

ASSIGNMENT QUESTIONS
Fourth Semester B.Sc. Computer Science (2020 Admission)
SCHOOL OF DISTANCE EDUCATION
UNIVERSITY OF KERALA

CS1441 Design and Analysis of Algorithms

1. Explain the recursive algorithm to find the minimum and maximum element in an array.
2. Write a short note on:
 - a) Greedy method.
 - b) Dijkstra's Algorithm.
 - c) NP hard and NP complete problems.
3. What is back tracking? Explain how 8-queens problem can be solved using backtracking.
4. What are spanning trees? Explain the different algorithms to determine minimum cost spanning tree with examples.
5. Explain various methods for analysing the performance of an algorithm.

CS1442 Database Management Systems

1. Explain the fundamental operations of relational algebra.
2. Write a short note on
 - a) Data dictionary.
 - b) Lossy join
 - c) Inference Axioms
 - d) Tuple relational calculus.
3. Discuss the pitfalls in relational database design.
4. Differentiate 3NF and Boyce Codd NF with examples
5. Explain ER Model and explain the symbols used.

CS1443 Computer Networks

1. Explain about various transmission medias
2. Explain the following terms:
 - a) Piggybacking
 - b) Pipelining
3. Write a short note on
 - a) Bridge
 - b) Hub
 - c) Switch
 - d) Router
 - e) Gateway
4. Explain CSMA/CD in detail
5. Explain Distance Vector and Link state routing algorithms in detail.

CS1444 Programming in Java

1. Explain multithreading in Java with suitable example.
2. Differentiate between method overloading and method over-riding with example
3. Explain various types of inheritance supported by Java with diagrammatic illustrations and example.
4. Write the steps for Exception Handling Technique and write a program to create your own Exception.
5. Write short note with example
 - a) Constructor
 - b) Applet
 - c) Interface
 - d) Package
