Day : Tuesday   Time : 03:00 PM-06:00 PM

Date : 19-07-2022   **S-20101-2022**   Max. Marks : 60

N. B.

   1) All Questions are **COMPULSORY**

   2) Figures to the right indicate **FULL** marks.

   3) Draw diagrams **WHEREVER** necessary.

Q.1   Answer any **TWO** of the following: **(12)**

   a) Explain the process of knowledge discovery with suitable diagram.

   b) Explain the need of database management system.

   c) What is data model? Explain entity – relationship model.

Q.2   Answer any **TWO** of the following: **(12)**

   a) Create database for student (Srollno, Sname, Saddress, Smarks). Insert five records and display complete database.

   b) Explain the applications of database management system.

   c) Differentiate between network model and hierarchical model.

Q.3   Answer any **TWO** of the following: **(12)**

   a) Draw and explain 3-tier architecture of database management system.

   b) What is data independence? Explain the types of data independence.

   c) Explain data warehouse characteristics to support decision –making process.

Q.4   Answer any **THREE** of the following: **(12)**

   a) What is data mining? What is the need of data mining?

   b) Explain database schemas.

   c) What are the features of ROLAP?

   d) Explain roll up operation.

Q.5   Answer any **FOUR** of the following: **(12)**

   a) What is database key? State different types of database keys.

   b) Define the following database operations:

        i)   update

        ii)   delete

   c) State the features of data marts.

   d) Write a short note on drill down operation.

   e) State the benefits of data warehouse.

   f) Write a short note on data warehouse back end tools.

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