Exam : 310-019

Title : Sun Certified Associate for the Java Platform, Standard Edition

Ver : 08.07.06

QUESTION 1

What type of relationship is needed to represent the relationship between students and the courses they are enrolled in at a university?

A. a one-to-one association
B. a one-to-one composition
C. a one-to-many association
D. a one-to-many composition
E. a many-to-many association
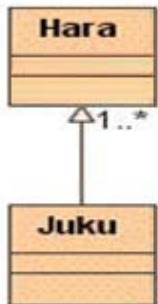F. a many-to-many composition

Answer: E

QUESTION 2

Which two symbols are used to indicate the visibility of an attribute in UML?
(Choose two.)

A. -
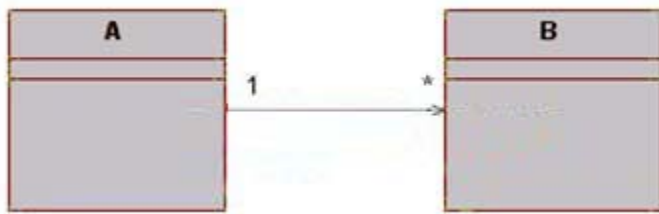B. $
C. +
D. &
E. *

Answer: AC

QUESTION 3

Exhibit:

Which is true?

A. Juku is a subclass of Hara.
B. This is NOT a valid UML diagram.
C. Juku implements the Hara interface.
D. Every Juku has a reference to at least one Hara.
E. Juku is a subclass of Hara and at least one other class.

Answer: B

QUESTION 4
Exhibit:

Which code correctly implements the association between A and B?

A. class A {
private B b;
}
class B { }
B. class A {
private B [] b;
}
class B { }
C. class A { }
class B {
private A [] a;
}
D. class A { }
class B {
private A a;
}
E. class A {
private B[] b;
}
class B {
private A a;
}
F. class A {
private B b;
}
class B {
private A [] a;
}

Answer: B

QUESTION 5
Which two keywords directly support looping? (Choose two.)

A. if

B. for
C. while
D. switch
E. foreach

Answer: BC

QUESTION 6
Given:
11. class Cat {
14. public static void main(String [] args) {
15. Cat c1 = new Cat ();
16. Cat c3 = new Cat ();
17. Cat c2 = c1;
18. Cat c4 = c3;
19. c1 = c4;
20. c4 =c2;
21 if (c1==c2) System.out.print("c1 == c2");
22 if (c1==c3) System.out.print("c1 == c3");
23. }
24. }
What is the result?

A. c1 == c2
B. c1 == c3
C. c1 == c2 c1 == c3
D. No output is produced.
E. The output is unpredictable.

Answer: B

QUESTION 7
Which option will correctly initialize the property com.example.property to
someValue when invoking java?

A. -Pproperty:someValue
B. com.example.property=someValue
C. -Dcom.example.property=someValue
D. -Pcom.example.property:someValue
E. -P com.example.property someValue

Answer: C

QUESTION 8
A Java programmer wants to develop a small application to run on mobile phones.
Which Java edition (or editions) are required to develop the application?

A. only J2SE
B. only J2EE
C. only J2ME
D. J2SE and J2EE
E. J2SE and J2ME
F. J2EE and J2ME

Answer: E

QUESTION 9
Which two are true about JavaScript and HTML? (Choose two.)

A. JavaScript is part of the J2SE.
B. JavaScript and HTML are NOT compiled.
C. JavaScript provides more client-side functionality than HTML alone.
D. JavaScript code is always processed on the server, NOT on the client.
E. JavaScript is guaranteed to be portable across all browsers on any platform.

Answer: BC

QUESTION 10
Which is a benefit of Swing clients?

A. They are easier to deploy than thin clients.
B. They can be used without a JRE on the client.
C. They are more universally supported by browsers than thin clients.
D. They can provide a richer graphical user interface experience than thin clients.

Answer: D

QUESTION 11
Which is true?

A. JSP is defined as JavaScript Pages.
B. JSP technology output is never displayed to clients.
C. JavaServer Pages are translated into servlets before they are executed.
D. JSP developers must learn Java programming to create JavaServer Pages.

Answer: C

QUESTION 12
Which four are primitive data types? (Choose four.)

A. int
B. null

C. long
D. char
E. short
F. String
G. Integer

Answer: ACDE

QUESTION 13
Which three are char literals? (Choose three.)

A. '\n'
B. 'C'
C. "C"
D. /C/
E. 'ABC'
F. '\uF00D'

Answer: ABF

QUESTION 14
Which four are legal declarations? (Choose four.)

A. String st = null;
B. String st = "Hello";
C. String st = 'Hello';
D. String st =='Hello';
E. String st =="Hello";
F. String [] st = new String [1];
G. String st = new String ("Hello");

Answer: ABFG

QUESTION 15
What keyword is used to create an enumeration?

A. enum
B. ENUM
C. const
D. enumeration
E. There is no keyword for creating enumerations. The Enum class must be used instead.

Answer: A

QUESTION 16
Which four are primitive integer types in Java? (Choose four.)

A. int
B. byte
C. long
D. short
E. float
F. nibble
G. double

Answer: ABCD

QUESTION 17
Which type of primitive can be assigned a new value within a conditional expression?

A. int
B. byte
C. char
D. short
E. boolean

Answer: E

QUESTION 18
Given:
17. class B { }
Which demonstrates inheritance?

A. class A this B { }
B. class A super B { }
C. class A extends B { }
D. class A implements B { }

Answer: C

QUESTION 19
Which two are valid examples of interface implementation? (Choose two.)

A. class C extends D { }
B. class C implements D { }
C. class C extends D, E { }
D. class C implements D E { }
E. class C implements D, E { }
F. class C extends D, implements E { }

Answer: BE

QUESTION 20
Given:
1. public interface Player {
2. // insert code here
3. // insert code here
4. }
5. class F implements Player {
6. public void play(){
7. // ...
8. }
9. public void stop(){
10. // ...
11. }
12. }
Which two, inserted independently at lines 2 and 3, allow the code to compile?
(Choose two.)

A. void play ();
int stop ();
B. void play ();
void stop();
C. final void play ();
final void stop();
D. static void play ();
static void stop();
E. public void play ();
public void stop();
F. private void play ();
private void stop();

Answer: BE

QUESTION 21
Which three are true? (Choose three.)

A. An abstract class CANNOT be instantiated.
B. An interface can extend multiple interfaces.
C. All methods in an abstract class must be abstract.
D. If abstract class B directly extends abstract class A, class B must implement all
abstract methods declared in A.
E. If concrete class C extends concrete class B, and B implements interface A, then all
methods from interface A can be invoked on an instance of C.

Answer: ABE

QUESTION 22
Which two are true? (Choose two.)

A. An abstract class can implement an interface.
B. An abstract class can be extended by an interface.
C. An interface can be extended by an abstract class.
D. An interface CANNOT be extended by another interface.
E. An abstract class can be extended by a concrete class.
F. An abstract class CANNOT be extended by an abstract class.

Answer: AE

QUESTION 23
You are asked to create code that defines a Beverage, and includes method
implementation code for some beverage behaviors. Beverage subtypes will be
required to provide implementations of some, but not all, of the methods defined in
Beverage.
Which approach correctly implements these goals?

A. Create an abstract Beverage class that defines only abstract methods.
B. Create a Beverage interface that all beverage subtypes must implement.
C. Create a concrete Beverage class that defines both abstract and concrete methods.
D. Create an abstract Beverage class that defines both abstract and concrete methods.

Answer: D

QUESTION 24
Which two are true about composition relationships? (Choose two.)

A. Composition relationships can be one-to-many.
B. Composition relationships are never one-to-many.
C. Composition relationships are always many-to-many.
D. Composition relationships are used to show exclusive ownership.
E. Composition relationships are never used when an object is owned by exactly one
other object.

Answer: AD

QUESTION 25
Which is true about association navigation?

A. Association navigation is meaningful for only OO design, NOT implementation.
B. Association navigation is used to describe the relationship between a subclass and its superclass.
C. Association navigation indicates which direction a relationship can be traversed.
D. Association navigation indicates how many instances of each object type are involved in an association.

Answer: C

QUESTION 26
Which two are true about the relationship "A keyboard has 101 keys."? (Choose two.)

A. This is a one-to-one relationship.
B. This is a composition relationship.
C. This is a one-to-many relationship.
D. This is a many-to-many relationship.
E. This is a not a composition relationship.

Answer: BC

QUESTION 27
Which two are true about the composition relationship "A Blip consists of many Blipverts."? (Choose two.)

A. A Blip must have at least two Blipverts.
B. A Blipvert can be a part of only one Blip.
C. A Blipvert must be part of at least one Blip.
D. When a Blipvert is deleted, its Blip should also be deleted.
E. When a Blip is deleted, each of its Blipverts should also be deleted.

Answer: BE

QUESTION 28
Given:
1. class Exam {
2. private int num = 0;
3. public int getNum() {
4. return num;
5. }
6. }
7. public class Sample {
8. public static void main(String[] args) {
9. Exam e = new exam ();
10. e.num = 100;
11. int num = e.getNum();
12. System.out.print1n("The number is: " + num);
13. }
14. }
What is the result?

A. Compilation fails.
B. The number is: 0

C. The number is: 100
D. An exception is thrown at runtime.

Answer: A

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QUESTION 29
Which two are true? (Choose two.)

A. A class that extends another class CANNOT be well encapsulated.
B. Polymorphism only applies when one class encapsulates another.
C. A class with a public instance variable CANNOT be well encapsulated.
D. If class B is well encapsulated, then class A can access class B's instance variables only through a method invocation.

Answer: CD

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QUESTION 30
You are asked to create a Dog class that exposes the Dog class String name and int breed to other code as read-only attributes, provides encapsulation, and adheres to the standard JavaBeans naming conventions.
Which approach implements these requirements?

A. Provide public getName()/setName() and public getBreed()/setBreed() methods in the Dog class, and mark the name and breed instance variables private.
B. Provide private name() and private breed() methods in the Dog class, and mark the name and breed instance variables public.
C. Provide public getName() and public getBreed() methods in the Dog class, and mark the name and breed instance variables private.
D. Provide public name() and public breed() methods in the Dog class, and mark the name and breed instance variables private.
E. Provide private getName() and private getBreed() methods in the Dog class, and mark the name and breed instance variables private.

