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1 (Sem -2) COA

2024

**COMPUTER APPLICATION**

Paper : COA0200404

**( Database Management System )**

Full Marks : 45

Time : Two hours

***The figures in the margin indicate  
full marks for the questions.***

1. Answer the following questions as directed :  
1×5=5

- (a) Rows in a table are \_\_\_\_\_ in a relation.  
(Fill in the blank)
- (b) The various kinds of data that describe an entity, are known as its \_\_\_\_\_.  
(Fill in the blank)
- (c) A \_\_\_\_\_ is always established between two entities.  
(Fill in the blank)

Contd.

(d) An E-R model uses double outlined rectangled to represent \_\_\_\_\_ entity set.  
(Fill in the blank)

(e) A functional-dependency is a relationship between \_\_\_\_\_.  
(Fill in the blank)

2. Answer **any five** questions from the following : 2×5=10

(a) Define the term Database.

(b) What is a file-processing system ?

(c) What is SQL? What are the characteristics of SQL ?

(d) What is an E-R model ? What are its advantages ?

(e) Define the term entity. What is the difference between tangible and non-tangible entity ?

(f) Explain the difference between strong and weak entity type.

(g) Define Normalization.

(h) Define the term degree. What do you mean by the term cardinality ?

(i) Give *two* characteristics of relation.

(j) Explain briefly about integrity constraints.

3. Answer **any four** questions from the following : 5×4=20

(a) Define the term data integrity and explain its types.

(b) What is a file-processing system ? What are the disadvantages of a file-processing system that led to the development of the database system ?

(c) Define the term data-model. Explain different types of data-models.

(d) What are the advantages of using E-R model ?

(e) What is full-functional dependency ? Explain.

(f) Explain partial dependency with an example.

(g) What is BCNF in normalization ?

(h) What is DDL ? Explain.

4. Answer **any one** questions from the following: 10×1=10

- (a) Who is a database administration (DBA)? What are the various responsibilities of a DBA ?
  - (b) What is a database schema ? Explain with the help of an example. Explain the different types of data models.
  - (c) Define Normalization and why is it done. Explain 1NF, 2NF, 3NF and 4NF with suitable examples.
  - (d) What is data type ? What are the various data types supported by standard SQL ?
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