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**NPTEL (https://swayam.gov.in/explorer?ncCode=NPTEL)** » **Programming in Java (course)**

Announcements (announcements)        **About the Course (https://swayam.gov.in/nd1_noc20_cs08/preview)**

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# Unit 5 - Week 3 :

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## Course outline

**How does an NPTEL
online course work?**

**Week 0 :**

**Week 1 :**

**Week 2 :**

**Week 3 :**

○ Lecture 11 : Java
Static Scope Rule
(unit?
unit=4&lesson=25)

○ Lecture 12 :
Demonstration-V
(unit?
unit=4&lesson=26)

○ Lecture 13 :
Inheritance (unit?
unit=4&lesson=27)

○ Lecture 14 :
Demonstration-VI
(unit?
unit=4&lesson=28)

○ Lecture 15 :
Information
Hiding (unit?
unit=4&lesson=29)

● **Quiz :
Assignment 3
(assessment?
name=95)**

# Assignment 3

**Your last recorded submission was on 2020-02-16, 12:53 IST**          **Due date: 2020-02-19, 23:59 IST.**

1)                                                                                                          *1 point*

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

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

☐ a.
☑ b.
☐ c.
☐ d.

2)   Which inheritance in Java programming is not supported?                            *1 point*

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

☑ a.
☐ b.
☐ c.
☐ d.

3)                                                                                                          *1 point*

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**Assignment
Solution**

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.

☐ a.
☐ b.
☑ c.
☐ d.

4)                                                                                                           *1 point*

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

☐ a.
☑ b.
☐ c.
☐ d.

5)                                                                                                           *1 point*

**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.

☐ a.
☐ b.
☐ c.
☑ d.

6)                                                                                                           *1 point*

**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.

☑ a.
☐ b.
☐ c.
☐ d.

7)                                                                                              *1 point*

```
public class B1 {
private static int i = 0;
private static int j = 0;

public static void main(String[] args) {
int i = 3;
int k = 4;

    {
int j = 2;
System.out.println("i + j is "+i +j);
    }

    k = i + j;
System.out.println(k);
System.out.println(j);
    }
}
```

**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

☑ a.
☐ b.
☐ c.
☐ d.

8)                                                                                              *1 point*

**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

☑ a.
☐ b.
☐ c.
☐ d.

9)                                                                                              *1 point*

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.*

  ☐ a.

  ☐ b.

  ☑ c.

  ☐ d.

10)                                                                                                          *1 point*

Consider the class composition as shown in the following.

```
public class Student{
public static void main(String[]args){
        Question12 question =new Question12();
            System.out.print(question.q);
}
}

class Question12{
        final String q = "Questions ";
        private String a = "Answers";
}
```

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.

  ☐ a.

  ☑ b.

  ☐ c.

  ☐ d.

You may submit any number of times before the due date. The final submission will be considered for grading.

Submit Answers