Answer: C

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QUESTION 31
Which two describe benefits of encapsulation? (Choose two.)

A. Code is more efficient because attributes of the class can be accessed directly by other classes, without the overhead of going through access methods.
B. Code is more reusable because the attributes of the class are protected from direct modification by other code.
C. Code is more useful because attributes of the class can be accessed by other classes for both reading and writing.
D. Code is safer because attributes of the class CANNOT be directly modified by code outside the class.

E. Code is more flexible because the attributes can be modified directly from code in other packages.

Answer: BD

QUESTION 32
Given:
1. class Book {
2. public String title;
3.
4. public void setTitle(String title) {
5. if (checkTitle(title)) this.title=title;
6. }
7. public String getTitle() {
8. return title;
9. }
10. private boolean checkTitle(String newTitle) {
11. // code that verifies proposed title change
12. }
13. }
Which two are true? (Choose two.)

A. The Book class demonstrates encapsulation.
B. The Book class does NOT provide information hiding.
C. The Book class adheres to the JavaBeans naming conventions.
D. The checkTitle method can be accessed from outside the Book class.
E. The title attribute is protected from direct modification by outside code.

Answer: BC

QUESTION 33
Given:
1. public class Boat{
2. // insert code here
3. public void setGas(int v){
4. gas = v;
5. }
6. }
Which, inserted at line 2, is valid and demonstrates encapsulation?

A. struct int gas;
B. public int gas;
C. private int gas;
D. protected int gas;

Answer: C

QUESTION 34
Which two are benefits when appropriately using polymorphism? (Choose two.)

A. code that is faster at runtime
B. code that is more efficient at runtime
C. code that is more dynamic at runtime
D. code that is more flexible and reusable
E. code that is protected from extension by other classes

Answer: CD

QUESTION 35
Given concrete class B is a subclass of concrete class A, and class A implements
interface C, which two are examples of polymorphism? (Choose two.)

A. use a reference variable of type B to refer to an instance of type A
B. use a reference variable of type A to refer to an instance of type B
C. use a reference variable of type C to refer to an instance of type A
D. use a reference variable of type A to refer to an instance of type C
E. use a reference variable of type C to refer to an instance of type B

Answer: CE

QUESTION 36
Given:
1. // insert code here
2. void play();
3. void stop();
4. }
5. // insert code here
6. public void play() { }
7. public void stop() { }
8. }
Which, inserted at lines 1 and 5, allows the code to compile?

A. 1. interface Player {
5. class DVDPlayer implements Player {
B. 1. implements Player {
5. class DVDPlayer interface Player {
C. 1. class Player {
5. interface DVDPlayer implements Player {
D. 1. interface Player {
5. class DVDPlayer extends Player {
E. 1. abstract class Player {
5. class DVDPlayer extends Player {

Answer: A

QUESTION 37
Which two are true? (Choose two.)

A. An interface can implement another interface.
B. A class can implement more than one interface.
C. Many classes can implement the same interface.
D. Every class must implement at least one interface.

Answer: BC

QUESTION 38
Given:
11. class A {
12. public void methodX(int i) { /* some code */ }
13. public String methodY(String s) { /* some code */ }
14. }
15. class B extends A {
16. public void methodX(int i) { /* some code */ }
17. public String methodX(String s) { /* some code */ }
18. public String methodY(String s) { /* some code */ }
19. }
Which two are true? (Choose two.)

A. The methodX(int) in class B overrides methodX(int) in class A.
B. The methodX(String) in class B overrides methodX(int) in class A.
C. The methodX(int) in class A overloads methodX(String) in class B.
D. The methodY(String) in class B overrides methodY(String) in class A.
E. The methodY(String) in class B overloads methodY(String) in class A.

Answer: AD

QUESTION 39
Given:
11. interface A {
12. void someMethod();
13. }
14. class B implements A {
15. public void someMethod() { }
16. }
Which represents the "program to an interface" principle?

A. public A make() { return new A(); }

B. public A make() { return new B(); }
C. public B make() { return new A(); }
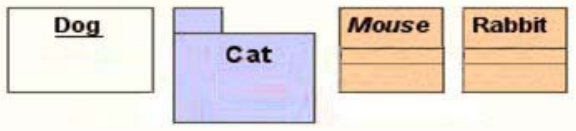D. public B make() { return new B(); }

Answer: B

QUESTION 40
Which two are represented in a UML class diagram? (Choose two.)

A. ways to test an application
B. operations of classes and interfaces
C. relationships between classes and interfaces
D. the interactions between objects in sequential order

Answer: BC

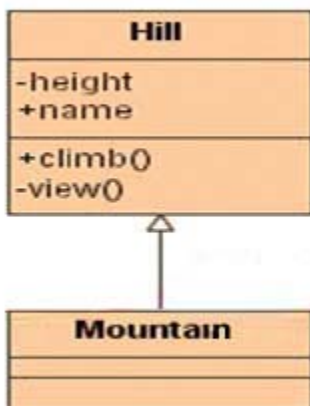**QUESTION** 41
Exhibit:

Which is an abstract class?

A. Cat
B. Dog
C. Rabbit
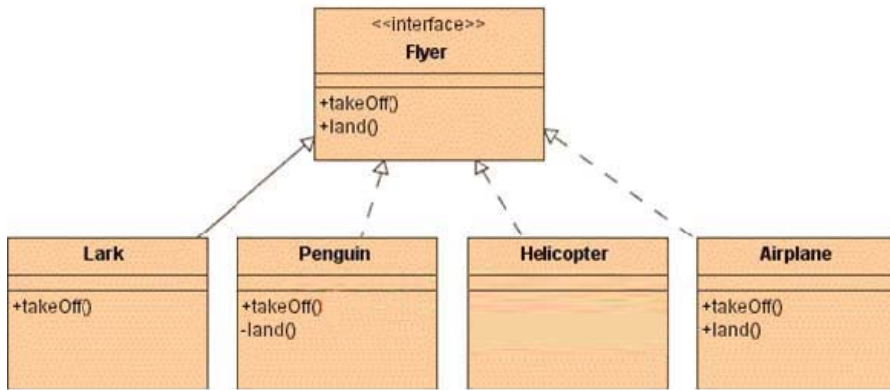D. Mouse

Answer: D

QUESTION 42
Exhibit:

Which attribute CANNOT be accessed from a Mountain object?

A. view
B. climb
C. name
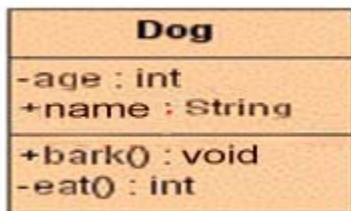D. height

Answer: D

QUESTION 43
Exhibit:

Which class correctly implements the interface Flyer?

A. Lark
B. Airplane
C. Penguin
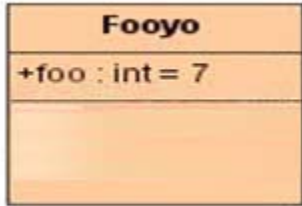D. Helicopter

Answer: B

QUESTION 44
Exhibit:

Which is the class name?

A. eat
B. age
C. Dog
D. bark
E. name

Answer: C

QUESTION 45
Exhibit:

Which two are true? (Choose two.)

A. foo is public
B. foo is private
C. foo is an attribute
D. foo is an operation

Answer: AC

QUESTION 46
Which two are valid representations of operations in UML? (Choose two.)

A. - op(p : P) : P
B. + int op(int param)
C. * op(param : int) : int
D. + op(param : int) : int
E. public void op(int param)

Answer: AD

QUESTION 47
Exhibit:
MISSING

.
Which is true?

A. A extends B.
B. B extends A.
C. A implements B.
D. B implements A.
E. A is an instance of B.
F. B is an instance of A.
G. This is NOT valid UML notation.
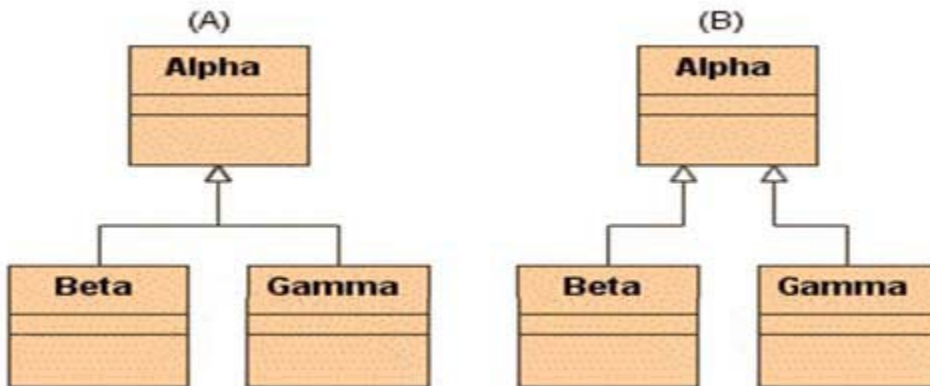
Answer: C

QUESTION 48
Exhibit:

Which is true about the use of italics in this diagram?

A. The use of italics carries no standard UML meaning.
B. The use of italics indicates that Blipvert is an interface.
C. The use of italics indicates that Blipvert is a final class.
D. The use of italics indicates that Blipvert is an enumeration.
E. The use of italics indicates that Blipvert is an abstract class.

Answer: E

QUESTION 49
Exhibit:
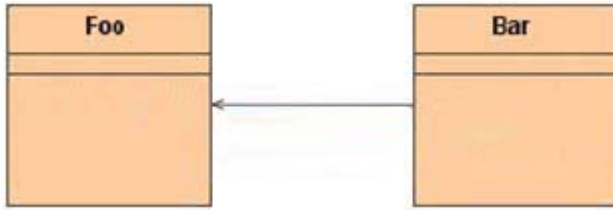

Which is true?

