1.When is the Float object, created in line 3, eligible for garbage collection?

```
public Object m()
{
Object o = new Float(3.14F)
Object [] oa = new Object[l]/* Line 5 */
oa[0] = o /* Line 6 */
o = null /* Line 7*/
oa[0] = null /* Line 8 */
return o /* Line 9 */
}
```

A) just after line 5
B) just after line 6
C) just after line 7
D) just after line 8
E) just after line 9
ANS) just after line 8

2.Determine output

```
int[] x = {5,6,7,8,9};
int[] y = x;
y[2] = 10;
```

What is the value of x[2]?
A) 6
B) 7
C) 8
D) 10
E) 0
ANS) 10

3.Given the following declarations, which of the assignments given in the options below would
compile. Select the two correct answers.

```
int i = 5;
boolean t = true;
float f = 2.3F;
double d = 2.3;
```

A. t = (boolean) i;
B. f = d;
C. d = i;
D. i = 5;
E. f = 2.8;
A) A,B,C
B) B,C
C) C,D
D) C,D,E
E) A,D,E
ANS) C,D

4.How will you save the above java program?

```
import App;
public class MyApp{
public static void main(String[] args){
//code here;
}
}
```
A) App.java
B) App.class
C) MyApp.java
D) MyApp.class
ANS) MyApp.java

5.What is the output of the below code:

```
class Test {
public static void main(String args[]) {
int array[] = new int [5];
for (int i = 5; i > 0; i--)
array[5 - i] = i;

Arrays.sort(array);
System.out.print(Arrays.binarySearch(array, 4));
}
}
```
A) 1
B) 1
C) 2
D) 3
ANS) 3

6.What is the output of the below code:

```
public class Test {
public static void main(String... args) {
double d=2D+2d+2.+2l+2L+2f+2F+2.f+2.D;
System.out.println(d);
}
}
```
A) 18
B) 9
C) 9.0
D) 18.0
E) Run time exception
F) Compiler error
ANS) 18.0

7.What is the output of the below code:

```
class Test{
public static void main(String[] args) {
try {
int[] array = {1,2,3,4,5};
for (int i = 0; i < 7; ++i) {
```

```
System.out.print(array[i]);
}
} catch (ArrayIndexOutOfBoundsException e) {
System.out.print("0");
}
}
}
```

A) 12345
B) 123450
C) 12345
ArrayIndexOutOfBoundException
D) Compilation fails
ANS) 123450

8.What is the output of the below code:

```
class X{
int a;
static int a;
int Add(){
return a;

}
}
```

A) 0
B) No Output
C) Compilation fails
D) Run time error
ANS) Compilation fails

9.What is the output of the below code:

```
int[] array = {0,1,2,3};
array.clear(2);
System.out.println(array);
```

A) {0,1,3}
B) {2,3}
C) {0,1}
D) Compilation Fails
ANS) Compilation fails

10.Write the valid code to get the month?

```
public class Test {
public static void main(String[] args) {
Calendar calendar = new GregorianCalendar();
//insert code here
System.out.println(month);
}
}
```

A) int month = calendar.get(Calendar.DAY_OF_MONTH);
B) int month = calendar.get(Calendar.MONTH);

C) int month = calendar.get(MONTH);
D) int month = calendar.get(MONTH);

ANS) int month = calendar.get(Calendar.MONTH);

11.What is the output of the below code:

```
package com.manipal.demo;
public class DemoProgram {
public static void main(String[] args) {
Class cls = DemoProgram.class;
System.out.println(cls.getName());
}
}
```

A) DemoProgram
B) com.manipal.demo.DemoProgram
C) Compilation fails
D) runtime error
ANS) com.manipal.demo.DemoProgram

12.What is the output of the below code:

```
public class DemoProgram {
public static void main(String[] args) {
double x = 60984.123;
double y = -497.99;
System.out.println(Math.floor(x)+" "+Math.floor(y)+" "+Math.floor(0));
}
}
```

A) 60984.2 -498.0 0.1
B) 60984.2 -498.1 0.0
C) 60984.0 -498.0 0.0
D) 60984.0 -498.0 0.0
E) Compilation fails
ANS) 60984.0 -498.0 0.0

