**Q.P. Code : 515402**

Duration : 3 hrs                                                                                        Marks : 80

Note:    Q.1 is compulsory
         Attempt Any four question from Q. 2 to Q. 7

         Figures to right indicates marks

         Additional information can be considered but justify the same

Q 1.   a)   Explain architecture of Data warehouse with neat diagram                        [10]

       b)   Write difference between (Any Two)                                              [10]
             a. OLTAP Vs OLAP
             b. Operational system Vs Informational system
             c. OODBMS and ORDBMS
             d. DW and Data mart

Q 2.   a)   Compare various architecture available in parallel database with real time      [08]
            example based on it.

       b)   Explain OLAP architecture with a neat diagram                                   [07]

Q 3.   a)   Explain recovery process in distributed DBMS. Prove statement "recovery in      [08]
            DDBMS is more complicated than in centralized system".

       b)   Compare different data storing techniques available in DDBMS                    [07]

Q 4.   a)   Compare different types of web mining with appropriate example                  [08]

       b)   List characteristics of XML. Explain XML documents and databases.               [07]

Q 5.   a)   Explain Fact Constellation Schema for Inventory management system assuming      [08]
            appropriate information.

       b)   Explain K-nearest Neighbors algorithm in detail with an example                 [07]

Q 6.   a)   Explain bitmap index. When does it make sense to use a bitmap index? Explain with [08]
            an example.

       b)   Explain KDD in detail. Write down the importance of Data mining in KDD Process  [07]

Q 7.        Write Short Notes on **ANY THREE**                                              [15]
             a) New Challenges in implementing ORDBMS
             b) Spatial DB
             c) MOLAP
             d) Distributed Catalog Management
             e) Persistent programming languages