A. Only diagram A is valid.
B. Only diagram B is valid.
C. Both diagrams are invalid.
D. Diagrams A and B are equivalent.
E. Diagrams A and B are both valid, but have different meanings.
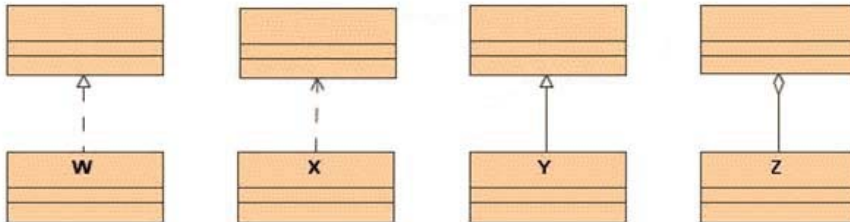
Answer: D

QUESTION 50
Exhibit:

Which two are true? (Choose two.)

A. The diagram shows a composition relation.
B. The diagram does NOT show a composition relation.
C. A Foo instance has access to the Bar with which it is associated.
D. A Bar instance has access to the Foo with which it is associated.
E. It cannot be determined from the diagram whether instances of Foo and Bar will have access to each other.

Answer: BD

QUESTION 51
Exhibit:

Which class has a superclass relationship?

A. W
B. X
C. Y
D. Z

Answer: C

QUESTION 52
Which is true regarding multiplicity?

A. It is used to show the interfaces implemented by a class.
B. It is used to indicate which class some other class extends.
C. It is used to indicate of which class an object is an instance.
D. It is used to indicate the number of instances of a class that may be associated with an instance of some other class.

Answer: D

QUESTION 53
Exhibit:
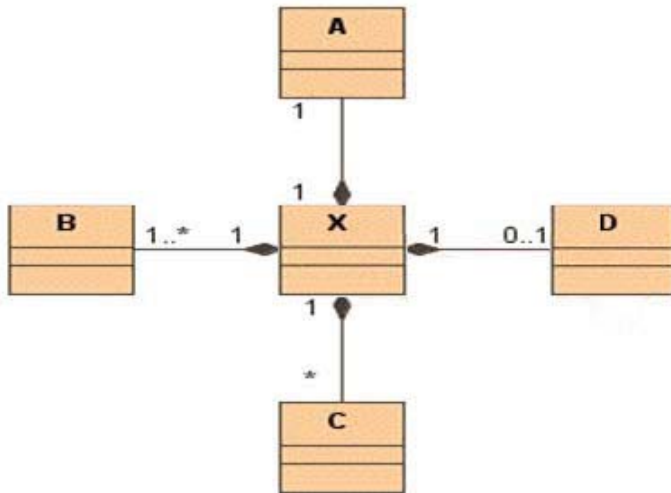
Which two classes can have two or more instances associated with a single instance
of X. (Choose two.)

A. A
B. B
C. C
D. D

Answer: BC

QUESTION 54
Exhibit:
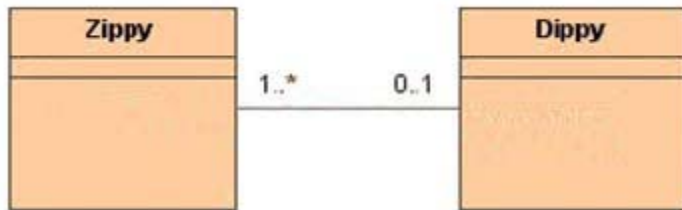
Which two are true? (Choose two.)

A. It is valid for a Zippy to have no associated Dippy.
B. It is valid for a Dippy to have no associated Zippy.
C. Every Zippy must be associated with exactly one Dippy.
D. Every Dippy must be associated with exactly one Zippy.
E. Every Dippy must be associated with at least one Zippy.
F. It is valid for a Zippy to be associated with more than one Dippy.

Answer: AE

QUESTION 55
Exhibit:

Which diagram best represents the relationship "A Dog has four Legs" based on the definitions of association and composition?

A. A
B. B
C. C
D. D

Answer: A

QUESTION 56
Which two are true? (Choose two.)

A. 2..4 is a valid multiplicity indicator.
B. The multiplicity indicators * and 1..* are equivalent.
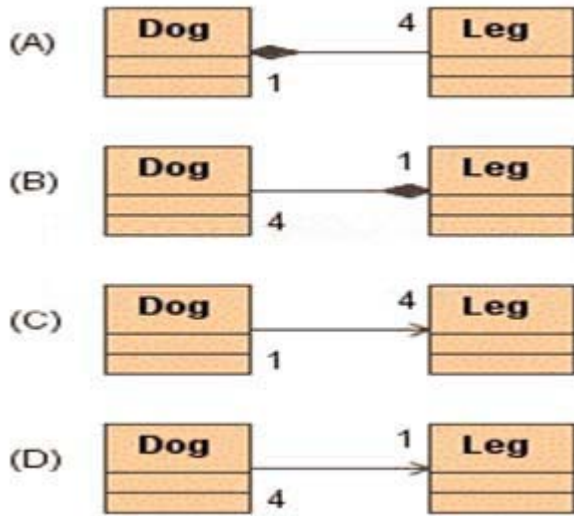C. The multiplicity indicators + and 1..* are equivalent.
D. An optional association is shown using the multiplicity indicator 0..1.
E. Multiplicity indicators must always be shown at both ends of an association.
F. Multiplicity indicators are optional, but if they are included they must be shown at both ends of an association.

Answer: AD

QUESTION 57
Exhibit:
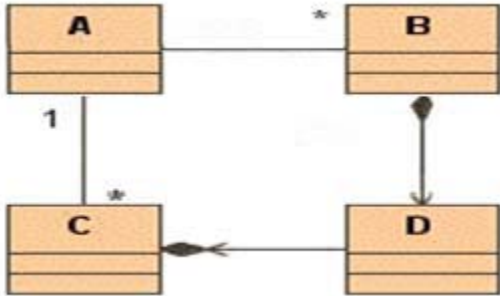
Which relationships, referenced by the class names involved, are drawn using valid UML notation?

A. only AB and AC
B. only BD and CD
C. AB, AC, BD, and CD
D. only AC, BD, and CD
E. only AB, AC, and BD

Answer: C

QUESTION 58
Exhibit:
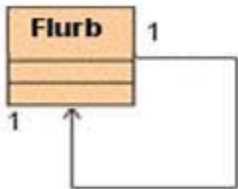
Which two are true? (Choose two.)

A. Every Flurb contains a reference to itself.
B. Every Flurb is associated with exactly one Flurb.
C. There can only be one instance of the Flurb class.
D. There must always be an even number of Flurb instances.
E. A Flurb can be associated with itself, but it also could be associated with a different Flurb.

Answer: BE

QUESTION 59
Exhibit:
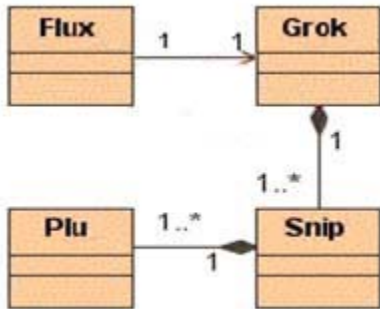
Which two are true? (Choose two.)

A. Deleting a Plu will cause a Grok to be deleted.
B. Deleting a Grok will cause a Plu to be deleted.
C. A Grok knows with which Flux it is associated.
D. A Flux knows with which Grok it is associated.
E. Deleting a Snip will cause its associated Grok to be deleted.
F. Any Grok associated with a Flux must be deleted when the Flux is deleted.

Answer: BD

QUESTION 60
Which two are valid? (Choose two.)

A. enum Suit { CLUBS, DIAMONDS, HEARTS, SPADES }
class EnumTest {
public static void main(String args[]) {
System.out.println(Suit.CLUBS);
}
}
B. class EnumTest {
public static void main(String args[]) {
enum Num { ONE, TWO, THREE, FOUR }
System.out.println(Num.ONE);
}
}
C. class EnumTest {
enum Colors { Red = 1, Green = 2, Blue = 4, Yellow = 8 }
public static void main(String args[]) {
System.out.println(Colors.Red);
}
}
D. class EnumTest {
enum Days { Sat, Sun, Mon, Tue, Wed, Thu, Fri }
public static void main(String args[]) {
System.out.println(days.Sat);
}
}

}

Answer: AD

QUESTION 61
Which three are valid? (Choose three.)

A. int j ='A';
B. Int i = 10L;
C. int num = 3.14;
D. int flag = true;
E. byte b = 10;
int i = b;
F. double d = 5.0;
int n = (int)d;

Answer: AEF

QUESTION 62
Which three compile without error? (Choose three.)

A. String str = "Hello";
B. String str = 'Hello';
C. String str = new String("Hello");
D. String str = "Hello"+"World!";
E. String str = "Hello"-"World!;
F. String str = new String('Hello');

Answer: ACD

QUESTION 63
Which two compile without error? (Choose two.)

A. boolean b = 0;
B. float f = 3.14;
C. double d = 1000;
D. char c = '\u0078';

Answer: CD

QUESTION 64
Given:
1. public enum Color { RED, YELLOW, GREEN }
2. enum Fruit {
3. Banana(Color.RED),

4. Apple(Color.YELLOW),
5. Kiwi(Color.GREEN);
6. private Color color;
7. Fruit(Color color) {
8. this.color = color;
9. }
10. }
11. class Test {
12. public void method() {
13. // insert code here
14. }
15. }
Which two, inserted independently at line 13, allow the code to compile? (Choose two.)

A. Fruit f = Banana;
B. Color red = Color,calues[0];
C. Fruit f= new Fruit (Color.Red);
D. Fruit☐ fruits = Fruit.values();
E. Fruit f = Fruit.Banana; switch (f) { }

Answer: DE

QUESTION 65
Which three are legal ways to declare and initialize an instance variable? (Choose three.)

A. static int x = 42;
B. public int x = 'c';
C. public int x = null;
D. public Integer f = null;
E. static integer f = new integer (42);
F. public integer f = new integer(42);

Answer: BDF

QUESTION 66
Given:
3. class TestVars {
4. int x, y;
5. char c;
6. // insert code here
7. }
Which three, inserted independently at line 6, allow the code to compile? (Choose three.)

A. int g = c;
B. int z = x/y;
C. int x = y++;
D. boolean t = y;
E. char d = (char) y;
F. boolean bool = "false";

Answer: ABE

QUESTION 67
Given:
3. int calc() {
4. long x = 40L;
5. int i = 30;
6. i = x
7. System.out.print("result is : " +i);
8. }
What is the result of calling calc()?

