**B.TECH.(CS) 5TH semester examination, AUGUST 2017**

**Subject Name: Design and analysis of Algorithm**

**Duration: 1:30 hr. Max Marks: 50**

**Section A**

**(Short Answer Type) 5 questions of 10 marks each (any 3) 30**

1. What are the criteria of algorithm, define them?

2. Explain what divide-and-conquer strategy is. Solve recurrence relation using Master method: T(n)=2T(n/2)+n

3. How to design an algorithm, write all the points with description?

4. Write the C programming logic for matrix multiplication in brute force technique

5. Write definition of Time complexity, Space complexity and make table for all types of complexities.

**Section B**

**(Long Answer Type) 2 questions of 20 marks each (any 1) 20**

**1.** Solve the recurrence relation using substitution method: T(n)=T(n-1)+n

**2.** Solve the recurrence relation using substitution method: T(n)=2T(n/2)+1

**3.** Multiply below matrices using Strassen’s algorithm.



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