

Vidya Vikas Mandal's
Shree Damodar College of Commerce & Economics, Margao-Goa
SY BCA, Semester-III, Semester End Examination, October 2019
Database Management Systems (BCA302)

Duration: 2 Hours**Max. Marks: 50***Instructions:*

1. All questions are compulsory
2. Start each questions on a fresh page
3. Figures to the right indicate maximum marks.
4. Draw a neat diagram wherever necessary

Q. 1. A Answer the following in not more than 10 words.

5X1= 5 Marks

1. Name the different Application of DBMS.
2. Name the different users associated with DBMS.
3. Give an example of derived attributes
4. Expand the term ACID
5. Define First Normal Form (1NF)

Q. 1. B State True or False and *Justify*

5X1=5 Marks

1. View level is the lowest t level of abstraction.
2. A database schema is specified by a set of definitions that are expressed using a data definition language (DDL).
3. For each attribute, there is a set of permitted values, called the domain, or value set, of that attribute.
4. A superkey is a set of one or more attributes that, taken collectively, allow us to identify uniquely an entity in the entity set.
5. In ERD, Double rectangles represent relationship sets.

Q. 2 Answer the following.

10 Marks

1 Define Foreign Key. Give one example.

2 X1=2 Marks

2 Explain three levels of abstraction in DBMS

3X1=3 Marks

3 Use of Database Management Systems is preferred over File Processing Systems. Justify the statement.

5X1= 5 Marks

Q. 3. Answer the following

10 Marks

1 Define Data Model

2X1=2 Marks

2 Explain 2NF with the help of example.

3X1=3 Marks

3 Explain different type of attributes with the help of example

5X1=5 Marks

Q.4. Answer the following

10 Marks

1 Define Data Warehousing

2X1= 2Marks

2 With the help of example explain how to convert Many to Many and One to One Relation into relations/tables 3X1= 3 Marks

3 In an educational institute, there are several departments and students belong to one of them. Each department has a unique department number, a name, a location, phone number and is headed by a professor. Professors have a unique employee Id, name, phone number. We like to keep track of the following details regarding students: name, unique roll number, sex, phone number, date of birth, age and one or more email addresses. Students have a local address consisting of the hostel name and the room number. They also have home address consisting of house number, street, city and PIN. It is assumed that all students reside in the hostels. A course taught in a semester of the year is called a *section*. There can be several sections of the same course in a semester; these are identified by the *section number*. Each section is taught by a different professor and has its own timings and a room to meet. Students enroll for several sections in a semester. Each course has a name, number of credits and the department that offers it. A course may have other courses as pre-requisites i.e, courses to be completed before it can be enrolled in. Professors also undertake research projects. These are sponsored by funding agencies and have a specific start date, end date and amount of money given. More than one professor can be involved in a project. Also a professor may be simultaneously working on several projects. A project has a unique *projectId*. Draw a Entity Relationship Diagram for the given requirements.

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| Q. 5. | Answer the following | 10 Marks |
| 1 | What are the Application of Data Mining? | 2X1=2 Marks |
| 2 | Define 3NF | 3X1=3 Marks |
| 3 | Write a short note on Mobile Database and Multimedia Database | 5X1= Marks |