A. result is: 30
B. result is: 40
C. Compilation fails because of an error at line 6.
D. Compilation fails because of an error at line 4.

Answer: C

QUESTION 68
Given:
1. class Variables {
2. int i;
3. String s;
4. Object o;
5. String g = null;
6. Integer y;
7. char c;
8. }
Which four are object references? (Choose four.)

A. i
B. s
C. o
D. g
E. y
F. c

Answer: BCDE

QUESTION 69
Given:
5. // insert code here
6. public abstract void bark ();
7. }
8.
9. // insert code here
10. public void bark() {
11. System.out.println("woof");
12. }
13. }
Which, inserted at lines 5 and 9, allows the file to compile?

A. 5. class Dog {
9. public class Poodle extends Dog {
B. 5. abstract Dog {
9. public class Poodle extends Dog {
C. 5. abstract class Dog {
9. public class Poodle extends Dog {
D. 5. class Dog {
9. public class Poodle implements Dog {
E. 5. abstract Dog {
9. public class Poodle implements Dog {
F. 5. abstract class Dog {
9. public class Poodle implements Dog {

Answer: C

QUESTION 70
Given:
5. // insert code here
6. public void eat ();
7. }
8.
9. // insert code here
10. public void eat() {
11. System.out.pirntln("eating dinner");
12. }
13. }
Which, inserted at lines 5 and 9, allows the file to compile?

A. 5. class Animal {
9. public class Tiger extends Animal {
B. 5. class Animal {
9. public class Tiger subclasses Animal {

C. 5. class Animal {
9. public class Tiger implements Animal {
D. 5. interface Animal {
9. public class Tiger extends Animal {
E. 5. interface Animal {
9. public class Tiger subclasses Animal {
F. 5. interface Animal {
9. public class Tiger implements Animal {

Answer: F

QUESTION 71
Given:
11. public class Employee {
12. public Sting name;
13. // insert code here
14.
15. public String getName() {
16. retutn.name;
17. }
18.
19. public int getSalary() {
21. }
22. }
Which, when inserted at line 13, allows another class to get the value of the salary variable, but NOT change the value of the salary variable?

A. public int salary;
B. secure int salary;
C. hidden int salary;
D. private int salary;
E. readOnly int salary;

Answer: D

QUESTION 72
Given:
1. public abstract class Wow {
2. private int wow;
3. public Wow(int wow) {
4. this.wow = wow;
5. }
6. public void wow() { }
7. private void wowza() { }
8. }
Which is true about the class Wow?

A. It compiles without error.
B. It does NOT compile because an abstract class CANNOT have private methods.
C. It does NOT compile because an abstract class CANNOT have instance variables.
D. It does NOT compile because an abstract class must have at least one abstract method.
E. It does NOT compile because an abstract class must have a constructor with no arguments.

Answer: A

QUESTION 73
Given:
1. interface A { }
2. interface B { void b(); }
3. interface C { public void c(); }
4. abstract class D implements A,B,C { }
5. class E extends D {
6. void b() { }
7. public void c() { }
8. }
Which is true?

A. The code compiles without error.
B. Compilation fails due to an error in line 1.
C. Compilation fails due to an error in line 2.
D. Compilation fails due to an error in line 4.
E. Compilation fails due to an error in line 6.

Answer: E

QUESTION 74
Given:
1. interface Flyer {
2. void takeOff();
3. boolean land();
4. }
5. class Airplane implements Flyer {
6. public void takeOff() { /* some code */ }
7. // insert code here
8. return true;
9. }
10. }
Which, inserted at line 8, correctly implements the interface?

A. boolean land() {
B. public void land() {

C. boolean land(int i) {
D. public boolean land() {
E. protected boolean land() {

Answer: D

QUESTION 75
Given:
1. abstract class A {}
2. class B {}
3. interface C {}
4. interface D {}
5. // insert code here
Which, inserted at line 5, results in a compilation failure?

A. class E extends A {}
B. class E extends A, B {}
C. class E implements C {}
D. class E implements C, D {}
E. interface E extends C, D {}
F. class E extends B implements D {}

Answer: B

QUESTION 76
Given:
1. class X {
2. private Y y;
3. public X(Y y) {this.y = y;}
4. }
5. class Y {
6. Private X x;
7. public Y() { }
8. public Y(X x) { this.x = x;}
9. }
The instance variable y is intended to represent the composition relationship "X is composed of Y."
Which code correctly maintains this meaning?

A. X x1 = new X(new Y());
X x2 = new X(new Y());
B. Y yy = new Y();
X x1 = new X(yy);
X x2 = new X(yy);
C. X xx = new X(null);
Y y1 = new Y(xx);

Y y2 = new Y(xx);
D. Y y1 = new Y(new X(null));
Y. y2 = new Y (new X(null));

Answer: A

QUESTION 77
Given:
5. class Foo {
7. }
6. public int fooInt = 6;
8.
9. public class Bar {
10. static int myInt = 7;
11. public static void main(String [] args) {
12. // insert code here
13. System.out.println("myInt = " + myInt);
14. }
15. }
Which, inserted at line 12, creates the output myInt = 42?

A. myInt = myInt * fooint;
B. myInt = my Int * f.fooint;
C. Foo f = Foo ();
myInt = myInt * fooInt;
D. Foo f = new Foo ();
myInt = myInt * fooInt;
E. Foo f = new Foo;
myInt = myInt * f.fooInt;
F. Foo f = new Foo();
myInt = myint * f.fooInt;

Answer: F

QUESTION 78
Exhibit:
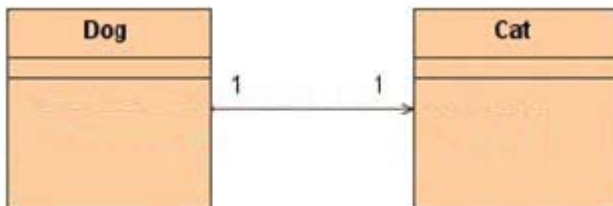
Which correctly implements the relationship shown in the diagram?

A. class Cat {
Dog d;

```
}
class Dog {
Cat c;
}
B. class Cat { }
class Dog {
cat c;
}
C. class Cat {
Dog d;
}
class Dog { }
D. class Cat { }
class Dog { }
```

Answer: A

QUESTION 79
Exhibit:
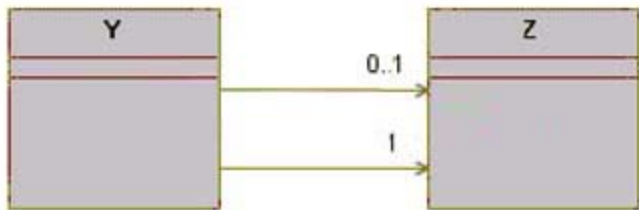
Which correctly implements the relationships shown in the diagram?

```
A. public class Y {
private Z []zland2;
public Y(Z[] z1and2) {
if (z1and2 == null || z1and2.length != 2) {
System.exit(1);//ERROR!
}
this.z1and2 = z1and2;
}
}
B. public class Z {
private Y[]y1and2;
public Z(Y[] y1and2) {
if (y1and2 == null || y1and2.length != 2) {
Sytem.exit(1);//ERROR!
}
this.y1and2 = y1and2;
}
}
C. public class Y {
```

```
private Z z1;
private Z z2;
public Y(Z z1) {
if (z1 == null) System.exit(1);//ERROR!
this.z1 = z1;
}
public Y(Z z1, Z z2) {
this(z1);
this.z2 = z2;
}
}
D. public class Z {
private Y y1;
private Y y2:
public Z(Y y1) {
if (y1==null) Sytem.exit(1);//ERROR!
this.y1=y1;
}
public Z(Y y1, Y y2) {
this(y1);
this.y2=y2;
}
}
```

Answer: C

QUESTION 80
Given:
13. class Stone {
14. String color = "white";
15. }
16.
17. public class ManyStones {
18. Stone□ stones = {new Stone(), new Stone(), new Stone()};
19. }
Which is true?

A. Compilation fails.
B. The class ManyStones has a color attribute.
C. The class Stone has a relationship to a ManyStones object.
D. The class ManyStones has a relationship to three Stone objects.
E. The class ManyStones CANNOT have access to multiple class Stone objects.

Answer: D

QUESTION 81
Which three can be included in an interface declaration? (Choose three.)

A. void showMessage();
B. public void showMessage();
C. static void showMessage();
D. private void showMessage();
E. abstract void showMessage();
F. proctected void showMessage();
G. public void showMessage() {
System.outprintln("Hello.");
}

Answer: ABE

QUESTION 82
Given:
interface Writable { }
interface Erasable { }
Which three are valid? (Choose three.)

A. public class Pencil extends Writable { /*...*/ }
B. public class Pencil implements Writable { /*...*/ }
C. public interface Pencil extends Writable { /*...*/ }
D. public interface Pencil implements Writable { /*...*/ }
E. public class Pencil implements Erasable,Writable { /*...*/ }

Answer: BCE

QUESTION 83
Which is a valid definition of an interface called Transportable given another valid interface, Movable?

A. class Movable extends Transportable { /*...*/ }
B. class Movable implements Transportable { /*...*/ }
C. interface Transportable extends Movable { /*...*/ }
D. interface Transportable implements Movable { /*...*/ }

Answer: C

QUESTION 84
Given:
1. interface Movable {
2. void move();
3. void stop();

4. }
Which is valid?

A. public class Bicycle implements Movable {
public void move() { /*...*/ }
}
B. public class Bicycle implements Movable {
void move() { /*...*/ }
void stop() { /*...*/ }
}
C. public class Bicycle extends Movable {
public void move() { /*...*/ }
public void stop() { /*...*/ }
}
D. public class Bicycle implements Movable {
public void move() { /*...*/ }
public void stop() { /*...*/ }
}

Answer: D

QUESTION 85
Given:
11. class Automobile {
12. public void drive() { System.out.print("go forward"); }
13. }
14. class Ferrari extends Automobile {
15. public void drive () { System.out.print("go fast"); }
16. }
17. public class Driver {
18. public static void main(String[] args) {
19. Automobile□ autos = { new Automonile(), new Ferrari() };
20.for (int x = 0; x <autoes.lenght; x++)
21. autos [x].drive();
22. }
23. }
What is the result?

