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Third Semester B.Sc. Degree Examination, November/December 2019

(Semester Scheme (CBCS) (Freshers 2018-19 Onwards)

Computer Science

Paper III – DATABASE MANAGEMENT SYSTEM AND SOFTWARE ENGINEERING

Time : 3 Hours]   *[Max. Marks : 70*

Instructions to Candidates : Answer ALL questions.

SECTION – A

Answer any **TEN** questions. Each question carries **2 marks** :   **(10 × 2 = 20)**

1. Define RDBMS.

2. List the advantage of DBMS.

3. What is schema and instances?

4. What is ER diagram? Draw any two notations used to construct ER-diagram.

5. Write the difference between DROP and DELETE commands.

6. Write the syntax for CREATE and UPDATE commands.

7. Mention the purpose of GRANT and REVOKE commands in SQL.

8. Define software engineering.

9. Name the various categories of software application domain.

10. What is DFD? Name any two notations of DFD.

11. List the golden rules in interface design.

12. What is black box testing?

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Answer any **FIVE** of the following questions :   (5 × 10 = 50)

13. (a) Explain the characteristics of database approach.

    (b) Write a note on various database users.   (5 + 5)

14. (a) What is data model? Explain any one data model in detail.

    (b) Explain different types of keys in database.

15. (a) What is normalization? Explain any one normal form with example.

    (b) Explain any five aggregate function in SQL.   (5 + 5)

16. (a) Explain any three operations in relational algebra.

    (b) Explain DML commands with example.   (5 +5)

17. (a) Specify the features of PL/SQL.

    (b) What is joins? Explain any two types of joins in SQL.   (5 + 5)

18. (a) Compare and contrast waterfall model and V model.

    (b) Write a note on software design.   (5 + 5)

19. (a) What is software testing? Explain any two types of software testing.

    (b) Discuss in detail about software quality assurance (SQA).   (5 + 5)

20. (a) Explain pattern based design in detail.

    (b) Write a note on extreme programming.   (5 + 5)