USN | | | | | | | | | | **18SCS13**

First Semester M.Tech. Degree Examination, Dec.2019/Jan.2020
Advances in Database Management System

Time: 3 hrs.   Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. What is data integrity? Explain the types of integrity constraints. **(10 Marks)**
   b. Explain the object definition language (ODL) with an example. **(10 Marks)**

OR

2 a. Discuss the basic types of update operations on relations. **(07 Marks)**
   b. List and explain the three categories of constraints in database. **(03 Marks)**
   c. What is the need for object oriented databases? Explain the features of object oriented database. **(10 Marks)**

Module-2

3 a. What is Hashing? Explain the Internal Hashing technique. **(10 Marks)**
   b. Describe the characteristics of secondary storage devices. **(10 Marks)**

OR

4 a. What do you understand by distributed databases? Give the various advantages and disadvantages of distributed database management systems. **(10 Marks)**
   b. Write short notes on:
      (i) Concurrency control
      (ii) Recoverability **(10 Marks)**

Module-3

5 a. Discuss the characteristics of many NOSQL and explain how these systems are differs from traditional SQL systems. **(10 Marks)**
   b. What is mongoDB model? Explain with an example. **(10 Marks)**

OR

6 a. Explain the Hadoop Distributed File System (HDFS) with respect to architecture and HDFS preliminaries. **(10 Marks)**
   b. What is Bigdata? Explain with respect to volume, velocity, variety and veracity. **(10 Marks)**

Module-4

7 a. Write short notes on:
      (i) Multimedia databases
      (ii) Deductive database **(10 Marks)**
   b. What is spatial database? Explain with the help of data types, spatial operators and spatial queries. **(10 Marks)**

OR

8 a. Explain the generalized model for active databases and oracle triggers. (10 Marks)
   b. Explain the techniques adopted in web usage analysis. (10 Marks)

Module-5

9 a. What is the objective of data mining? What is the importance of associative rules for data mining? Explain any one data mining algorithm. (10 Marks)
   b. Explain the clustering and classification techniques in data mining. (10 Marks)

OR

10 a. What is the use of data warehouse? Discuss the architecture of data warehouse and its functionality in detail. (10 Marks)
    b. State and explain the types of knowledge discovered during data mining. (05 Marks)
    c. Discuss the applications of data mining. (05 Marks)

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