



DHARMSINH DESAI UNIVERSITY, NADIAD
FACULTY OF TECHNOLOGY
B.TECH – SEMESTER – VI, IT
SUBJECT: [IT 616] CORE JAVA TECHNOLOGY

Examination : Third Sessional
Date : 13/04/2016
Time : 12:30 to 01:45 pm

Seat No. :
Day : Wednesday
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. [12]

(a) Write output of given code. [2]

```
class ExpDemo {  
    public static void main(String args[]) {  
        try {  
            int a[] = { 1, 2, 3, 4, 5 };  
            for (int i = 0; i < 7; ++i) {  
                System.out.print(a[i]);  
            }  
        } catch (ArrayIndexOutOfBoundsException e) {  
            System.out.print("0");  
        }  
    }  
}
```

(b) Match the following thread state with its description: [2]

A

B

- | | |
|-------------|--|
| 1. New | 1. A thread that is waiting to be notified by another thread |
| 2. Runnable | 2. A Fresh thread that has not yet started to execute |
| 3. Blocked | 3. A thread that is blocked waiting for a monitor lock |
| 4. Waiting | 4. A thread that is executing in the Java virtual machine |

(c) Differentiate the following in context of java: final, finally and finalize. [2]

(d) Explain following terms related to java networking: [2]

1. BindException
2. ServerSocket

(e) Explain DataInputStream and DataOutputStream classes. [2]

(f) When a thread invokes its yield() method, it returns to the ____ state. When a thread invokes its sleep() method, it returns to the ____ state. [2]

Q.2 Attempt *Any Two* from the following questions. [12]

(a) Write java IO program for File. [6]

1. Display File properties.
2. If File is directory then display names of all files and its sub directories that are present in that directory.

(b) Write a program that takes input for filename and search word from command line arguments and checks whether that file exists or not. If exists, the program will display those lines from a file that contains given search word. [6]

(c) 1. Explain Thread State Diagram. [4]

2. Thread object can call run () method directly. State True/False with justification. [2]

- Q.3 Attempt ***ALL*** from the following questions. [12]
- (a) Differentiate Checked and Unchecked Exception. Write an application that generates user defined exception **UserDefinedException**, if any value from its command line arguments is negative. [6]
 - (b) Write a TCP client-server program. Client send values height and base of triangle to the server and server should calculate area of triangle and respond to client. [6]

OR

- Q.3 Attempt ***ALL*** from the following questions. [12]
- (a) Write a program to simulate moving banner applet. Banner moves from left to right or right to left on pressing button ">>" and "<<" respectively. [6]
 - (b) Write a java program for TCP echo client and server. [6]