

M.Sc Sem.-2 Examination

P - 409

Bioinformatics

June 2022

Time : 2-00 Hours]

[Max. Marks : 50

Section-I -Attempt any three from this section.**[42]**

Qu 1:

- A. Explain the types of DBMS. Draw an E/R diagram for the Shopping Mall using all types of entities and attributes 7 Marks
- B. Explain briefly Normalization and all its forms 7 Marks

Qu 2:

- A. Explain the physical architecture of a DBMS using a diagram 7 Marks
- B. Explain briefly what is a primary key and a foreign key 7 Marks

Qu 3:

- A. Explain what are the components of SQL and briefly explain their function. 7 Marks
- B. Given a table species with the following fields 7 Marks
write the create statement

speciesid	string	6 – 8 characters	Primary key
speciesname	string	upto 30 characters	cannot be null
habitat	string	upto 255 characters	cannot be null
common_name	string	upto 255 characters	cannot be null
average_age	integer		can be null
Morphology	string	upto 10000 characters	can be null

Qu 4:

- A. Write the syntax of the insert, update and delete commands using examples 7 Marks
- B. Write short notes on join 7 Marks

Qu 5:

- A. What type of data does the miRbase database hold? 7 Marks
- B. Explain the features and Characteristics of BindingDB. 7 marks

Qu 6:

- A. Explain the applications and Characteristics of ProDom and Pfam Database. 7 Marks
- B. Explain the characteristics of derived databases. Explain the features of RNABase Database 7 Marks

Qu 7:

- A. Explain briefly what is data mining and its applications. 7 Marks
- B. Explain what is clustering using examples 7 Marks

Qu 8:

- A. Explain the type of attributes (Nominal, Ordinal, Interval and Ratio). 7 Marks
- B. Explain briefly the association rule with examples 7 Marks

P.T.O

Section II- Answer the following questions

[8]

1. In database, each row is called as a
 - (a) Horizontal data
 - (b) Record
 - (c) Information
 - (d) None of these
2. SQL stands for
 - (a) Standard quality literature
 - (b) Structure query language
 - (c) Standard query language
 - (d) Standard query linguistics
3. What does the following statement in SQL do?
DROP TABLE student;
 - (a) Deletes a table called student
 - (b) Creates a table called student
 - (c) Check if there is a table called student
 - (d) None of the above
4. A top to bottom relationship among the items in a database is established by a
 - (a) Hierarchical database
 - (b) Network database
 - (c) Relational database
 - (d) All of the above
5. What does BLOB in SQL stand for?
 - (a) Binary Large Objects
 - (b) Big Large Objects
 - (c) Binary Language for Objects
 - (d) None of the above
6. A command that let to change one or more fields in a record is
 - (a) Insert
 - (b) Modify
 - (c) Select
 - (d) None of the above
7. Which of the following is true of a Network Structure?
 - (a) It is a physical representation of the data. (b) It allows a many to many relationship.
 - (c) It is conceptually simple. (d) It will be dominant database of the future.
8. What type of relationship exists between a Student table and Fees table?
 - (a) One to one
 - (b) One to many
 - (c) Many to many
 - (d) One to many and many to many

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