



PROGRAMMING IN JAVA

Assignment3

TYPE OF QUESTION: MCQ

Number of questions: 10 Total mark: $10 \times 1 = 10$

QUESTION 1:

Which of these is used by operating system to manage the Recursion in Java?

- a. Array
- b. Stack
- c. Queue
- d. Tree

Correct Answer:b

Detailed Solution:

A stack is internally used by the Java run time manager to execute a recursive method.

QUESTION 2:

Which inheritance in Java programming is not supported?

- a. Multiple inheritance using classes.
- b. Multiple inheritance using interfaces.
- c. Multilevel inheritance.
- d. Single inheritance.

Correct Answer: a

Detailed Solution:

Java does not support multiple inheritance of classes but it supports **multiple inheritance** for interfaces. Means, a class cannot inherit more than one class but it can inherit and implement multiple interfaces.





QUESTION 3:

How can a protected member be accessed?

- a. Accessible only within the class.
- b. Accessible only within package.
- c. Accessible within the package as well as outside the package but through inheritance only.
- d. Accessible to everywhere.

Correct Answer:c

Detailed Solution:

A protected member is accessible to any sub class of the class.

QUESTION 4:

For each description on the left, find the best matching modifier on the right. You may use a choice more than once or not at all.

1. Hides the instance variable from code in other files. A. private

2. Hides the method from code in other files.

B. public

3. Hides the subclass from code in other files.

C. final

4. Exposes the API method to code in other files.

D. static

5. Prevents the value of the instance variable from being Changed once initialized.

E. none of the above

a. 1-A,2-A,3-C,4-D,5-E

- b. 1-A,2-A,3-A,4-B,5-C
- c. 1-C,2-B,3-A,4-A,5-D
- d. None of Above

Correct Answer: b

Detailed Solution:

This matching is as per the general rule of the access specifiers in Java.





QUESTION 5:

If there is an abstract method in a class, then which of the following is/are NOT true.

- a. The class should be declared abstract.
- b. No object of the class can be created.
- c. Any subclass of the class may or may not be abstract class.
- d. A final class can have abstract method(s) and an abstract class can be declared final.

Correct Answer: d

Detailed Solution:

If a class includes abstract methods, then the class should be declared abstract. No object can be created for an abstract class. Further, if a class is derived from an abstract class and abstract method in the base class is not defined, then the derived class is also an abstract class.

QUESTION 6:

Which of the following statement is true regarding the order of execution of constructors in an inheritance hierarchy?

- a. Base class constructor will be called followed by the derived class constructor.
- b. Derived class constructor will be called followed by the base class constructor.
- c. Only Base class constructor will be called.
- d. Only derived class constructor will be called.

Correct Answer: a

Detailed Solution:

On object creation of derived class, first base class constructor and then the derived class constructor will be called.





QUESTION 7:

What is the output of the above program?

```
a. i + j is 32
3
0
b. i + j is 5
7
2
c. i + j is 32
7
2
d. i + j is 5
3
0
```

Correct Answer: a





QUESTION 8:

Which of this keyword can be used in a sub class to call the constructor of super class?

- a. super
- b. this
- c. extent
- d. extends

Correct Answer: a

Detailed Solution:

Using the super keyword, we can explicitly call a base class constructor.

QUESTION 9:

Consider the composition of two classes as given below.

```
Public class Question5{
    public static void main(String args[]){
        String question= "Which course have you opted?";
        System.out.print(Answer.submit(question));
    }
}
class Answer{
    static String answer = "Programming with Java";
    static String submit(String question){
        return ("The answer to the question, "+question+" is "+answer);
    }
}
```

Which of the following option is true about the above program?

- a. Error: String cannot be a method return type like void, int, char, etc.; as it is a class.
- b. Error: Non-static variable 'answer' cannot be referenced from a static context.
- c. Output: The answer to the question, Which course have you opted? is Programming with Java
- d. Error: Compilation error as variable 'question' is not static.

Correct Answer: c





QUESTION 10:

Consider the class composition as shown in the following.

Select the correct option(s) as per your understanding of the above-mentioned code.

- a. This code doesn't maintain encapsulation.
- b. This code maintains encapsulation.
- c. Variable 'q' can be modified using the 'question' object in Student class.
- d. Variable 'a' can be accessed using the 'question' object in Student class.

Correct Answer: b

Detailed Solution:

The code is an encapsulation.