A. go fast go fast
B. go fast go forward
C. go forward go fast
D. go forward go forward
E. Compilation fails due to an error on line 15.
F. Compilation fails due to an error on line 19.
G. Compilation fails due to an error on line 21.

Answer: C

QUESTION 86
Given:
1. interface Pet { }
2. class Dog implements Pet { }
3. class Beagle extends Dog { }
Which three are valid? (Choose three.)

A. Pet a = new Dog();
B. Pet b = new pet();
C. Dog f = new Pet();
D. Dog d = new Beagle();
E. Pet e = new Beagle();
F. Beagle c = new Dog();

Answer: ADE

QUESTION 87
Given:
3. interface Pet {
4. void eat();
5. }
6. class Dog implements Pet { public void eat() { } }
7. class Beagle extends Dog { public void eat() { } }
Which demonstrates the "program to an interface" principle?

A. class PetFood {
public void go(Pet p) {
p.eat();
}
}
B. class PetFood {
public void go(Dog d) {
d.eat();
}
}
C. class PetFood {
public void go(Beagle b) {
b.eat();
}
}
D. class PetFood extends Pet {
public void go(PetFood d) {

```
d.eat();
}
}
E. interface PetFood implements Pet {
public void go(Pet d) {
d.eat();
}
}
```

Answer: A

QUESTION 88
Which is a valid abstract class?

```
A. public abstract class Car {
protected void accelerate();
}
B. public interface Car {
protected abstract void accelerated();
}
C. public abstract class Car {
protected final void accelerated();
}
D. public abstract class Car {
protected abstract void accelerated();
}
E. public abstract class Car {
protected abstract void accelerate() {
// more code here
}
}
```

Answer: D

QUESTION 89
Exhibit:
```
1. interface Drinkable {
2. void drink();
3. }
1. class Tea implements Drinkable {
2. public void drink () { System.out.print("Drinking tea.."); }
3. }
1. class Coffee implements Drinkable {
```

2. public void drink () { system.out.print("Drinking coffee.."); }
3. }
1. public class TestDrink {
2. static boolean teaFlag;
3. public static Drinkable getDrinkable() {
4. if (teaFlag) {
5. return new Tea();
6. } else {
7. return new Coffee();
8. }
9. }
10. // more code that sets the value of the teaFlag boolean
11. }
1. public class DrinkableFactory {
2. static boolean teaFlag;
3. public static Drinkable getDrinkable(){
4. if (teaFlag) {
5. return nre Tea();
6. } else {
7. return new Coffee();
8. }
9. }
10. // more code that sets the value of the teaFlag boolean
11. }
Which, inserted at line 3 of the TestDrink class, demonstrates the "program to an interface" principle?

A. Tea aDrink = new Tea();
B. Drinkable aDrink = DrinkableFactory.getDrinkable();
C. Drinkable aDrink = new Drinkable ();
D. Tea aDrink = new Drinkable();

Answer: B

QUESTION 90
Given:
6. int time = 12;
7. if (time < 12) {
8. System.out.print("Good morning");
9. }
10. // insert code here
12. }
11. System.out.println("Good afternoon");
13. else if (time >= 18) {
14. System.out.println("Good evening");
15. }

Which three, inserted independently at line 10, produce the
output Good afternoon? (Choose three.)

A. if (time >= 12 && time < 18) {
B. else if (time < 12 || time > 18) {
C. else if (time > 12 || time <= 18) {
D. else if (time > 12 && time >= 18) {
E. else if (time >= 12 || time < 18) {

Answer: ACE

QUESTION 91
Given:
3. int num = 0, count;
4. while (num < 3) {
5. num ++;
6. // insert code here
7. System.out.println("num = " + num + | : count = " + count);
8. }
9. }
Which, inserted at line 6, produces the following output?
num = 1 : count = 1
num = 1 : count = 2
num = 2 : count = 1
num = 2 : count = 2
num = 3 : count = 1
num = 3 : count = 2

A. while (++count < 3) {
B. while (++count < 2) {
C. for (count = 1 ; count < 3 ; count ++) {
D. for (count = 0 ; count < 3 ; count ++) {
E. for (count = 1 ; count < 2 ; count ++) {

Answer: C

QUESTION 92
Given:
1. class Test {
2. public static void main(String args[]) {
3. String str = "Hello!";
4. String str2 = "Bye!";
5. srt += str 2;
6. str -= str 2;
7.
8. if (str == str2) {

9. System.out.println("str = str2");
10. } else {
11. System.out.println(str = str2");
12. }
13. }
14. }
What is the result?

A. str = str2
B. str != str2
C. Compilation fails.
D. The code runs with no output.

Answer: C

QUESTION 93
Given:
1. class Test {
2. public static void main(String args[]) {
3. int num;
4. num = 10
5. calc(num);
6. System.out.println("num="+num);
7. }
8.
9. static void calc(int num) {
10. num += 100;
11. }
12. }
What is the result?

A. num = 10
B. num = 110
C. num = 100
D. Compilation fails because of an error at line 3.
E. Compilation fails because of an error at line 9.

Answer: A

QUESTION 94
Given:
4. class Example {
5. int x = 50;
6. int y = 100;
7. public static void main(String args[]) {
8. int x = 0, y =10;

9. Example ex = new Example ();
10. while (x < 3) {
11. x++;y-;
12. }
13. System.out.println("x = " + x + ", y = " + y);
14. }
15. }
What is the result?

A. x = 3 , y = 7
B. x = 53 , y = 97
C. Compilation fails because of an error at line 8.
D. Compilation fails because of an error at line 9.
E. Compilation fails because of an error at line 10.
F. Compilation fails because of an error at line 11.

Answer: A

QUESTION 95
You need to create a class Foo that will record the number of times the go() method
is invoked on a particular instance of the class.
Which solution correctly implements this goal?

A. Declare a static variable invokeCount for the class Foo, and increment the variable
within the go() method.
B. Declare an instance variable invokeCount for the class Foo, and increment the variable
within the go() method.
C. Declare a local variable invokeCount inside the go() method, and increment the
variable within the go() method.
D. Declare a method parameter invokeCount as the argument to the go() method, and
increment the variable within the go() method.

Answer: B

QUESTION 96
You need to create a class that maintains a customer's account balance. The class
must allow both credits (deposits) and debits (withdrawals) to the account.
Which class correctly implements this functionality?

A. public class Account {
double balance;
public void debit(double amount) {
amount = balance - amount;
}
public void credit(double amount) {
amount = balance + amount;

```
}
}
B. public class Account {
double balance;
public void debit(double amount) {
balance = balance - amount;
}
public void credit(double amount) {
balance = balance + amount;
}
}
C. public class Account {
double balance;
public void debit() {
double debit;
balance = balance - debit;
}
public void credit() {
double credit
balance = balance + credit;
}
}
D. public class Account {
public void debit(double amount) {
double balance;
balance = balance - amount;
}
public void credit(double amount) {
double balance;
balance = balance + amount;
}
}
E. public class Account {
double balance;
public void debit(double balance) {
balance = balance - amount;
}
public void credit(double balance) {
balance = balance + amount;
}
}
```

Answer: B

QUESTION 97
You need an algorithm that must:

* Iterate through an array of primitive integers
* Print the value of each array element in index order
* If the value of the element is equal to 10, print the value of the element, and then terminate the iteration
Which method correctly implements the algorithm?

A. public static void foo(int[] list) {
for(int i:list) {
System.out.println(i);
if (i == 10) break;
}
}
B. public static void foo(int[] list) {
while(list.length > 0) {
System.out.println(i);
if (i == 10) break;
}
}
C. public static void foo(int[] list) {
for each(int i in list) {
System.out.println(i);
if (i == 10) terminate;
}
}
D. public static void foo(int[] list) {
for (int i=0l i <list.lengthl i++){
System.out.println(i);
if (i == 10) break.
}
}
E. public static void foo(int[] list) {
for(int i=0; i <list.length; i++) {
System.out.println(i);
if (i == 10) continue;
}
}

Answer: A

QUESTION 98
Given:
2. class Test {
3. public static void main(String args[]) {
4. for (int i = 1; i <5; i++) {
5. if (i == 2) {
6. continue;

7. }
8. System.out.print("i = " + i);
9. }
10. }
11. }
What is the result?

A. i = 1
B. Compilation fails.
C. i = 1 i = 3 i = 4
D. i = 1 i = 2 i = 4
E. The code runs with no output.
F. i = 1 i = 3 i = 4 i = 5
G. i = 1 i = 2 i = 4 i = 5

Answer: C

QUESTION 99
You need an algorithm that must:
* Print the characters of a String, in index order
* Skip all instances of the character 'a' that appear in the String
Given:
2. public void foo (String s) {
3. // insert code here
4. }
Which two, inserted independently at line 3, correctly implement the algorithm?
(Choose two.)

A. for(char c:s) {
if (c != 'a') System.out.print(c);
}
B. for (int i =0; i <s.length(); i++){
if (s.charAt(i) ! ='a') System.out.print(i);
}
C. int i=0;
while (i < s.length()) {
if (s.charAt(i) != 'a') {
System.out.print(i);
}
i++;
}
D. for(int i = 0; i <s.length(); i++) {
char c = s.charAt(i);
if (c !='a') system.out.print(c);
}
E. int 1= 0;

```
while (i < s.length()) {
if (s.charAt(i) != 'a') {
System.out.print(s.charAt(i));
}
i++;
}
```

Answer: DE

QUESTION 100
Given:
1. class Test {
2. public static void main(String args[]) {
3. int i=1;
4. while (i-- > 1) {
5. System.out.println("i : "+i);
6. }
7. }
8. }
What is the result?

A. i : 1
B. i : 0
C. i : -1
D. No output is produced.
E. Compilation fails.

Answer: D

QUESTION 101
Given:
1. class Test {
2. public static void main(String args[]) {
3. int num 1 = 10, num2 = 20, result;
4. result = calc(num1,num2);
5. System.out.println(result);
6. }
7.
8. // insert code here
9. }
Which, inserted at line 8, produces the output 30?

