

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII (OLD) EXAMINATION – SUMMER 2019****Subject Code: 171602****Date: 27/05/2019****Subject Name: Distributed Database Application & System****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Which process of DDBS design is used when we wanted to design DDBS from scratch? Draw and explain that process. **07**
(b) What are the various problem areas in DDBS environment? Explain them in detail. **07**
- Q.2** (a) Explain Layers of Query Processing. **07**
(b) Explain type of networks topology. **07**
- OR**
- (b) Explain all normal forms with example. **07**
- Q.3** (a) Draw and explain various components of Distributed DBMS. **07**
(b) Describe COM_MIN algorithm used in horizontal fragmentation. **07**
- OR**
- Q.3** (a) What is site Autonomy in Distributed DBMS? Explain in brief. **07**
(b) Describe BEA algorithm used in vertical fragmentation. **07**
- Q.4** (a) Draw and explain query optimization process. **07**
(b) Explain reduction for hybrid fragmentation. **07**
- OR**
- Q.4** (a) What do you mean by query optimization? Explain System R (centralized) query optimization algorithm. **07**
(b) Explain partitioning algorithm. **07**
- Q.5** (a) Explain various transaction states and properties in detail. **07**
(b) Explain Centralized Semantic Integrity Control. **07**
- OR**
- Q.5** (a) Explain Two Phase Commit Protocol. **07**
(b) Explain View management. How it is carried out in centralized and distributed DBMS? **07**
