

RESEARCH METHODOLOGY
(Held in April 2010)

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.
All questions carry equal marks.

1. (a) What are the objectives of research?
(b) Compare research methods and research techniques.
(c) Discuss the points to be considered by a researcher in selecting a research problem or a subject for research.
2. (a) Describe the different steps in a research process.
(b) Explain the important concepts relating to research design.
3. (a) Why Interpretation is necessary? Discuss on oral presentation.
(b) What is a technical report? Give the general outline of a technical report.
4. (a) Discuss the role of a computer in research.
(b) Describe the applications and uses of computer.

5. (a) What is a binary tree? Explain the properties of binary trees.
(b) Discuss on the following :
(i) Priority queue
(ii) ISAM.
6. (a) Discuss how deletion and insertion are performed in a Heap.
(b) Write a short note on AVL tree.
7. (a) What do you mean by distributed databases? Discuss the advantages of distributed databases.
(b) Write a short note on multidimensional data and databases.
8. (a) What are key elements of parallel processing? Discuss.
(b) What is sparse data? Discuss.
9. (a) Explain perception training algorithm.
(b) Discuss on generalized delta rule.
10. Discuss on the following :
(a) Kohonen learning network
(b) Supervised Hebbian learning.

5940/J12

NOVEMBER 2009

**ADVANCED TOPICS IN COMPUTER SCIENCE
(Held in April 2010)**

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

1. (a) **What is Exception Handling? Discuss.**
(b) **Discuss the different I/O streams.**
(c) **Discuss the different string methods and their use.**
2. **Write short notes on the following :**
(a) **RMI**
(b) **CORBA**
3. (a) **Discuss the applications of Bean Builder Tools.**
(b) **Discuss the steps involved to create and configure an instance to create and configure and instance of the our Button Bean.**
(c) **Discuss the various methods defined by Servlet Response.**

4. (a) Given an overview of servlets.
(b) Write short note on different classes defined in Java. beans.
5. (a) What is WAP? Discuss the benefits WAP for the consumers.
(b) Discuss the features offered by WAP.
(c) What is WML? Discuss.
6. Write short note on the following :
(a) WAP Editors.
(b) WAP architecture.
7. (a) What do you mean by spatial data? Describe a spatial data model.
(b) Discuss on multimedia databases.
(c) What is Image segmentation? Discuss.
8. (a) What is Mobile data base? Discuss the database requirements for mobile database processing.
(b) What is Internet addressing? Discuss.
(c) Discuss how a user exchanges information with a web based database.

9. (a) What is COM? Discuss.
(b) Write a short note on CORBA's object model.
10. Discuss on the following :
(a) Multi-tiered component architecture.
(b) CORBA interface definition language.
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