

1604
Code No.: G-5130/N/BL/AICTE

FACULTY OF ENGINEERING
B.E.(IT) IV Semester (AICTE) (New) (Main & Backlog) Examination, July/August 2025

Subject: Database Systems

Max. Marks: 70

Time: 3 Hours

- Note: (i) First question is compulsory and answer any four questions from the remaining six questions. Each question carries 14 Marks.
(ii) Answer to each question must be written at one place only and in the same order as they occur in the question paper.
(iii) Missing data, if any, may be suitably assumed.

1. ☒ a) List the responsibilities of DBA.
☒ b) Differentiate between DBMS and RDBMS
☒ c) Explain domain key normal form
☒ d) Define a candidate key
☒ e) Define Transaction Log backup
☒ f) Define Aggregate function.
☒ g) Define trigger and active database.
2. ☒ a) Explain three Schema Architecture in detail
☒ b) What do you understand by 'file system organization'? Explain various file organization in detail
3. ☐ a) Discuss about various Codd's rules.
☐ b) Discuss types of attributes in the entity relationship model?
4. ☐ a) Explain relational algebra and its operations.
☐ b) Differentiate primary and secondary indices, dense and sparse indices, single level and multi level indices, B tree and B+ tree.
5. ☒ a) What is a view? How views are created, altered and destroyed?
☐ b) Explain conflict and view serializable schedule
6. ☐ a) Differentiate OLTP and OLAP
☐ b) Briefly explain ACID properties for a transaction
7. ☒ a) Short notes on data warehouse, NoSQL database, mobile database.
☒ b) Explain Normalization in Databases.

blinding light