

B.TECH SEM – V (2007 COURSE) (COMPUTER ENGG.) :
SUMMER - 2018
SUBJECT: DATABASE MANAGEMENT SYSTEM

Day : **Friday** Time : **10.00 AM TO 01.00 PM**
Date : **25/05/2018** **S-2018-2663** Max. Marks: 80

N. B.:

- 1) **Q.No.1** and **Q.No.5** are **COMPULSORY**. Out of remaining attempt **ANY TWO** questions form section – I and Section – II.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Answers to both the sections should be written in **SEPARATE** answer books.
 - 4) Draw neat and labeled diagrams **WHEREVER** necessary.
 - 5) Assume suitable data, if necessary.
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SECTION – I

- Q.1** a) What is role of Storage Manager and Query Processor in DBMS? (05)
b) State the difference between Trivial and Non Trivial dependencies. (05)
c) Explain in brief Dynamic and Embedded SQL. (04)
- Q.2** a) Draw ER diagram for Banking Management System. (07)
b) Explain the different operation performed in Relational algebra. (06)
- Q.3** a) What is Normalization? Discuss various normal forms using suitable example. (07)
b) Explain in brief Data redundancy and Update Anomalies. (06)
- Q.4** a) Explain using one example (i) DDL (ii)DML (iii) DCL (iv) View (07)
b) What is Trigger? Explain using example different types of Triggers. (06)

SECTION – II

- Q.5** a) What is Indexing? Explain structure of B+ Tree index file. (05)
b) Explain in brief Log-based Recovery. (05)
c) Explain in brief client server architecture in context of DBMS. (04)
- Q.6** a) What is Query Optimization? Explain in detail the various stages of optimization process. (07)
b) What is Hashing? Explain Static and Dynamic hashing technique using suitable example. (06)
- Q.7** a) What is a Transaction? Explain the ACID properties of a Transaction. (07)
b) What is role of Precedence Graph in Transaction Serializability? (06)
- Q.8** a) Explain in detail the Centralised Database Architecture. (07)
b) What is a Data Warehouse? Explain in different schemas of Data warehouse. (06)

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