

252006

Seat No. _____

Second Year B. C. A. Theory Examination

April / May – 2003

BCA - 205 : Data Base Management Systems

Time : 3 Hours]

[Total Marks : 50

Instruction : Give examples **wherever** necessary.

- 1** Define the following terms with example (any **five**) **10**
- (a) Dense secondary index
 - (b) Schema and Instance
 - (c) Data Independence
 - (d) Domain and Attribute
 - (e) *DDL, DML, DCL, TCL*
 - (f) Functional Dependency.

OR

- 1** (a) Write down the advantages and disadvantages of *DBMS*. **5**
- (b) Write a short note on *DBA* responsibilities. **5**
- 2** (a) Explain the following keys with example : (any **five**) **5**
- (i) Primary key
 - (ii) Foreign key
 - (iii) Candidate key
 - (iv) Alternate key
 - (v) Super key
 - (vi) Secondary key.
- (b) Explain three level architecture of *DBMS*. **5**

OR

- 2** (a) Explain types of data models with example. **10**

3 Write *SQL* statements for the following : (any **five**) **10**
Donner (d-id, name, blood-group, city)
Collection (center-id, collection-date, bagno, d-id)
Issue (bag-no, issue-date, hospital-id)
hospital (hospital-id, name, city)

- (i) List the donors with details who donated on 1/1/1997
- (ii) List hospitals with details, which have not taken blood so far.
- (iii) List the hospitals blood group wise
- (iv) List the details of donors who have donated blood more than 3 times
- (v) List the current stock of blood bags
- (vi) List the hospitals of Bombay or Ahmedabad.

OR

3 (a) Write a short note on views in *SQL*. **5**

(b) What is *PL/SQL* ? Explain the block structure of *PL/SQL* block. **5**

4 (a) Explain non-redundant cover with example. **5**

(b) Explain following algorithms : **5**

(i) To compute closure of attribute X

(ii) Membership algorithm

(Test if $F \neq X \rightarrow Y$)

OR

4 What is normalization ? Explain First, Second Third and Boyce-codd normal forms with Insertion, Deletion and Updation Anomalies. **10**

5 (a) Explain briefly failure Anticipation and Recovery. **5**

(b) What is *DDBMS* ? Give its advantages. **5**

OR

5 (a) What is transaction ? Explain the properties of a transaction. **5**

(b) What is *DDBMS* ? Give its disadvantages. **5**