**1) Which statement is true regarding an object?**

(a) An object is what classes instantiated are from  
(b) An object is an instance of a class  
(c) An object is a variable  
(d) An object is a reference to an attribute  
(e) An object is not an instance of a class.

2) **Which of the following does not belong: If a class inherits from some other class, it should**

(a) Make use of the parent class’s capabilities  
(b) Over-ride or add the minimum to accomplish the derived class’ purpose  
(c) Over-ride all the methods of its parent class  
(d) Make sure the result “IS-A-KIND-OF” its base class  
(e) Make sure the result “contains” its base class.

3) **The wrapping up of data and functions into a single unit is called**

(a) Encapsulation (b) Abstraction  
(c) Data Hiding (d) Polymorphism (e) Message passing.

**4) Polymorphism**

(a) Is not supported by Java  
(b) Refers to the ability of two or more objects belonging to different classes to respond to exactly the same message in different class-specific ways  
(c) Simplifies code maintenance  
(d) Not simplifies code maintenance  
(e) Refers to the ability of two or more objects belonging to different classes to respond to exactly the same message in different class-specific ways and simplifies code maintenance.

**5) In object-oriented programming, new classes can be defined by extending existing classes. This is an example of:**

(a) Encapsulation (b) Interface (c) Composition  
(d) Inheritance (e) Aggregation.

**6) Given a class named student, which of the following is a valid constructor declaration for the class?**

(a) Student (student s) { } (b) Student student ( ) { }  
(c) Private final student ( ) { } (d) Void student ( ) { }  
(e) Static void student(){ }.

7) **What is garbage collection in the context of Java?**

(a) The operating system periodically deletes all of the java files available on the system.  
(b) Any package imported in a program and not used is automatically deleted.  
(c) When all references to an object are gone, the memory used by the object is automatically reclaimed.  
(d) The JVM checks the output of any Java program and deletes anything that doesn’t make sense.  
(e) When all references to an object are gone the memory used by the object is not reclaimed.

**8) The concept of multiple inheritances is implemented in Java by**

I. Extending two or more classes.  
II. Extending one class and implementing one or more interfaces.  
III. Implementing two or more interfaces.

(a) Only (II) (b) (I) and (II) (c) (II) and (III)  
(d) Only (I) (e) Only (III).

9) **In Java, declaring a class abstract is useful**

(a) To prevent developers from further extending the class  
(b) When it doesn’t make sense to have objects of that class  
(c) When default implementations of some methods are not desirable  
(d) To force developers to extend the class not to use its capabilities  
(e) When it makes sense to have objects of that class.

10) What is the error in the following class definitions?

Abstract class xy  
{  
abstract sum (int x, int y) { }  
}

(a) Class header is not defined properly.  
(b) Constructor is not defined.  
(c) Method is not defined properly  
(d) Method is defined properly  
(e) No error.

11) Which of these field declarations are legal within the body of an interface?

(a) Private final static int answer = 42 (b) public static int answer=42  
(c) final static answer =42 (d) int answer  
(e) No error.

12) A method within a class is only accessible by classes that are defined within the same package as the class of the method. Which one of the following is used to enforce such restriction?

(a) Declare the method with the keyword public  
(b) Declare the method with the keyword private  
(c) Declare the method with the keyword protected  
(d) Do not declare the method with any accessibility modifiers  
(e) Declare the method with the keyword public and private.

13) Given the code

String s1 = ” yes” ;  
String s2 = ” yes ” ;  
String s3 = new String ( s1);

Which of the following would equate to true?

(a) s1 == s2 (b) s1 = s2 (c) s3 == s1 (d) s3=s1 (e) s1!=s2.

14) Which of the following statements are true regarding the finalize( ) method?

(a) The finalize ( ) method must be declared with protected accessibility  
(b) The compiler will fail to compile the code that explicitly tries to call the finalize( ) method  
(c) The body of the finalize ( ) method can only access other objects that are eligible for garbage collection  
(d) The finalize ( ) method can be overloaded  
(e) The finalize() method cant be overloaded.

15) Which one of these is a valid method declaration?

(a)  
void method1  
(b)  
void method2()  
(c)  
void method3(void)  
(d)  
method4()  
(e)  
methods(void).

16)   Given a class named Book, which one of these is a valid constructor declaration for the class?

(a)  
Book(Book b) { }  
(b)  
Book Book() { }  
(c)  
private final Book() { }  
(d)  
void Book() { }  
(e)  
abstract Book() { }.

17) Which one of the following class definitions is a valid definition of a class that cannot be extended?

(a)  
class Link { }  
(b)  
abstract class Link { }  
(c)  
native class Link { }  
(d)  
static class Link { }  
(e)  
final class Link { }.

18) How restrictive is the default accessibility compared to public, protected, and private accessibility?

(a)  
Less restrictive than public  
(b)  
More restrictive than public, but less restrictive than protected  
(c)  
More restrictive than protected, but less restrictive than private  
(d)  
More restrictive than private  
(e)  
Less restrictive than protected from within a package, and more restrictive than protected from outside a package.

19) Which statement is true about accessibility of members?

(a)  
Private members are always accessible from within the same package  
(b)  
Private members can only be accessed by code from within the class of the member  
(c)  
A member with default accessibility can be accessed by any subclass of the class in which it is defined  
(d)  
Private members cannot be accessed at all  
(e)  
Package/default accessibility for a member can be declared using the keyword default.

20) Which of the following is true about the use of modifiers?

(a)  
If no accessibility modifier (public, protected, and private) is specified for a member declaration, the member is only accessible for classes in the package of its class and subclasses of its class anywhere  
(b)  
You cannot specify accessibility of local variables. They are only accessible within the block in which they are declared  
(c)  
Subclasses of a class must reside in the same package as the class they extend  
(d)  
Local variables can be declared static  
(e)  
None of the above.

Answers:

1. b
2. c
3. a
4. e
5. d
6. a
7. c
8. c
9. b
10. c
11. b
12. d
13. a
14. d
15. b
16. a
17. e
18. c
19. b
20. b

Question to be practiced: