

Ex/MLDL/08/2019

**MASTER OF LIBRARY AND INFORMATION SCIENCE  
(DIGITAL LIBRARY) EXAMINATION, 2019**

(1st Year, 2nd Semester)

**Information Technology - II**

**Paper : MLDL - 08**

Time : Two hours

Full Marks : 50

Answer *all* question.

1A. What do you mean by computer network ? Mention its different types. List the criteria to check the network reliability. Explain in brief different types of network architecture. 1+3+2+4

**OR**

1B. What is MAC address ? Discuss different networking devices and their uses needed to implement a standard LAN in a university campus. What is the difference between physical and logical topology ? 2+6+8

2A. Identify and discuss with suitable diagrams the components of a data communication system. Discuss telecommunication switching technologies available to handle digital traffic with their pros and cons. 3+7

**OR**

(Turn Over)

(2)

2B. What is a Network protocol? Explain the concept of layered task of networking. Briefly describe the function of the OSI model. 1+2+7

3A. What is RDBMS? Why normalization is needed for RDBMS? Explain First Normal form. Name a few popular RDBMS software. 2+3+3+2

**OR**

3B. Name a few areas where RDBMS is being used in modern library management system. Write SQL commands for the following :

- (i) Create a table named 'Book' with three fields (book\_id, title, and publisher) with appropriate attributes.
- (ii) Add another field 'author' after 'title' with proper attributes.
- (iii) Make the field 'book\_id' as PRIMARY KEY.
- (iv) Insert a record with proper values. 2+2+2+2+2

4A. Name different types of data used in MySQL. What do you mean by 'fields' and 'records' in a database? What is data redundancy in RDBMS? Explain. 2+3+3+2

(3)

**OR**

4B. Write SQL commands for the following :

- (a) Delete a table named 'Employee'.
- (b) Replace "Ashok" by "Asoke" for the field 'fname' in table 'Employee'.
- (c) Retrieve all data from a table 'Employee' where 'surname' is 'Das'.
- (d) Delete a record from a table 'employee' where 'emp\_id' is 100.
- (e) Delete a column named 'publisher' from table 'Book'.

2+2+2+2+2

5. Write short notes on any *two* of the following :  $2 \times 5 = 10$

- (a) Wireless Network
- (b) Boyce-Codd Normal Form (BCNF)
- (c) Network security
- (d) Entity-Relationship diagram in RDBMS.