13.Whats is the output of the below code:

```
package com.manipal.demo;
public class DemoProgram {
public static void main(String[] args) {
DemoProgram demo = new DemoProgram();
System.out.println(demo.getClass());
}
}
```

A) com.manipal.demo.DemoProgram
B) class DemoProgram
C) DemoProgram
D) class com.manipal.demo.DemoProgram
ANS) class com.manipal.demo.DemoProgram

14.Which statement is valid for the below syntax:

while(i<10 && i >24){
}
A) while loop never executes always true
B) while loop never executes always false
C) Compilation fails
D) Exception thrown at run time

ANS) while loop never executes always false

15.What is the value and data type for the below code:
2+3*5 = ?
A) 17 int
B) 25 int
C) 17 byte
D) 25 byte
ANS) 17 int

16.Determine the output
class Base {}
class Derived extends Base {
public static void main(String args[]){
Base a = new Derived();
System.out.println(a instanceof Derived);
}
}
A) true
B) false
ANS) true

17.Given the declaration
Circle x = new Circle(), which of the following statement is most accurate.
A. x contains an int value.
B. x contains an object of the Circle type.
C. x contains a reference to a Circle object.
D. You can assign an int value to x.

A) A
B) B
C) C
D) D
ANS) C

18.Given:
class Mammal { }
class Raccoon extends Mammal {
Mammal m = new Mammal();
}
class BabyRaccoon extends Mammal { }
Which four statements are true? (Choose four.)

A. Raccoon is-a Mammal.
B. Raccoon has-a Mammal. C. BabyRaccoon is-a Mammal.
D. BabyRaccoon is-a Raccoon.
E. BabyRaccoon has-a Mammal.
F. BabyRaccoon is-a BabyRaccoon.
A) A,B,D,C
B) C,D,E,A
C) A,D,E,F
D) A,B,C,F
ANS) A,B,C,F

19.Given:
public interface A{public void m1();}
class B implements A{}
class C implements A {public void m1(){}}
class D implements A{public void m1(int x){}}
abstract class E implements A{}
abstract class F implements A{public void m1(){}}

abstract class G implements A{public void m1(int x){}}
What is the result
A) compilation succeeds
B) Exactly one class does NOT compile
C) Exactly two classes do NOT compile
D) Exactly four classes do NOT compile
E) Exactly three classes do NOT compile
ANS) Exactly two classes do NOT compile

20.Given:
interface Foo { int bar(); }
public class Test {
public static int fubar(Foo foo) { return foo.bar(); }
public void testFoo() {
fubar(/*Insert Code here*/);
}
}
Which code allows the class Test to compile?
A. Foo { public int bar() { return 1; }
B. new Foo { public int bar() { return 1; }
C.new Foo() { public int bar() { return 1; }}
D. new class Foo { public int bar() { return 1; }
A) A
B) B
C) C
D) D
ANS) C

21.
In Junit @Rule
TestName is invoked when _____

A) to mark public fields of a test class
B) test is about to start
C) test method is running.
D) All of the above
ANS) test is about to start

22.public class ArrayTest {
int[] one; int[] two;
@Before
public void first(){one= new int[]{1,2}; two= new int[]{1,2};}
@Test
public void test() { assertArrayEquals(one, two);}
}
What is the result of executing the above JUnit Test?
A) Test fails as references of both the arrays are not equal
B) Test passes
C) Compilation fails as there is no method assertArrayEquals in Junit
D) Runtime exception occurs
ANS) Test passes

23.
class Test{
public static void main(String[] args) {
int a=6,b=12;
for(int i=0;i<3;i++){
a++;b--;
if(a>b){
System.out.println("line of code");
}
else{
System.out.println("else block");
}
}
}
}
How many times "line of code" will execute ?
A) 0 times
B) 1 time
C) 2 times
D) 3 times
E) Compilation fails
ANS) 0 times

24.How is an abstract class represented in a class diagram?
A) Class Name is Underlined
B) Class Name is in Italics
C) Class Name is in Bold
D) Class Name is in uppercase
ANS) Class Name is in Italics