A. static int calc(int n1, int n2) { return; }
B. public int calc (int n1 , int n2) { retutn; }
C. static void calc (n1, n2) { return (n1 + n2); }
D. static int calc(int n1, n2) { return n1 , n2; };

E. static int calc(int n1, int n2) { return n1 + n2l; }
F. public int calc (int n1, int n2) { return n1 + n2; }

Answer: E

QUESTION 102
Given:
1. public class Foo {
2. int size;
3. public static void main(String[] args) {
4. Foo f= new Foo();
5. f.setSize(5);
6.Foo g = f.go(f);
7. System.out.print(f.size+ " : " +g.size);
8. }
9. void setSize(int s) {
10. size = s;
11. }
12. public Foo go(Foo g) {
13. g.setSize(2);
14. return g;
15. }
16. }
What is the result?

A. 5 : 5
B. 2 : 5
C. 2 : 2
D. Compilation fails.

Answer: C

QUESTION 103
Given:
1. public class Bar {
2. int size;
3. public static void main(String[] args) {
4. Bar b = new Bar();
5. b.size = 27;
6. int i = b.go(b.size);
7. System.out.print(b.size " : " + i);
8. }
9. public int go(int size) {
10. size++;
11. return size;
12. }

13. }
What is the result?

A. 27 : 27
B. 28 : 27
C. 27 : 28
D. 28 : 28
E. Compilation fails.

Answer: C

QUESTION 104
Given:
1. class Test2 {
2. static String setMessage(String str) {|
3. return str + " How are your doing?";
4. }
5.
6. public static void main(String[] args) {
7. String str = "Hello! ";
8. str = setMessage(str);
9. System.out.println("str : " + str);
10. }
11. }
What is the result?

A. str : Hello!
B. str : How are you doing?
C. str : Hello! How are you doing?
D. Compilation fails because of an error at line 2.
E. Compilation fails because of an error at line 3.
F. Compilation fails because of an error at line 7.
G. Compilation fails because of an error at line 8.

Answer: C

QUESTION 105
Given:
4. int n1 = 22, n2 = 67, n3 = 0, n4 = 47, n5 = 17, n6 = 50;
5. boolean b = true;
Which three evaluate to true? (Choose three.)

A. (n2 > n6) || b
B. (!b) && (n1 <= n4)
C. (n2 < n6) && (n4 >= n1)
D. (n3 < n5) || (n2 <= n1)

E. !(n1 < n3) && (n5 != n4)

Answer: ADE

QUESTION 106
Given:
1. class Test {
2. public static void main(String[] args) {
3. int num = 1;
4. for (num = 0; num <3; ++num){
5. num *=2;
6. }
7. System.out.println("num = " + (num++));
8. }
9. }
What is the result?

A. num = 5
B. num = 4
C. num = 3
D. num = 2
E. Compilation fails.

Answer: C

QUESTION 107
Given:
14. class Dog {
15. String name;
16. public static void main(String [] args) {
17. Dog d1 = new Dog();
18. Dog d2 = new Dog();
19. d1.name = "Aiko";
20. d2.name = "Aiko";
21. if(d1 == d2) System.out.print(" == ");
22. if (d1.equals(d2)) System.out.println("dot =");
23. }
24. }
What is the result?

A. ==
B. dot =
C. == dot =
D. Compilation fails.
E. No output is produced.

F. The result is unpredictable.

Answer: E

QUESTION 108
Given:
1. class Test {
2. public static void main(String args[]) {
3. String str = new String("Welcome");
4. // insert code here
5. }
6. }
Which, inserted at line 4, produces the output true?

A. System.out println(str.trim());
B. System.out println(str.index.Of(1));
C. System.out println(str.indexOf("W"));
D. System.out println(str.startsWith("W"));
E. System.out println(str.startsWith('W'));

Answer: D

QUESTION 109
Given:
12. String s = "abcdefgabc";
13. car c = s.charAt(2);
14.
15. if (c == 'c')
16. s = s.reaplace('c', 'X');
17. else if (c == 'b')
18. s = s.replace('b','O');
19. else
20. s = s.replace('c','O');
21. System.out.println(s);
What is the result?

A. abOdefgabc
B. abXdefgabc
C. aOcdefgabc
D. aOcdefgaOc
E. abOdefgabO
F. abXdefgabX
G. Compilation fails.

Answer: F

QUESTION 110
Given:
1. class Test {
2. public static void main(String[] args) {
3. String str = "Hello";
4. str = str.replace ("Bye");
5. System.out.println("str : " + str);
6. }
7. }
What is the result?

A. str : Bye
B. str : Byelo
C. str : HeBye
D. str : Hello
E. Compilation fails.
F. str : HelloBye
G. The code runs with no output.

Answer: E

QUESTION 111
Given:
18. string s = " abcdcba ";
19. int x = 2;
20. s = s.trim();
21. if (s.length() < 8) {
23. x = s.index.Of('c',3);
23. }
24. System.out.println("x = " + x);
What is the result?

A. x = 2
B. x = 3
C. x = 4
D. x = 5
E. x = 6

Answer: C

QUESTION 112
Why should package names in Java be unique?

A. to provide the Internet location from which the package can be downloaded
B. to programatically declare specific ownership of classes in the package

C. to allow classes in the package to be accessed by classes outside of that package
D. to avoid class name conflicts if two development groups use the same package and class names

Answer: D

QUESTION 113
Which object-oriented principle is supported by the use of Java packages?

A. inheritance
B. encapsulation
C. polymorphism
D. dynamic typing

Answer: B

QUESTION 114
Which two correctly import the Map class in the java.util package? (Choose two.)

A. import Map;
B. import *.Map;
C. import java.util;
D. import java.util.*;
E. package java.util.*;
F. import java.util.Map;
G. package java.util.Map;

Answer: DF

QUESTION 115
Which correctly declares a class Test in package com.example?

A. public class com.example.Test {
// some code here
}
B. import com.example;
public class Test {
// some code here
}
C. package com.example;
public class Test {
// some code here
}
D. package com.example {
class Test {
// some code here

}}

Answer: C

QUESTION 116
Which is valid?

A. package com.example;
class Test { }
import java.util.*;
B. import java.util.*;
package com.example;
class Test { }
C. package com.example;
import java.util;
import java.*;
class Test { }
D. package com.example;
import java.util.*;
import java.io.*;
class Test { }
E. package com.example;
package com.sun;
import java.util.*;
class Test { }

Answer: D

QUESTION 117
Which two are true? (Choose two.)

A. A source file can have from zero to many import statements.
B. An import statement is associated with only one class in a source file.
C. If a source file has one import statement, it must be preceded by a package statement.
D. A single import statement can be used to simplify access to several classes in the Java API.
E. A single import statement can be used to simplify access to several packages in the Java API.

Answer: AD

QUESTION 118
Given two complete source files:
1. /* Example.java */
2. package pack;
3. public class Example { }
1. /* Test.java */
2. // insert code here

3. public class Test {
4. public static void main(String args[]) {
5. Example obj = new Example();
6. }
7. }
Which, inserted at line 2 in Test.java, allows the code to compile?

A. import pack;
B. import pack.Test;
C. import pack.Example;
D. The code compiles with no changes.

Answer: C

QUESTION 119
Given:
1.
2. class FortyTwo {
3. public static void main(String[] args) {
4. Integer i = new Integer(42);
5. }
6. }
Which two allow the code to compile? (Choose two.)

A. Add import java.lang; at line 1.
B. Make no changes.
C. Add import lang.Integer; at line 1.
D. Add package java.lang at line 1.
E. Add import java.lang.integer; at line 1.
F. Add package java.land.Intger; at line 1.

Answer: BE

QUESTION 120
Which two classes make valid use of the ArrayList class in package java.util?
(Choose two.)

A. import java.util;
public class Test {
public static void main(String args[]) {
ArrayList list = new ArrayList();
}
}
B. import java.util.ArrayList;
public class Test {

```
public static void main(String args[]) {
ArrayList list = new ArrayList();
}
}
C. package java.util;
public class Test {
public static void main(String args[]) {
ArrayList list = new ArrayList();
}
}
D. package java.util.ArrayList;
public class Test {
public static void main(String args[]) {
ArrayList list = new ArrayList();
}
}
E. public class Test import java.util.ArrayList {
public static void main(String args[]) {
ArrayList list = new ArrayList();
}
}
F. public class Test {
public static void main(String args[]) {
java.util.ArrayList list = new java.util.ArrayList();
}
}
```

Answer: BF

QUESTION 121
Which option for javac sets the destination directory for class files?

A. -d <directory>
B. -dest <directory>
C. -output <directory>
D. -classes <directory>
E. -directory <directory>
F. -classpath <directory>

Answer: A

QUESTION 122
How can the two class paths be set for the javac compiler? (Choose two.)

A. using the BIN environment variable

B. using the PATH environment variable
C. using the -classes option to javac
D. using the -classpath option to java
E. using the -classpath option to javac
F. using the -sourcepath option to javac
G. using the CLASSPATH environment variable

Answer: EG

QUESTION 123
Given that TestClass relies on classes in the someJar.jar file in /some/dir, which
javac invocation will correctly compile TestClass in the current directory?

A. javac ./*.java
B. javac -classpath /some/dir/*.jar *.java
C. javac -classpath /some/dir/someJar.jar ./TestClass
D. javac -classpath /some/dir/someJar.jar ./TestClass.java
E. javac -classpath someJar.jar -sourcepath . TestClass.java

Answer: D

QUESTION 124
You are in a directory containing a file named StringTest.java.
Which three are valid? (Choose three.)

A. javac -v
B. java -version
C. javac -version
D. javac -v StringTest.java
E. javac -version StringTest.java

Answer: BCE

QUESTION 125
Given:
* Directory structure:
projects
|__src
| |__foo
|
|__classes
* A file Clock.java in the /projects/src/foo directory
* The working directory /projects/src
* The class Clock in package foo
Which command-line compiler invocation will create a foo directory within the
classes directory, and then place the compiled Clock.class within that directory?

A. javac -D foo/Clock.java
B. javac -d ../classes foo/Clock.java
C. javac -d ../classes/foo/Clock.java
D. javac -d ../classes/foo foo.Clock.java
E. javac -directory ../classes/foo foo/Clock.java

Answer: B

QUESTION 126
Given:
1. public class Foo {
2. public static void main() {
3. System.out.println("Hello.");
4. }
5. }
Which is true?

