

**S-774**

**Total Pages : 4**

**Roll No. -----**

**MCS-505**

**Database Management System**

**(MCA/MSCT)**

**2<sup>nd</sup> /4<sup>th</sup> Semester, Examination 2022(Dec.)**

**Time: 2 Hours**

**Max. Marks: 70**

**Note :** This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions 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 Nineteen (19) marks each. Learners are required to answer any two (02) questions only.

**[2 x 19 = 38]**

**P.T.O.**

- Q.1. (a) Discuss and differentiate between database and flat file system.
- (b) Explain the elements of database using suitable diagram.
- Q.2. (a) What are the different uses of database?
- (b) Explain the components of DBMS.
- Q.3. (a) What are the characteristics of SQL?
- (b) Explain all the aggregate function using suitable example.
- Q.4. (a) What is data independence? Why is data independence important?
- (b) What are the five main functions of database administrator?
- Q.5. (a) Define Network data model in brief with example.
- (b) Define integrity constraints with suitable example.

## Section – B

### (Short-answer-type questions)

Note: Section 'B' contains Eight (08) short-answer-type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only.

[4 x 8 = 32]

- Q.1. Define foreign key. What is the concept used for this? How does it play a role in the join operation? Explain through example.
- Q.2. Define client server architecture of distributed database.
- Q.3. Explain the concept of database security with suitable example.
- Q.4. How many types of back up in database? What are the tools available for back up?

P.T.O.

- Q.5. What are the different types of keys?
- Q.6. Explain the different types of failure.
- Q.7. Discuss the relative advantages of centralized and distributed database.
- Q.8. Explain the reason why recovery of interactive transaction is more difficult than recovery of batch transaction.

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