

M. SC. (I.T.) SEM. – I (C.B.C.S. COURSE) (2015 COURSE) :

SUMMER - 2018

SUBJECT: DATABASE CONCEPTS

Day: **Monday**
Date: **28/05/2018**

S-2018-1025

Time: **02.30 pm to 05.30 pm**
Max. Marks: 60

N.B.:

- 1) Q. No. 1 is **COMPULSORY**. Attempt any **FOUR** questions out of the remaining.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat labeled diagrams **WHEREVER** necessary.
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- Q.1** Write short notes on Any **FOUR** of the following: **[20]**
- a) SCHEMA
 - b) ARIES
 - c) Database Users
 - d) ETL
 - e) OLTP vs OLAP
 - f) BCNF
- Q.2** Explain various 'Data Models' in details. **[10]**
- Q.3** What are the challenges for physical level design of DBMS? Explain them in detail. What do you mean by 'Physical Data Independence'? **[10]**
- Q.4** What are different concepts involved in Enhanced Entity Relationship modeling? Explain each of them in detail. **[10]**
- Q.5** Explain the scenario where parallel databases are used for enterprise-wide data processing. **[10]**
- Q.6** What are different constraints in SQL? Explain each of them in detail. What different integrities are ensured by SQL for RDBMS? **[10]**
- Q.7** How 'Concurrency Control' is ensured by DBMS? Explain various techniques / algorithms, which are used for concurrency control. **[10]**

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