

MCA-07/PGDCA-07/M.Sc.IT-07
FUNDAMENTALS OF DATA BASE
MANAGEMENT SYSTEM

Master of Computer Application/Post-Graduate
Diploma in Computer Application/Master of Science
in Information Technology

(MCA/PGDCA/MSc.IT-11/12/16/17)

Second Semester, Examination-2020

Time Allowed : 2 Hours

Maximum Marks : 80

Note : This paper is of Eighty (80) marks divided into Two (02) sections A and B. Attempt the question contained in these sections according to the detailed instructions given therein.

Section-A

(Long Answer Type Questions)

Note : Section-'A' contains Five (05) long answer type questions of Twenty (20) marks each. Learners are required to answer any two (02) questions only. (2×20=40)

1. Explain advantages of DBMS over file processing system in detail.
2. What are the steps involved in query processing?
Explain how queries are optimized with an example.
3. What is a Database model? Explain Network model in detail with its advantages.
4. What is normalization? Why do we required normalization? Define 1NF, 2NF, 3NF, and BCNF?
5. Write short notes on the following :
 - (a) Functional Dependencies
 - (b) Primary Key
 - (c) Data Manipulation Language (DML)

Section-B

(Short answer type questions)

Note: Section-B Contains Eight (08) short answer type questions of Ten (10) marks each. Learners are required to answer any four (04) questions only. (4×10=40)

1. What is the difference between data and information?
2. Who is a DBA? What are the responsibilities and role of a DBA?
3. Explain entity. What is the difference between strong and weak entity?
4. Explain the different operations of relational algebra.
5. What is SQL? Explain the Characteristics of SQL.

6. Explain the IN operator and BETWEEN operator.
7. What do you understand by database design?
Also explain advantages of SQL?
8. Write short notes on the following :
 - (a) Candidate Key.
 - (b) SUM Functions.
