

## **M.Phil Computer Science**

### **MAY 2006 Paper I - RESEARCH METHODOLOGY**

**Time: Three hours Maximum: 100 marks**

**Answer any FIVE questions. (5\*20=100)**

1. (a) What is research? Discuss the types of research. (b) What is the necessity of defining problem? Discuss the techniques involved in defining a problem.
2. (a) Discuss the important concepts relating to research design.(b) Write a short note on research process.
3. (a) Discuss the layout of the research report. (b) Write a short note on oral presentation.
4. (a) Discuss the evolution of present day computer technology. (b) Why Interpretation? Discuss.
5. (a) Discuss on binary tree representations. (b) What do you mean by height balanced binary trees? Discuss.
6. Write short notes on the following: (a) Priority Queues (b) Tree operators.
7. (a) What do you mean by distributed database? List the advantages of distributed database. (b) What is parallel processing? What are the key elements of parallel processing?
8. (a) Write a short note on relational data manipulation. (b) Explain spatial databases with examples.
9. (a) What is machine learning? Discuss the issues related to machine learning. (b) Write a short note on networks connectionist
10. (a) What is back propagation learning? What are the limitations of back propagation learning? (b) What is meant by perceptron representation problem? Discuss.

### **MAY 2006 Paper II - ADVANCED TOPICS IN COMPUTER SCIENCE**

**Time: Three hours Maximum: 100 marks**

**Answer any FIVE questions.(5 x 20 = 100)**

1. Write a detailed note on features of CORBA IDL and its role in CORBA

Software Architecture.

2. Explain the Java Bean Design signatures and persistence of Java Beans.
3. Explain in detail about DNA services.
4. Discuss the technology requirements for mobile computing.
5. Describe and explain the Architecture of WAP.
6. Write a detailed note on W AP Development Toolkit.
7. How to develop a simple Bean using the BDK?
8. Discuss the methods and objects available in File and I/O Streams.
9. Explain briefly on Java Servlets and the deficiencies of CGI.
10. Explain briefly on Web Databases.

**MAY 2006 Paper III - DATA MINING AND WARE HOUSING**

**Time: Three hours Maximum: 100 marks**

**Answer any FIVE questions. (5\*20=100)**

1. Describe the challenges to data mining regarding data mining methodology and user interaction issues.
2. With a neat sketch describe a three-tier data warehousing architecture.
3. Describe data (lossy) compression techniques.
4. What are the four major types of concept hierarchies? Explain them.
5. For class characterization, what are the major differences between a data cube-based implementation and a relational implementation. Discuss which is most efficient and under what conditions?
6. Discuss the classification of association rules.
7. What is a decision tree? Draw the tree and explain with an example.
8. Describe the grid-based method of clustering.
9. Describe multimedia data mining.
10. Explain data mining for financial data analysis.