BICSE-007

B.Tech. – VIEP – COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

⬜⬜⬛11   **December, 2017**

BICSE-007 : DISTRIBUTED DATABASE

Time : 3 hours   *Maximum Marks : 70*

Note : *Answer any* **seven** *questions. All questions carry equal marks.*

1. (a) Discuss the relative advantages of centralized and distributed databases.   *5*

    (b) What are the possible types of failures in DDBMS which are also applicable to a centralized database system ? Discuss.   *5*

2. With the help of an illustration, describe the key features of the distributed database management system.   *10*

3. (a) What are the desirable properties of a transaction ? Explain with the help of examples.   *5*

    (b) List five important functions of DDBMS and explain.   *5*

4. How does the centralized two-phase locking protocol work ? What are its shortcomings in applying to DDBMS ? *10*

5. What are the different levels of distribution transparencies which can be provided by DDBMS for Read Only applications ? Explain with examples. *10*

6. (a) What are the serializability requirements for DDBMS ? Explain. *5*

    (b) What is Deadlock ? Explain the distributed deadlock detection algorithm. *5*

7. Describe the logical steps of two-phase commit protocol (2PC) in DDBMS. Also show the state of transition during 2PC. *10*

8. What are the problems which arise in DDBMS with respect to the concurrency control and recovery but not encountered in centralized DBMS ? Discuss. *10*