No. of Printed Pages—2

771 (DBMS)

[20-HRGPNW–D3S(N)21A]

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

DATABASE MANAGEMENT SYSTEM

GCA S3–02

Full Marks : 50

Time : 2 hours

The figures in the margin indicate full marks for the questions

1. *(a)* Answer the following questions : 1×4=4

(i) Define field and record.

(ii) Define master file.

(iii) Define functional dependency.

(iv) Why do we need normalization of database?

(b) Fill in the blanks : 1×2=2

(i) In 3NF, no non-prime attribute is functionally dependent on _____.

(ii) In an ER diagram, a _____ symbol represents a relationship.

(c) Choose the correct answer : 1×2=2

(i) Which of the following is a TCS command?

1. Commit
2. Create
3. Insert
4. Drop

(ii) What command is used to view the structure of a table?

1. DESC
2. ALTER
3. UPDATE
4. None of the above

2. Answer any *three* of the following questions : 2×3=6

(a) Give two disadvantages of sequential access organization.

(b) Describe physical data model in brief.

(c) Give the syntax for deleting a database.

(d) What are strong entities? Give an example.

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

(a) Explain the concepts of primary key and foreign key with examples.

(b) State the features of a good database design.

(c) What integrity constraints exist in the DBMS?

(d) Define BCNF. How does it differ from 3NF?

4. Answer any *four* from the following questions : 6×4=24

(a) Describe the various types of attributes used in ER model.

(b) Differentiate among DATE, TIME and TIMESTAMP commands in SQL using example.

(c) What is the purpose of JOIN command in SQL? List the different types of JOIN. Explain any one of them. 1+2+3=6

(d) Explain catastrophic failure and non-catastrophic failure in brief.

(e) What are the basic security goals for any database? What is the use of statistical databases?

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