only one of the child elements can appear?

Select one:

- a. None of the listed options
- b. <xs:complexType name="CountryInfo"><xs:all> <xs:element name="countryName" type="xs:string"/> <xs:element name="states" type="xs:integer"/></xs:all></xs:complexType>
- c. <xs:complexType name="CountryInfo"><xs:sequence> <xs:element name="countryName" type="xs:string"/> <xs:element name="states" type="xs:integer"/></xs:sequence></xs:complexType>
- d. <xs:complexType name="CountryInfo"><xs:choice> <xs:element name="countryName" type="xs:string"/> <xs:element name="states" type="xs:integer"/></xs:choice></xs:complexType>

Answer: d

**Question 39**

Not yet answered

Marked out of 1.00

Flag question

Which parser reads small chunk of document at a time, parses it, generate an events and then reads another chunk of document

Select one:

- a. SAX
- b. None of the listed options
- c. XML
- d. DOM

Answer: SAX

Q40)

How can you force garbage collection of an object?

1. Garbage collection cannot be forced
2. Call System.gc().
3. Call Runtime.gc().
4. Set all references to the object to new values(null, for example).

Select one:

- a. 1
- b. 4
- c. 2
- d. 3

Ans: c

Q41)

You are developing a trigger which should ensure that no negative value is inserted in employee table's Age column . you have created a trigger as follows

```
create or replace trigger AgeVerify  
before insert  
on employee for each row  
when(new.EmpAge < 0)  
begin  
RAISE_APPLICATION_ERROR(-20000, 'no negative age allowed');  
end;  
/
```

Identify error if any in the above trigger and give the solution.

Select one:

- a. Replacing RAISE\_APPLICATION\_ERROR(-20000, 'no negative age allowed'); to RAISE\_APPLICATION\_ERROR(-20000,"no negative age allowed"); will give the desired output
- b. Replacing RAISE\_APPLICATION\_ERROR(-20000, 'no negative age allowed'); to RAISE\_APPLICATIONS\_ERROR(-20000,"no negative age allowed"); will give the desired output
- c. Replacing RAISE\_APPLICATION\_ERROR(-20000, 'no negative age allowed'); to RAISE\_APPLICATIONS\_ERROR(-20000, 'no negative age allowed'); will give the desired output
- d. No problem in the trigger. It gives the desired result
- e. The order of Arguments passed to RAISE\_APPLICATION\_ERROR is wrong

Ans: c

Q42)

InputStream is the class used for stream of characters.

State True or False.

Select one:

- True
- False

Ans: False

Q43)

XYZ company database has SALES table which captures all department sales information. You have been asked to create department wise summarized total sales report from SALES table. Which of the following correct option will fetch you meaningful result?

Select one:

- a. Use Aggregate function along with GROUP BY clause in query to retrieve result
- b. Use Aggregate function along with ORDER BY clause in query to retrieve result
- c. None of the listed options
- d. Use Aggregate function along with WHERE clause in query to retrieve result

Ans: a

Q44)

How to drop all tables from recycle bin?

Select one:

- a. Cannot drop tables from Recycle Bin
- b. PURGE DBA\_RECYLEBIN
- c. DROP DBA\_RECYLEBIN
- d. DROP ALL\_TABLE\_RECYLEBIN
- e. PURGE RECYLEBIN



Ans: e

Q45)

TagSupport and BodyTagSupport classes are present in which package?

Select one:

- a. javax.servlet.jsp.tagext
- b. java.servlet.jsp.tagext
- c. javax.servlet.jsp.tagext
- d. javax.servlet.jsp.tag

JSP will have javax

Ans: c

**Question 46**

Not yet answered

Marked out of 1.00

Flag question

Which method removes the attribute with the given name from the ServletContext interface?

