Second Semester B.C.A. Degree Examination, April/May 2019

(CBCS Scheme)

Computer Science

Paper 2.1 – DATABASE MANAGEMENT SYSTEMS

Time : 3 Hours]   *[Max. Marks : 90*

Instructions to Candidates : Answers ALL the Sections.

SECTION – A

I.   Answer any **TEN** of the following.   **(10 × 1 = 10)**

1.   What is meta data?

2.   What is data redundancy?

3.   Define schema.

4.   What is data independence?

5.   What is an entity?

6.   Give an example for stored attributes.

7.   What is weak entity?

8.   Write the syntax of update command.

9.   What is PL/SQL?

10.   What is heap files?

11.   What is functional dependencies?

12.   Define cursor.

SECTION – B

II.   Answer any **FIVE** of the following.   **(5 × 3 = 15)**

13.   What is DBA? Mention its responsibilities.

14.   Explain network model.

15.   What is composite attribute? Give one example.

16. Briefly explain DML commands.

17. Write the block of a PL/SQL program.

18. What are spanned and unspanned records?

19. Define lock. Name the problems caused by use of locks.

SECTION – C

Answer any **SIX** of the following. **(6 × 5 = 30)**

20. Explain the various end users.

21. Explain the three level DBMS architecture.

22. Explain SELECT and PROJECT operations in relational algebra.

23. Explain the ALTER command with example.

24. Write the PL/SQL program for sum of first 10 natural numbers.

25. What is an ER diagram? Mention the symbols used in ER diagram. Illustrate with an example.

26. Explain RAID technology.

27. Explain the conditional statements used in PL/SQL with example.

SECTION – D

Answer any **FIVE** of the following. **(5 × 7 = 35)**

28. (a) Write the advantages of DBMS.

    (b) What is normalisation? Explain 1NF with example. **(3 + 4)**

29. Explain the terms : **(2 + 2 + 2 + 1)**

    (a) Cardirality ratio

    (b) Foreign key

    (c) Generalization

    (d) Data Models.

30. Consider the database with relations ITEM (<u>Itemcode</u>, Itemname, Price) PURCHASE (Itemcode, quantity). Write the SQL for the following :

    (a) Create the above tables using specified primary key and foreign key

    (b) Enter any 3 taples.

    (c) Display all the records in a table.

    (d) List the items purchased.

31. Explain the joining operations with example.

32. (a) Write the difference between SQL & PL/SQL.

    (b) Briefly explain the client server architecture. **(4 + 3)**

33. (a) Explain external hashing.

    (b) Explain union set operations. **(3 + 4)**

34. (a) What is database trigger? What are its uses?

    (b) List the limitations of PL/SQL. **(4 + 3)**

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