25.What is the syntatical error in the below code:
abstract class Sum{
abstract abc(int m,int n);
}
A) body of the method is missing
B) class modifier needs to be changed to public
C) method return type is missing
D) abstract modifier near the method should be changed to public
ANS) method return type is missing

26.What is an actor model?
A) An actor model can represent an external entity which communicates with the system
B) An actor can represent a specific physical entity
C) An Actor model can represent a role played by the User.
D) All of the above
ANS) All of the above

27.* can be defined as_____
A) No limit on the number of instances (including none).
B) Zero or one instance. The notation.
C) Exactly one instance
D) At least one instance
ANS) At least one instance

28.How to represent an instance in a UML diagram
A) underline
B) slanted line
C) overline
D) Dashed line
ANS) underline

29.In a Sequence diagram, Slanted lines describe _____
A) Construction of objects
B) Destruction of object
C) Propogation delay of messages
D) order of messages
E) race conditions
ANS) Propogation delay of messages

30.Match the Following for a Component Diagram:
a. Component : 1) Dashed Arrows
b. Dependencies : 2)rectangles with two tabs at the upper left.
C . An Interface to the Component : 3)Circle and solid line
A) a-3
b-1
c-2

B) a-2
b-1
c-3
C) a-1
b-2

c-3
D) a-2
b-3
c-1
ANS) a-2
b-1
c-3

31.Dog sub class is extending supercalss Mammal,How will represent using UML?
A) Filled diamond on side of the Super class
B) Hollow triangle shape on the superclass end of the line
C) Hollow diamond on
the Collection side
D) Hollow triangle shape on the subclass end of the line
ANS) Hollow triangle shape on the superclass end of the line

32.What is the output of the below code:

```
public class Test {
public static void main(String[] args) {
List<Integer> list = new ArrayList<Integer>();
list.add(9);
list.add(8);
list.add(2);
list.add(1);
Collections.reverse(list);
Collections.sort(list);
Iterator itr = list.iterator();
Collections.shuffle(list);
while(itr.hasNext()){
System.out.println(itr.next());
}
}
}
```

A) 9 8 2 1
B) 1 2 8 9
C) 2 9 1 8
D) Non-Predicatable
ANS) Non-Predicatable

33.Given the code fragment:

```
1. ArrayList<Integer> list = new ArrayList<>(1);
2. list.add(1001);
3. list.add(1002);
4. System.out.println(list.get(list.size()));
```

What is the result?
A) Compilation fails due to an error on line 1.
B) An exception is thrown at run time due to error on line 3
C) Anexception is thrown at run time due to error on line 4
D) 1001 1002
ANS) Anexception is thrown at run time due to error on line 4

34. Which of the following describes the purpose of JUnit?
A It is a framework to help with writing unit tests for your code.
B It is a framework to help with writing code involving unit conversions.
C It is a framework to help with packaging your code into units for distribution.
D It is a framework to convert all days/dates in your code to June.
Answer: A

35.Invoked only once?
a)@BeforeClass
b)@After
c)@Before
Answer : a

36. Invoked before each test?
a)@BeforeClass
b)@After
c)@Before
Answer : @Before

37. Invoked after each test?
a)@BeforeClass
b)@After
c)@Before
Answer : @After

38. Only once invoked finishing all tests?
a)@BeforeClass
b)@After
c)@Before
d)AfterClass
Answer : @AfterClass

39. Which diagram in UML shows a complete or partial view of the structure of a modeled system at a specific time?
a) Sequence Diagram
b) Collaboration Diagram
c) Class Diagram
d) Object Diagram
Answer: d

40. In use case diagram actor represents?
Answer: An actor represent a roll that an outsider takes on when intracting with the business system for instance, an action can be a customer, a business partner , a supplier or another business system

41. Aggregation represent in UML?
Answer : hollow diamond on the collection side

42. Composition represent in UML?
Answer : Filled diamond on the side of the collection

43. Generalization represent in UML?
Answer : hollow triangle shape on the superclass end of the line

44. Dependency represent in UML?
Answer : dotted line followed by

46. The relationship between the object and component parts in UML diagram are represented by ----------.
Answer : Aggregation