A. Compilation fails.
B. An exception occurs at runtime when class Foo is invoked with the command line java Foo.
C. The class Foo will run successfully when invoked with the command line
java Foo, and will print "Hello."
D. The class Foo will run successfully when invoked with the command line:
java Foo, but will produce no output.

Answer: B

QUESTION 127
Which two are true about the java and javac commands? (Choose two.)

A. java -version will print the version of the JVM.
B. java -classpath will print the classpath used by the JVM.
C. javac -D lets you specify the destination directory for the compiled class files.
D. javac -version will print the OS version for the machine on which the JDK is installed.
E. java -classpath lets you specify one or more directories to be used by the JVM to
locate class files.

Answer: AE

QUESTION 128
Which two packages are used to create GUI programs in J2SE? (Choose two.)

A. java.io
B. java.net
C. java.awt
D. java.util

E. javax.swing

Answer: CE

QUESTION 129
Which package contains classes used to create data collections, such as maps or queues?

A. java.io
B. java.net
C. java.awt
D. java.util
E. java.lang
F. javax.swing

Answer: D

QUESTION 130
Which package contains the classes used to create a socket?

A. java.io
B. java.net
C. java.awt
D. java.util
E. java.lang
F. javax.swing

Answer: B

QUESTION 131
Which two are true? (Choose two.)

A. Classes in the java.awt package are used to paint objects on canvases.
B. Classes in the java.awt package inherit many behaviors from classes in the java.swing package.
C. Classes in the javax.swing package provide support for complex GUI components, such as tables and trees.
D. Classes in the java.awt package are designed to provide lightweight components that work the same across different platforms.

Answer: AC

QUESTION 132
Which package contains classes to read from, and write to, files?

A. java.io
B. java.net

C. java.util
D. java.lang
E. javax.file
F. javax.swing
G. java.stream

Answer: A

QUESTION 133
Which two are true about javax.swing? (Choose two.)

A. It is used to create MIDlets.
B. It includes classes for creating buttons and panels.
C. It uses the native GUI components of each platform.
D. It is used to create applications that have the same user interface on different platforms.

Answer: BD

QUESTION 134
Which three classes are part of the java.io package? (Choose three.)

A. URL
B. File
C. String
D. Reader
E. Socket
F. BufferedWriter

Answer: BDF

QUESTION 135
Which statement about java.util is incorrect?

A. It contains HashSet and Vector.
B. It contains the collections framework.
C. It contains classes used to manipulate dates.
D. It contains classes necessary to implement networking applications.

Answer: D

QUESTION 136
Which two are true? (Choose two.)

A. J2EE includes the MIDP API.
B. J2EE application developers need J2SE.
C. J2EE includes servlet APIs and EJB APIs.

D. J2EE applications depend on web servers.
E. J2EE runs on consumer and embedded devices.

Answer: BC

QUESTION 137
What is the correct name for J2EE?

A. Java 2 Platform, Enterprise Edition
B. Java 2 Package, Enterprise Edition
C. Java 2 Platform, Enterprise Environment
D. Java 2 Package, Enterprise Environment

Answer: A

QUESTION 138
A Java programmer wants to develop a browser-based multitier application for a large bank.
Which Java edition (or editions) should be used to develop this system?

A. only J2SE
B. only J2EE
C. only J2ME
D. J2SE and J2EE
E. J2SE and J2ME
F. J2EE and J2ME

Answer: D

QUESTION 139
A Java programmer wants to develop a stand-alone, desktop, word processing application.
Which Java edition (or editions) are appropriate to develop this application?

A. only J2SE
B. only J2EE
C. only J2ME
D. J2SE and J2EE
E. J2SE and J2ME
F. J2EE and J2ME

Answer: A

QUESTION 140
Which is true about Java RMI?

A. RMI uses the SOAP protocol.
B. rmiregistry provides a lookup service.

C. An HTTP server is necessary to use RMI.
D. RMI is the acronym for Remote Method Interchange.

Answer: B

QUESTION 141
Which is true?

A. A J2SE program can create no more than 10 concurrent threads.
B. The Java threading model provides equal processor time to all threads.
C. All threads created by a given Java program share the same invocation stack.
D. Threading allows GUI applications to perform lengthy calculations and respond to user events at the same time.

Answer: D

QUESTION 142
Which is an advantage of RMI over sockets?

A. Sockets CANNOT transmit objects.
B. RMI transmission speed is faster than sockets.
C. Interactive communication is NOT possible using sockets.
D. It is NOT necessary to implement an application-level communication protocol to use RMI.

Answer: D

QUESTION 143
Which statement about threading in Java is false?

A. A thread is a special type of method.
B. The synchronized keyword is used to lock objects.
C. A thread whose execution has completed is no longer runnable.
D. Threads waiting to be executed are generally chosen for execution based on priority.

Answer: A

QUESTION 144
Which is true about RMI?

A. RMI is used to create thin web clients.
B. RMI allows objects to be sent from one computer to another.
C. RMI is the Java API used for executing queries on a database.
D. RMI is used to develop applications for wireless mobile devices.
E. RMI is the transport protocol used by web servers and browsers.

Answer: B

QUESTION 145
Which is true?

A. You must use JDBC to connect an RDBMS to a Java application.
B. JDBC is designed to provide a bridge between servlets and EJB technology.
C. Classes in the JDBC API include implementations of JDBC drivers.
D. The JDBC API is located within the java.sql and javax.sql packages.

Answer: D

QUESTION 146
Which two are true? (Choose two.)

A. SQL commands cannot be contained in servlets.
B. SQL is a web services technology used to parse large XML files.
C. SQL technology is used to access JMS queues from within EJB technology.
D. SQL commands can be written in applications that use NO Java technologies.
E. SQL allows you to modify multiple rows in a table with a single command.

Answer: DE

QUESTION 147
Which Java technology provides a standard API for relational database access?

A. JSP
B. JMS
C. JDC
D. JNDI
E. JDBC

Answer: E

QUESTION 148
What is the definition of the acronym SQL?

A. Special Query Language
B. System Query Language
C. Special Queue Language
D. System Queue Language
E. Structured Query Language
F. Structured Queue Language

Answer: E

QUESTION 149
Which two are characteristics of an RDBMS? (Choose two.)

A. J2EE provides a cross-platform RDBMS.
B. An RDBMS represents data using two-dimensional tables.
C. An RDBMS represents data using three-dimensional tables.
D. Business-tier applications use session beans to represent rows in an RDBMS.
E. Java technologies provide capabilities for connecting a legacy RDBMS to a web application.

Answer: BE

QUESTION 150
Which is true?

A. All JDBC drivers are pure Java.
B. The JDBC API is included in J2SE.
C. The JDBC API is an extension of the ODBC API.
D. JDBC is used to connect to MOM (Message-Oriented Middleware) products.

Answer: B

QUESTION 151
Which statement is true?

A. The JMS API is located in the java.jms package.
B. JMS provides interfaces to naming and directory services.
C. JMS enables an application to provide flexible, asynchronous data exchange.
D. JMS enables an application to provide tightly coupled, distributed communication.

Answer: C

QUESTION 152
What is the purpose of JNDI?

A. to parse XML documents
B. to access native code from a Java application
C. to register Java Web Start applications with a web server
D. to access various directory services using a single interface

Answer: D

QUESTION 153
Which three about JMS are true? (Choose three.)

A. JMS is the acronym for Java Mail Service.
B. JMS supports an event-oriented approach to message reception.

C. JMS supports both synchronous and asynchronous message passing.
D. JMS does NOT depend on MOM (Messaging-Oriented Middleware) products.
E. JMS provides a common way for Java programs to access an enterprise messaging system's messages.

Answer: BCE

QUESTION 154
Which two are features of JNDI? (Choose two.)

A. an interface to search for objects using attributes
B. connectivity to databases and other tabular data sources
C. a defined common set of messaging concepts and programming strategies
D. an interface to store and retrieve named Java objects of any type

Answer: AD

QUESTION 155
Which Java technology provides a unified interface to multiple naming and directory services?

A. JNI
B. EJB
C. JNDI
D. JDBC
E. JavaMail

Answer: C

QUESTION 156
Which two are true about HTML? (Choose two.)

A. It can be generated dynamically by servlets.
B. It is an object-oriented programming language.
C. It is used by the browser to display the client user interface.
D. It contains APIs that are used to access data in an RDBMS.

Answer: AC

QUESTION 157
Which two are true about JavaScript and HTML? (Choose two.)

A. HTML is displayed in a client-side environment.
B. JavaScript runs only in a server-side environment.
C. JavaScript must be deployed in a separate file from HTML.
D. JavaScript has a function that can open a new browser window.

Answer: AD

QUESTION 158
Which two are true? (Choose two.)

A. XML is an extension of HTML.
B. HTML can be used only for displaying images.
C. HTML is an acronym for HyperText Markup Language.
D. HTML is the language used to publish web pages on the World Wide Web.

Answer: CD

QUESTION 159
Which two are true about HTML? (Choose two.)

A. HTML is an object-oriented programming language.
B. HTML documents CANNOT be browsed by a text editor.
C. HTML can set up hypertext links between documents.
D. HTML uses tags to structure text into headings, paragraphs, and lists.

Answer: CD

QUESTION 160
Which two are true? (Choose two.)

A. JavaScript is the standard J2SE scripting language.
B. JavaScript includes built-in libraries for invoking methods on Enterprise JavaBeans.
C. JavaScript can be used to create a rollover image effect in a web page.
D. JavaScript can only be used in browsers that have the Java Plug-in installed.
E. JavaScript can be used to validate form input values before they are sent to the server.

Answer: CE

QUESTION 161
Which two are true about J2ME? (Choose two.)

A. It provides a built-in database.
B. It is the foundation platform for J2SE.
C. It can be used to create Swing applications.
D. It can be used to create applications that run on mobile phones.

Answer: AD

QUESTION 162
Which two are true? (Choose two.)

A. MIDP does NOT have an API to support audio.
B. MIDP does NOT have an API to support text messaging.
C. A MIDP device must support wireless downloading of software.
D. J2ME can be used to make network-connected household appliances.

Answer: CD

QUESTION 163
Which is true about MIDlets?

A. The only API used to create MIDlets is the MIDP API.
B. MIDlet devices are not required to allow applications to be uninstalled.
C. Devices that support MIDlets must allow the MIDlets to access the device's low-level functions.
D. Devices that run MIDlets must provide software that manages wireless downloading of applications.

Answer: D

QUESTION 164
You have developed a MIDlet that runs on a Java-enabled Personal Digital
Assistant (PDA) device. Now, your employer has asked you to port the MIDlet to
run on other Java platforms.
Which is true?

A. The MIDlet can run within a standard web browser.
B. The MIDlet is guaranteed to run correctly under J2SE.
C. The MIDlet is 100% portable across all J2ME devices.
D. The MIDlet is NOT guaranteed to run on a Java technology-enabled phone.

Answer: D

QUESTION 165
Which is true?

A. Any J2ME application can be run on any J2ME device.
B. Only a single J2ME configuration, CLDC, has been created.
C. J2ME can be customized using profiles to add functionality to specific devices.
D. J2ME applications can run on mobile devices without a J2ME runtime environment.

Answer: C

QUESTION 166
Which is an advantage of applets over HTML/JavaScript clients?

A. Applets are more widely supported by browsers.
B. Applets are downloaded more quickly to the client.

C. Applets can use a wider variety of UI components.
D. In their default state, applets have access to the client's computer.

Answer: C

QUESTION 167
Which is a requirement to use applets in a web browser?

A. A web container must be installed at the server.
B. The Java Plug-in must be installed on the server.
C. The Java compiler must be installed on the client.
D. The Java Runtime Environment must be installed on the client.

Answer: D

QUESTION 168
Which two, about a client's environment, can be determined by an applet? (Choose two.)

A. type of web server
B. type of web browser
C. version of Java Plug-in
D. type of web container

Answer: BC

QUESTION 169
Which environment has the highest probability of properly supporting an applet?

A. J2EE server environment
B. mobile environments using telephone handsets
C. intranet environment where client components are standardized
D. Internet environment where client components are not standardized

Answer: C

QUESTION 170
Which two are characteristics of applets? (Choose two.)

A. Applet security is provided by Java's sandbox security model.
B. Applets can be developed quickly using HTML/JavaScript tags.
C. Because code is downloaded at the time of execution, applets are easy to distribute.
D. Because it executes on the web server, the client does NOT incur the processing overhead.

Answer: AC

QUESTION 171
Which is NOT a characteristic of Swing?

A. Swing components are available in all web browsers.
B. Swing components can display a platform-specific "look and feel."
C. Swing components can display a platform-independent "look and feel."
D. Swing components can be used to develop J2EE client applications.

Answer: A

QUESTION 172
Which two are true about the Swing API? (Choose two.)

A. Swing can be used without AWT.
B. Swing provides more GUI components than AWT.
C. Swing is considered more "lightweight" than AWT.
D. Swing classes are located in the java.awt package.

Answer: BC

QUESTION 173
What is true about JavaScript clients?

A. They support all standard J2SE syntax.
B. They must be hosted by J2EE containers.
C. They CANNOT write to the client's hard drive.
D. They require Java Web Start technology to be deployed.

Answer: C

QUESTION 174
Which type of GUI component is NOT included in Swing?

A. Dialog Box
B. Tree Table
C. File Chooser
D. Color Chooser

Answer: B

QUESTION 175
Which Java technology provides a standard API for a publish-subscribe messaging model?

A. JSP
B. JMS

C. JNDI
D. UDDI
E. JAX-RPC

Answer: B

QUESTION 176
Which two are provided by the JNDI API? (Choose two.)

A. an interface to query directory services using SQL
B. a service-provider interface to attach providers of directory services
C. an application-level interface used by the application components to access naming services
D. a framework for handling data in different MIME types, originating in different formats and locations

Answer: BC

QUESTION 177
Which Java technology uses standard mappings between Java classes and XML to support web service calls using the SOAP protocol?

A. EJB
B. JSP
C. JAXB
D. JAXM
E. JAX-RPC
F. JavaMail

Answer: E

QUESTION 178
A Java developer needs to be able to send email, containing XML attachments, using SMTP.
Which J2EE technology provides this capability?

A. JMail
B. XMail
C. JAXB
D. servlets
E. JavaMail

Answer: E

QUESTION 179
A J2EE programmer is developing components to encapsulate the business logic in

a multitier web-based application.
Which J2EE technology is appropriate?

A. EJB
B. JMS
C. JNDI
D. servlets
E. JAX-RPC

Answer: A

QUESTION 180
Which two are NOT Enterprise Beans? (Choose two.)

A. JavaBeans
B. entity beans
C. session beans
D. business beans
E. message-driven beans

Answer: AD

QUESTION 181
Which two technologies are primarily focused on developing Web Services? (Choose two.)

A. JSP
B. UDDI
C. JDBC
D. WSDL
E. RDBMS

Answer: BD

QUESTION 182
Which two technologies are used for processing HTTP requests and mapping those
requests to business objects? (Choose two.)

A. EJB
B. JMS
C. servlets
D. web services

Answer: CD

QUESTION 183
Which protocol provides an XML-based, platform-independent means of

exchanging structured information?

A. JSP
B. JNDI
C. UDDI
D. SOAP
E. WSDL

Answer: D

QUESTION 184
Which J2EE technology is used to generate dynamic content for web-based applications?

A. JMS
B. JSP
C. JNDI
D. SOAP
E. JAX-RPC

Answer: B

QUESTION 185
Which two are benefits of JSP technology? (Choose two.)

A. portability to any HTTP server
B. simplified Swing GUI development
C. separation of dynamic and static content
D. separation of servlet developer and JSP author roles

Answer: CD

QUESTION 186
What is the role of a JSP author?

A. to write Java code to implement business logic
B. to write Java code that interacts with server-side objects
C. to put static data and dynamic content together to create dynamic web pages
D. to coordinate the interaction between all the pages in a complex dynamic web-based application

Answer: C

QUESTION 187
Which technology is used to develop components that interact with server-side
objects in a web-based application?

A. XML

B. HTML
C. servlets
D. JavaScript

Answer: C

QUESTION 188
Which two are true? (Choose two.)

A. The servlet API is included in J2SE.
B. A servlet is a Java class that executes within a web browser.
C. The javax.servlet package contains part of the servlet API.
D. A servlet is a Java class that executes within a web container.
E. A servlet is an open source framework developed for creating web applications.

Answer: CD

QUESTION 189
Which two are benefits of servlets? (Choose two.)

A. They represent data in a persistent store.
B. Their lifecycles are managed by the container.
C. They allow you to embed Java code in HTML files.
D. They can produce dynamic content in response to web client requests.

Answer: BD

QUESTION 190
Which is an appropriate description of session beans?

A. They are used to store persistent data.
B. They are used to share data among clients.
C. They are used to represent data in an RDBMS.
D. They are used to implement business processes.

Answer: D

QUESTION 191
Which type of J2EE component is used to store business data persistently?

A. JavaServer Pages
B. JavaBeans
C. entity beans
D. stateful session beans
E. stateless session beans

Answer: C

QUESTION 192
A developer must implement a "shopping cart" object for a web-based application.
The shopping cart must be able to maintain the state of the cart, but the state is not
stored persistently.
Which J2EE technology is suited to this goal?

A. JMS
B. JAX-RPC
C. entity beans
D. stateful session beans
E. stateless session beans

Answer: D

QUESTION 193
Which three are provided by the EJB tier in a multitier J2EE application? (Choose three.)

A. security
B. XML parsing
C. concurrency control
D. transaction management
E. dynamic content generation

Answer: ACD

QUESTION 194
A business-tier service is being developed that will provide credit card validation.
The service is not associated with a specific client, but is available to all clients. The
service also has to be as efficient as possible.
Which J2EE component matches these needs?

A. JNDI
B. servlet
C. entity bean
D. stateful session bean
E. stateless session bean

Answer: E

QUESTION 195
Which is NOT a correct statement about entity beans?

A. They are used to store persistent data.

B. They are persisted using BMP and CMP.
C. They are used to share data among clients.
D. They are used to implement business processes.
E. They are used to represent data stored in an RDBMS.

Answer: D

QUESTION 196
Which two are true about stateless session beans? (Choose two.)

A. They CANNOT hold client state.
B. They implement the JMS API.
C. They are used to implement business logic.
D. They are used to represent data stored in an RDBMS.

Answer: AC

QUESTION 197
Which two are associated with the web tier in a multitier web-based application?
(Choose two.)

A. process user input
B. store state persistently
C. implement business logic
D. generate dynamic content
E. integrate with database systems

Answer: AD

QUESTION 198
Which three are responsibilities of the business tier in a multitier web-based
application with web, business, and EIS tiers? (Choose three.)

A. to provide business logic
B. to participate in transactions
C. to generate dynamic content
D. to integrate with legacy applications
E. to process requests from web-based clients

Answer: ABD

QUESTION 199
Which two are advantages of using J2EE server-side technologies in a web-based
application? (Choose two.)

A. scalability

B. complexity
C. network latency
D. monolithic design
E. separation of concerns

Answer: AE

QUESTION 200
Which is a disadvantage of using J2EE server-side technologies in a web-based application?

A. scalability
B. complexity
C. maintainability
D. support for many different clients

Answer: B

QUESTION 201
Which two are associated with the web tier in a J2EE web-based application?
(Choose two.)

A. JMS
B. JSP
C. servlets
D. JAX-RPC
E. entity beans

Answer: BC

QUESTION 202
Which two are associated with the business tier in a J2EE web-based application?
(Choose two.)

A. JSP
B. HTML
C. servlets
D. entity beans
E. stateless session beans

Answer: DE

QUESTION 203
Which two are associated with the business tier in a J2EE web-based application?
(Choose two.)

A. JMS
B. JDBC
C. applets
D. servlets
E. Swing applications

Answer: AB

QUESTION NO: 204
Which is NOT associated with the web tier in a J2EE web-based application?

A. JNDI
B. HTML
C. JavaMail
D. JavaBeans
E. message-driven beans

Answer: E