

M. SC. (I.T.) SEM. – I (C.B.C.S. COURSE) (2015 COURSE) :
WINTER - 2017
SUBJECT : DATABASE CONCEPTS

Day : **Tuesday**
Date : **19/12/2017**

Time : **10.00 AM TO 01.00 PM**
Max. Marks : **60**

W-2017-0914

N. B. :

- 1) **Q. No. 1 is COMPULSORY.** Attempt **ANY FOUR** out of the remaining.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagram **WHEREVER** necessary.

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- Q. 1** Write short notes on **ANY FOUR** of the following: **(20)**
- a) ETL
 - b) OLAP
 - c) SQL
 - d) Data Models
 - e) Serializability
 - f) Views
- Q. 2** Explain the concept of Normalization in detail. Explain various normal forms with suitable example. **(10)**
- Q. 3** Explain 'Query Processing' and advantages of query optimization in detail. **(10)**
- Q. 4** Explain the ACID properties of transaction management, by taking suitable example. **(10)**
- Q. 5** What is ER modeling? Explain the concepts of Specialization, Generalization and Aggregation in detail. **(10)**
- Q. 6** What is the need of 'Database Recovery'? Explain various types of Database failures and techniques used for the recovery. **(10)**
- Q. 7** What is the significance of Codd's Rules? Explain 'Entity integrity' and 'Referential integrity' in detail. **(10)**

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