Department of Computer Engineering

Q-1) What is algorithm? Explain characteristics of algorithm 5

Q-2) Explain algorithm as technology 5

Q-3) Evolution of algorithm 5

Q-4) Explain different stages in problem solving 5

Q-5) Explain different algorithmic stratergies 5

Q-6) Explain different steps in algorithm 8

Q-7)Explain correctness and confirming correctness of algorithm 8

Q-8) Explain iterative algorithmic design issues 8

Q-9) Compare priori and a posteriori analysis

Q-10) Explain what is asymptotic notations? Explain different types of asymptotic notations

Q-11) Explain polynomial and non polynomial problems? Explain its computational complexity?

Q-12) what are deterministic and non deterministic algorithms ? Explain with examples

Q-13) Write one example of deterministic and non deterministic algorithm for searching

Q-14) What are P & NP classes? What is their relationships ? Give examples of each classes

Q-15) Explain following relationships with each other

a) Polynomial algorithm
b) Non Polynomial Hard Algorithm
c) Non polynomial Complete algorithm

Q-16) Explain in brief NP Complete problem

Q-17) Write a short note on polynomial time reduction

Q-18) What is SAT and 3 SAT Problem. Prove that 3 SAT Problem is NP complete

Q-19) Prove that vertex cover problem is NP complete

Q-20) Prove that Hamilton cycle problem is NP complete

Q-21) Exaplain NP Hard Hamilton Cycle problem