



DHARMSINH DESAI UNIVERSITY, NADIAD
FACULTY OF TECHNOLOGY
B.TECH. SEMESTER V [INFORMATION TECHNOLOGY]
SUBJECT: (IT510) CORE JAVA TECHNOLOGY

Examination	: Block (Regular)	Seat No.	: _____
Date	: 21/10/2016	Day	: Friday
Time	: 3:00 to 4:15	Max. Marks	: 36

INSTRUCTIONS:

1. Figures to the right indicate maximum marks for that question.
 2. The symbols used carry their usual meanings.
 3. Assume suitable data, if required & mention them clearly.
 4. Draw neat sketches wherever necessary.
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Q.1 Do as directed.

- (a) Explain JIT compiler in brief. [2]
- (b) Why string objects are immutable in java? [2]
- (c) Suppose s is a string with the value "ddit". What will be assigned to x, if you execute the following code? `char x = s.charAt(4);` [2]
- (d) Can I import same package/class twice? Will the JVM load the package twice at runtime? [2]
- (e) Assume `double[][] x = new double[4][5]`, what are `x.length` and `x[2].length` values? [2]
- (f) Why main method is static? [2]

Q.2 Answer the following questions. [12]

- (a) Explain any six characteristics of java. [6]
- (b) What is the output of the following codes? Explain your answer. [6]

```
(i)
import java.applet.*;
public class Test extends Applet implements Runnable {
    public void init() throws InterruptedException {
        Thread t = new Thread(this);
        t.sleep(1000);
    }

    public synchronized void run() {
    }
}
```

```
(ii)
public class Test {
    public static void main(String[] args) {
        boolean[][] x = new boolean[3][];
        x[0] = new boolean[1]; x[1] = new boolean[2];
        x[2] = new boolean[3];

        System.out.println("x[2][2] is " + x[2][2]);
    }
}
```

Q.3 (a) Write an applet program to play the tick-tack-toe game by two players. [6]

- (b) Explain various java non-access modifiers with appropriate java programs. [6]