

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- VIIth SEMESTER-EXAMINATION – MAY/JUNE- 2012****Subject code: 171602****Date: 28/05/2012****Subject Name: Distributed Database Application and System****Time: 02:30 pm – 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) Explain Following transparency for distributed database. **07**
(1) Network Transparency (2) Replication Transparency
(3) Fragmentation Transparency
(b) Explain Top Down Design Process for distributed database design. **07**
- Q.2** (a) Explain Layers of Query Processing. **07**
(b) Describe following operation in context of relation algebra (1) Selection (2) Intersection (3) θ – Join **07**
- OR**
- (b) Explain type of networks topology. **07**
- Q.3** (a) Explain Client – Server architecture with figure. **07**
(b) Describe COM_MIN algorithm used in horizontal fragmentation. **07**
- OR**
- Q.3** (a) Describe BEA algorithm used in vertical fragmentation. **07**
(b) List Distribution design issue and explain any one of them. **07**
- Q.4** (a) Explain individual assertion for distributed semantic integrity control. **07**
(b) Give objective of query processing in view of distributed database. **07**
- OR**
- Q.4** (a) Explain peer – peer architecture with figure. **07**
(b) List steps of query decomposition and explain any one from that. **07**
- Q.5** (a) What is query optimization? List components of query optimizer software and explain any one from that. **07**
(b) What is normalization? Explain any one normal form. **07**
- OR**
- Q.5** (a) Explain complicating factors of distributed DBMSs. **07**
(b) Explain transaction management in DDBMS. **07**
