



UA-3720

First Year B. C. A. (Sem. - II) Examination

March/April – 2012

Paper - 205 : Database Management System

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दृष्टावेब निशानीवाणी विगतो उत्तरवडी पर अवश्य बभवी.
Fillup strictly the details of signs on your answer book.

Name of the Examination :
FIRST YEAR B. C. A. (SEM. - 2)

Name of the Subject :
205 : DATABASE MANAGEMENT SYSTEM

Subject Code No. : **3 7 2 0** Section No. (1, 2,.....) : **NIL**

Seat No. :

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Student's Signature

(2) Figures on the right side indicate marks.

(3) Take assumption wherever necessary.

1 Answer following : (any seven)

14

- (1) What is a NULL value ?
- (2) Name any four Database Management System ?
- (3) What are disjoint and overlapping design constraints ?
- (4) What is candidate key ?
- (5) List the functions of file manager.
- (6) What is Query ?
- (7) How redundancy can be reduced ?
- (8) What is system R ?

2 Answer in detail : (any three)

18

- (1) Explain distinction among primary key, candidate key, super key, unique key and foreign key by giving example.
- (2) What is DBA ? How DBA can hide various level and kinds of complexity from database user ?
- (3) What is decomposition ? What are criteria for good decomposition ? Give an example of decomposition that is loss less but not dependency preserving.
- (4) Define DBMS. Explain structural architecture of DBMS.

- 3** Answer following : (any four) **12**
- (1) Explain trivial and non trivial dependencies ? Explain by providing appropriate example.
 - (2) Draw an E-R diagram for Banking System.
 - (3) What is the inconsistent values problem ? Include an example not used in the text.
 - (4) Explain the relationship between entity, entity class and entity instance.
 - (5) Name some DBMS applications and its working.
- 4** Answer following : (any three) **15**
- (1) Explain the concept of key and their significance.
 - (2) "Not Every BCNF Decomposition is dependency preservation" justify the statement.
 - (3) Explain DML and DDL statements.
 - (4) Explain Trivial and non-trivial dependencies. Write difference between them.
- 5** (a) Write SQL statement to create these tables : **3**
- Suppliers(sid : integer, sname : string, address : string)
Parts(pid : integer, pname : string, color : string)
Catalog(sid : integer, pid : integer, cost : real)
- (b) Solve the following queries : **8**
- (1) Find the names of suppliers who supply some red part.
 - (2) Find the most expensive parts supplied by suppliers named Mahesh.
 - (3) Find the parts supplied by every supplier at less than \$200.
 - (4) Find the supplier names of the suppliers who supply a red part that costs less than 100 dollars.
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