

CS702 Final Term Exam Syllabus

- Optimal Binary Search Tree
- Greedy Algorithms
- Pseudo Codes of Algorithm
- Mathematical Analysis of Algorithms
- Numerical in slides and recommended book Examples
- Cryptosystem numerical
- Mathematical examples
- Past papers for learning question format

CS702 Final Term Sample Paper Questions

- Pseudo Codes
- Algorithms
- Numerical examples / Proofs
- Definitions
- Mathematical questions from slides or recommend book (hard luck)
- Execution of an algorithms – conversion of tree/ graph etc

CS702 Final Term Sample Paper of a Student

- 1: Find a recursive formula to compute number of edges in a complete graph on n vertices. [5 Marks]
- 2: Write the pseudocode of KRUSKAL algorithm. [5 Marks]
- 3: Prove that for any integer n and any prime number p , if p divides n then p does not divide $n + 1$. [5 Marks]
- 4: Encrypt message STOP using RSA cryptosystem with $p = 43$, $q = 59$ and $e = 13$, $n = pq = 2537$. [5 Marks]
- 5: Prove that the CLIQUE problem is NP-complete. [10 Marks]
- 6: Write the Prim's Algorithm of minimum spanning tree. [10 Marks]
- 7: Prove that for all integers n , if n^2 is divisible by 7 then n is divisible by 7. [10 Marks]
- 8: What is an optimal Huffman Code and binary tree for the following set of frequencies. [10 Marks]