Exam Code: 206703   Paper Code:3272

Programme: Master of Science (Computer Science)
Semester III
Course Title: Data Mining and Data Warehousing
Course Code MCSL-3111

Time Allowed: 3 Hours   Max Marks: 80

Note: Attempt five questions in all, selecting at least one from each section, fifth question may be attempted from any section. Each question carries equal (16) marks.

Section A

Q.1: What is Data Mining? Explain the Data Mining Process.   (6,10)

Q.2: Explain the similarities and differences between Data Mining and Machine Learning. (16)

Section B

Q.3: Explain - Why a separate data warehouse is required? Discuss the features of data warehouse as well.   (10,6)

Q.4: Discuss OLAP and OLAM, when does OLAM come into play? How the two are integrated?   (5,5,6)

Section C

Q.5: What are various techniques of Data Mining? Explain.   (16)

Q.6: What is Knowledge Discovery in databases? Discuss.   (16)

Section D

Q.7: What are various challenges in implementation of Data Mining?   (16)

Q.8: Discuss widely used Data Mining Tools.   (16)

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Exam Code: 206703   Paper Code: 3273

Programme - Master Of Science (Computer Science)

Semester- III

Course Title - System Software

Course Code - MCSL-3112

Time Allowed - 3 Hours   Maximum Marks - 80

SECTION-A

1. What does System Software do? Which are different types of System Software? Discuss various components of software with the help of a suitable example.

2. Discuss various Phases of a one pass and two pass assemblers.

SECTION-B

3. (a) What is macro? Explain macro expansion by taking suitable example

   b) Explain conditional and recursive macro expansion.

   4. Explain two - pass assembler design

SECTION-C

5. What is difference between Incremental complier and Cross complier?

6. Write about different phases of compilation process?

SECTION-D

7. What are basic functions of a loader? What is difference between Linker and Loader ?

. 8. Explain the followings

   a) Text Editors

   b) Interactive Debugging Systems

Exam Code: 206703   Paper Code: 3274

Programme: Master of Science (Computer Science)
Semester: III
Course Title: **Advanced Web Technologies**
Course Code: MCSL-3113

Time Allowed: 3 Hours   **Max Marks: 80**

Note: Attempt five questions in all, selecting atleast one question from each section. The fifth question may be attempted from any section. Each question carries equal marks.

Section A

Q1: Write ASP.NET standard controls with examples.   (16)

Q2: Explain Requiredfield validator and Regularexpression validator with examples. (16)

Section B

Q3: a)Write a code to explain the concept of Date picker control.   (10)

b) How can you make changes in Master pages?   (6)

Q4: Explain different parameters used with SQL data source control.   (16)

Section C

Q5: Explain various fields that are used with Grid view control.   (16)

Q6: Explain Drop down list control and list box control with examples.   (16)

Section D

Q7: Explain concept of connected and disconnected data access in ADO.NET   (16)

Q8: Write page output and data source caching in detail.   (16)

Exam Code: 206703   Paper code: 3275

Programme: Master of Science (Computer Science) Semester III
Course Title: Design and Analysis of Algorithms
Course Code: MCSL-3114

Time Allowed: 3 Hours   Max. Marks: 80

Note: Attempt five questions in all, selecting atleast one question from each section. The fifth question may be attempted from any section. All questions carry equal marks.

Section - A

Q1) a) Explain all the important specifications of an algorithm? Explain various performance measurement factors of an algorithm with examples.

b) Explain how an array of elements can be sorted using Quick Sort algorithm?

(8 X 2 = 16)

Q2) Explain following algorithms with example:-

a) Selection Sort

b) Binary Search

(8 X 2 = 16)

Section - B

Q3) What is greedy technique? Does it always give an optimal solution to the problem? Explain any one greedy algorithm to support your answer.

(16)

Q4) Define spanning tree and minimum cost spanning tree? Explain Prim's and Kruskal's algorithm to find minimum spanning tree using same examples.

(16)

Section - C

Q5) What is Dynamic Programming method? Explain Dijkastra's Algorithm for solving single pair shortest path problem.

(16)

Q6) What is Knapsack problem? What are its types? Explain 0/1 Knapsack problem with the help of suitable example.
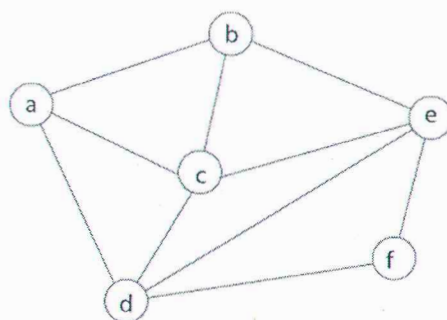
(16)

Section - D

Q7) What is Backtracking problem? What is the general method to solve such problem? Provide solution of 4-Queen problem.

(16)

Q8) Differentiate between Hamiltonian path, cycle and circuit? Find a Hamiltonian circuit using Backtracking method for graph given as follow.

(16)

Exam Code:206703   Paper Code: 3276

Programme: Master of Science (Computer Science)–III

Course Title: Software Testing

Course Code MCSL- 3115

Time Allowed: 3 Hours   Max Marks: 80

Note: Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section. Each question carries 16 marks.

Section – I

1. a. Explain General Principles of testing in detail.
    b. Explain differences between validating and verification.   16
2. Explain origin of Defects. What is the cost of these Defects?   16

Section – II

3. Explain Static vs Dynamic Testing in detail along with their various types.   16
4. Explain term Test Cases in detail. How they are important for Software Testing?   16

Section – III

5. Explain the fo!lowing terms: 16

    a. UML class diagram
    b. UML Sequence diagram
    c. UML use case diagram
6. Explain various issues in involved Object Oriented Testing?   16

Section – IV

7. What do you mean Software Test Automation? What are various skills required for Software Test Automation?   16
8. What do you mean by Regression Testing? What are its various types?   16

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