Bharti Vidyapeeth's
Institute of Computer Applications and Management
A-4, Paschim Vihar, New Delhi-63
THIRD SEMESTER [MCA] Internal Examination, October-2016

Paper Code: MCA –205	**Subject: Java Programming**
Time: 2 Hours	**Maximum Marks: 45**

Note: Attempt THREE questions in all. Question No. 1 is compulsory and attempt one question from each unit.

1. Answer all the following questions briefly:-   1.5 x 10 = 15
    (a) Discuss the advantage of this as a constructor call?   1.5
    (b) Justify the significance of organizing code in packages?   1.5
    (c) Differentiate between String, StringBuilder and StringBuffer.   1.5
    (d) Draw difference between throw and throws?   1.5
    (e) A method is forced to declare all uncaught checked exceptions that are   1.5
         thrown within its scope. List the advantage of this design policy.
    (f) Differentiate between working of templates of C++ and generics of Java.   1.5
    (g) Determine the class that is the immediate superclass of the Container class? 1.5
         What does this hierarchy signify?
    (h) Compare Comparable and Comparator interfaces. When would you use   1.5
         what?
    (i) State the methods that should be overridden by a class (and the class /   1.5
         interface they belong to) so that its objects may be maintained in a HashSet.
    (j) Can we call a non-static method from inside a static method? If yes how, if 1.5
         no why?

2. Answer any two of the following   3x2=6
    (a) Briefly explain the exception class hierarchy and its significance.
    (b) You are to automate business processes of an Internet Service Provider.
         Identify at least five important classes in the system and state the
         relationships between the classes.
    (c) What is the significance of interrupting a thread? What causes
         InterruptedException?

3. Use code snippets to answer any three of the following: 3x3=9
    (a) Function overriding happens even without the usage of @Override? Write a
         code snippet to demonstrate the importance of @Override annotation?
    (b) Create a News Flash panel that displays news headlines stored in a string
         array, one by one, after fixed time intervals?
    (c) Construct a code snippet to call a database procedure CalculateScore
         (PlayerID IN NUMBER, AverageScore IN/OUT NUMBER, Selected OUT
         VARCHAR)?

4. Implement any two of the following   7.5x2=15
    (a) Construct an application to maintain Product, Supplier association in a
         TreeMap. You may assume that a product is supplied by one supplier only.

The application should be able to
a. Add a Product, Supplier mapping
b. Lookup suppliers for a product.

(b) Create entity class Employee that uses PreparedStatement to implement functions save and searchByName.

(c) Create a modal dialog InputBox that extends Dialog. The class should have a constructor that takes a String as a parameter to construct a dialog box that displays a text box (whose initial contents are specified by the string parameter) and OK & CANCEL buttons. The dialog box should get closed when either of the buttons is clicked. The class should have functions to:
a. Check which button was pressed by the user.
b. Retrieve the string entered by the user, if user pressed OK, null if user pressed CANCEL.

Test this class to get a message from a user and display it on a Frame window

**************** **Wish you Luck!** ****************