MCA
(SEM III) ODD SEMESTER EXAMINATION 2015-16
Internet & Java Programming

[Time: 3 hrs.]   **[Max. Marks: 100]**

Note- *Attempt All Questions. All Questions carry equal marks***:-**

1. **Attempt any four parts:-**   **[5x4=20]**
   (a) For each type of network topology, discuss the implication of single cable fault.
   (b) How do the layers of TCP/IP protocol suite correlate to the layers of the OSI model?
   (c) What is the transmission impairment? Discuss each type.
   (d) How does a router different from a bridge?
   (e) What is the difference between a physical address and a logical address?
   (f) What is the purpose of Domain Name System (DNS)?

2. **Attempt any four parts:-**   **[5x4=20]**
   (a) What is polymorphism? How they are implemented in Java programming language? Explain with suitable programs.
   (b) Explain different uses of the keywords **this** and **super** with appropriate programs.
   (c) Write a program in java that reads a string. If string does not start with a capital later, it throws an exception.
   (d) Write a program in java to print the even and odd numbers between 1 and 50. Use two threads to print even and odd numbers with a pause of 2 seconds.
   (e) What do you mean by socket? How clientSocket interacts with the serverSocket?
   (f) Write a program in java to save "This is java programming", in a text file. Copy this content into another file and display on the screen.

3. **Attempt any two parts:-**   **[10x2=20]**
   (a) What is JDBC? Explain different types of java drivers available for database connectivity.
   (b) Write a java application using JDBC to read and display the students Name, Roll_no. and Class from a table named Student in a database.
   (c) What is Swing? How it is different from AWT?

4. **Attempt any two parts:-**   **[10x2=20]**
   (a) What is java Beans? How it is different with EJB? What are the steps required to create user defined Beans?
   (b) Write a student class in which marks() is a method, which calculates the percentage of marks from given marks. Write a java application which runs this method remotely using RMI.
   (c) Explain the followings in reference to java Beans:-
   (i)   Introspection. (ii) Bound Properties. (iii) Entity Bean. (iv) Java Bean API.

5. **Attempt any two parts:-**   **[10x2=20]**
   (a) How do you write, run and debug a servlet? Explain with the help of an example.
   (b) What do you mean by ServletContext? How it is different fromServletConfig? Explain with an example.
   (c) Write short notes on the followings:-
   (i) Thread safe servlet.   (ii) Cookies.