**SET-A**

**Rajasthan Institute of Engineering & Technology, Jaipur**

**University Roll No. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

3rd Year B. Tech. ..5th..Semester…Ist Mid Term Exam Sept– 2018

Branch:- CSE & IT Subject: - ADS

Time: 2hr [Maximum Marks:-20]

 Instructions to Candidates: -

 Attempt all four questions. All questions carry equal marks.Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly.

1. What is weight balance tree? Define the operation on weight balance tree.

**OR**

1. Define the AVL tree with operation insertion and deletion.
2. Explain interval tree with operation using example.

**OR**

1. Explain the properties of 2-3 trees and define the operations with example.
2. What is red black tree explain the following term:
3. Properties
4. Operations(insertion & deletion)

**OR**

3. Explain the double black & double red problem in red black tree with example.

1. What is binomial tree? Explain the binomial heap with example.

**OR**

1. Write a short note on

I) Dictionary

II) Dynamic Order Statistics

**SET-B**

**Rajasthan Institute of Engineering & Technology, Jaipur**

**University Roll No. \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

3rd Year B. Tech. ..5th..Semester…Ist Mid Term Exam Sept– 2018

Branch:- CSE & IT Subject: - ADS

Time: 2hr [Maximum Marks:-20]

 Instructions to Candidates: -

 Attempt all four questions.All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly.

1. Define the AVL tree with operation insertion and deletion.

**OR**

1. Explain Interval tree with operation using example.
2. Explain Dynamic Order Statistics with operation using example.

**OR**

1. What is 2-3 tree? Create a 2-3 tree of following

 Key values: 30,20,60,10,40,50,70,80,15,90.

1. What is heap tree? Explain its types with example.

**OR**

1. What is Marge able heap? Explain the binomial tree operations with Example.
2. Explain the properties of red black tree and also define the Operations(insertion & deletion)

**OR**

1. Create a Red-Black Tree of following

Key values: - 9,4,5,7,10,2,13,6

 .