VIT UNIVERSITY
(Estd. u/s 3 of UGC Act 1956)

Term End Examination - May 2013

Course : ITE311 - Network Programming **Slot: G1+TG1**

Class NBR : 3001/3402/5035

Time : Three Hours **Max.Marks:100**

PART – A (8 X 5 = 40 Marks)
Answer ALL Questions

1. List any five security features provided by Java for network programming.

2. a) List any two limitations of thread synchronization. **[2]**

   b) List any two alternatives to thread synchronization. **[2]**

   c) Define deadlock. **[1]**

3. List any five exceptions thrown by Java Socket class and briefly explain the reason for which the exceptions will be thrown.

4. Explain the following methods of the DatagramPacket class with simple example:

   a) getAddress() **[1]**

   b) getSocketAddress() **[2]**

   c) getData() **[2]**

5. a) Define RMI. **[3]**

   b) List any two advantages of RMI. **[1]**

   c) List any two disadvantages of RMI. **[1]**

6. a) Write a Java program to convert the given relative URI into the given absolute URI: **[2 ½]**

   Relative URI= academics/index.html

   Absolute URI= http://www.vit.ac.in/academics/index.html

   b) Write a Java program to convert the given relative URI into the target relative URI: **[2 ½]**

   Relative URI = academics/index.html

   Target Relative URI = /vit/home/academics/index.html

7. Write a Java program to access the contents of http://www.vit.ac.in using a list of proxy servers returned by the default proxy selector class.

8. a) Write a Java client program using TCP socket in which the client buffers and reads the data from the server. Set the time interval, as 10000 ms, for which the read call has to wait to get enough bytes while reading from server socket. **[2 ½]**

b) Write a Java client program using TCP socket to transfer the data from client to server and also ensure that data is sent as quickly as possible with minimum delay by setting the appropriate socket option. **[2 ½]**

PART – B (6 X 10 = 60 Marks)

Answer any <u>SIX</u> Questions

9. Java is suited for network programming. Justify.

10. Explain in detail about the working of HTTPS.

11. a) Write short notes on thread priorities. **[4]**

b) Explain the two approaches for creating threads using a simple program. **[6]**

12. Write a Java program for a Chat application using TCP socket:

a) One-One: **[5]**

b) One-Many (Broadcast) **[5]**

13. a) List the various steps involved in opening an URL Connection. **[4]**

b) Explain the various methods in DatagramChannel class and list the steps involved in establishing UDP connection using DatagramChannel. **[6]**

14. Write short notes on the following:

a) Java.rmi package **[5]**

b) Java.rmi.registry package **[5]**

15. a) Write a Java program to send a very simple mail message. **[5]**

b) Write a Java program to read mail headers. **[5]**

16. Write a Java program for one-to-one chat using Java UDP DatagramChannel class.

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