



32523/E 230

Reg. No.

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**V Semester B.C.A. 3 Degree Examination, Nov./Dec. 2018**  
**(Regular/Repeater)**  
**DATABASE MANAGEMENT SYSTEMS**

Time : 3 Hours

Max. Marks : 80

- Instructions :** 1) *All Sections are compulsory.*  
2) *Draw diagram wherever necessary.*

SECTION – A

1. Answer **any ten** of the following questions : **(10×2=20)**
- What is DBMS ?
  - What is schema ?
  - How primary key is useful ?
  - What do you mean by relation ?
  - List the responsibilities of DBA.
  - What is relational algebra ?
  - What do you mean by redundancy ?
  - What is functional dependency ?
  - What is domain of relation ? Give example.
  - Define database recovery.
  - What is deadlock ?
  - Expand A.C.I.D.

SECTION – B

- Answer **any four** of the following questions : **(5×4=20)**
- Elaborate three level architecture of database system.
  - What is ER diagram ? Discuss various symbols used in ER diagram.
  - What is attribute ? Discuss the following attributes.
    - Composite attribute.
    - Multivalued attribute.
  - Explain different key constraints in relational database.
  - What is normalization ? Explain 1<sup>st</sup> normal form.
  - Discuss any five aggregation function of SQL.

P.T.O.



## SECTION – C

Answer **any four** of the following questions :

(10×4=40)

8. a) Explain any five types of DBMS interfaces.  
b) Discuss different categories of end users who access to the database. (5+5)
  9. Explain the ER schema diagram for the company database. 10
  10. a) What is unary relational operator ? Describe the PROJECT and SELECT operation.  
b) Explain the following algebraic operation with example  
i) UNION  
ii) MINUS. (5+5)
  11. a) Discuss the informal design guidelines of relational schema.  
b) Explain the second normal form. (5+5)
  12. a) Write the syntax for the following SQL commands  
i) INSERT  
ii) DELETE  
iii) CREATE  
iv) SELECT.  
b) Explain the STATE transaction diagram for transaction execution. (4+6)
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