No. of Printed Pages—2

474 (DBMS)

[20-HBGPOW–D3S(O)21A]

BCA 3rd Semester (Old) Exam., 2020 (W)

DATABASE MANAGEMENT SYSTEM

[BCA–09]

(Theory)

Full Marks : 50

Time : 2 hours

The figures in the margin indicate full marks for the questions

1. Answer the following questions : 2×5=10

(a) Define data and information.

(b) Define tuple and attribute. Give examples.

(c) Define primary key with an example.

(d) What are database backups?

(e) What is a data model? Give two examples of data models.

2. Answer any *three* of the following : 4×3=12

(a) Describe any four types of database failure.

(b) What is data independence? Define the different types of data independence.

(c) What are the different types of attributes? Give examples of each.

(d) Describe any four ER modelling symbols with examples.

3. Answer any *one* from the following : 8

(a) What is functional dependency? Also describe full functional dependency and partial dependency with examples. 2+6=8

(b) Describe how sequential access organization for file works. Also mention three drawbacks for this type of organization. 5+3=8

4. Answer any *two* from the following : 10×2=20

(a) Why do we normalize a database? Define 1NF, 2NF and 3NF normal forms. Explain in brief how BCNF is stronger than 3NF. 2+6+2=10

(b) *(i)* Describe the different categories in which SQL statements are classified. 6

(ii) Give the SQL syntax for—

1. creating a table;

2. inserting records into tables. 2+2=4

(c) Define database management system. Mention four advantages of DBMS. Mention any four roles of the database administrator. 2+4+4=10

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