Select one:

- a. void removeAttribute(String name)
- b. void flushAttribute(String name)
- c. void clearAttribute(String name)
- d. void removeAttribute(Object name)

Answer: a

**Question 47**

Answer saved

Marked out of 1.00

Flag question

Try can be followed with either catch or finally.  
State True or False.

Select one:

 True  False

Answer: True

**Question 48**

Not yet answered

Marked out of 1.00

Flag question

As per Java Class names should be nouns, in mixed case with the first letter of each internal word capitalized.

Try to keep your class names simple and descriptive.

State True or False.

Select one:

 True  False

Answer: True

**Question 49**

Not yet answered

Marked out of 1.00

Flag question

```
public class MethodSigExample
{
    public int test(String s, int i)
    {
        int x = i + s.length();
        return x;
    }
}
```

During refactoring method signature can be changed using the option:

Select one:

- a. Refactor > Change Method Signature
- b. Refactor > move
- c. Refactor > Extract method
- d. Refactor > move Method

Answer: a

**Question 50**

Not yet answered

Marked out of 1.00

Flag question

```
SELECT e.EMPLOYEE_ID,e.LAST_NAME,e.DEPARTMENT_ID, d.DEPARTMENT_NAME  
FROM EMP e, DEPARTMENT d  
WHER e.DEPARTMENT_ID = d.DEPARTMENT_ID;
```

In the statement, which capabilities of a SELECT statement are performed?

Select one:

- a. Intersection, Projection, Join
- b. Selection, Intersection, Join
- c. Selection, Projection, Join ✓
- d. Difference,Projection, Join

Answer: c

**Question 51**

Not yet answered

Marked out of 1.00

Flag question

Which of the following statements are true?

Statement A: Index by Table is Also known as associative arrays. It lets you to look up elements using arbitrary numbers and strings for subscript values.

Statement B: Nested tables hold an arbitrary number of elements. They use sequential numbers as subscripts.

Select one:

- a. Statement A is True and B is False.
- b. Both statements A and B are True.
- c. Both statements A and B are False. ✓
- d. Statement A is false and B is True.

Answer: b

**Question 52**

Not yet answered

Marked out of 1.00

Flag question

A Web application developed for an institution requires insertion of a header file comprising the logo and institution name. Identify the correct JSP tag from the options given below to add the logo and institution name to all the pages of the Web application.

Select one:

- a. <jsp:forward page="Header.html">
- b. <form method="post" action="Header.html">
- c. <%@ include file="Header.html" %> ✓
- d. <% page import="Header.html" %>

Answer: c

**Question 54**

Not yet answered

Marked out of 1.00

Flag question

Select the advantages of using coding conventions in java application development.

Select one:

- a. Improves Easy understanding
- b. All of the listed options
- c. Improves Easy Maintenance
- d. Improves Readability of the software

Answer: b

**Question 55**

Not yet answered

Marked out of 1.00

Flag question

Which attribute of the page directive indicates that the JSP engine can handle more than one request at a time when its value is set to true?

Select one:

- a. extends
- b. IsThreadSafe
- c. autoflush
- d. Info

Answer: b Is ThreadSafe

**Question 56**

Not yet answered

Marked out of 1.00

Flag question

When one method is overridden in sub class the access specifier of the method in sub class should be equal as method in super class.

State True or False.

Select one:

- True
- False

Answer: false

**Question 58**

Not yet answered

Marked out of 1.00

Flag question

How to divide the page into two rows when we are using frameset?

Select one:

- a. By using rows=50%,50%
- b. By using cols=50%,50%
- c. By using rowspan
- d. By using colspan

Answer: a

**Question 60**

Not yet answered

Marked out of 1.00

Flag question

XYZ Company database tables are accessed by several users but few users want to do positional row updates or deletes operation on databases tables based on business requirement. What will the right solution you will implement in such scenario?

Select one:

- a. Use Views
- b. Use database Trigger
- c. Use database Indexes
- d. Use Cursors

Answer: b.use Cursor.