

**322516(22)**

**B. E. (Fifth Semester) Examination, April-May 2020**

**(Old Scheme)**

**(CSE Branch)**

**DATABASE MANAGEMENT SYSTEM**

***Time Allowed : Three hours***

***Maximum Marks : 80***

***Minimum Pass Marks : 28***

***Note : Attempt all questions. Part (a) of each question is compulsory and attempt any two parts from remaining parts (b), (c) or (d).***

**Unit-I**

1. (a) Define Instances and Schemas. 2
- (b) What is the importance of DBMS? Enlist drawbacks of File processing system. 7

- (c) What is Entity Relationship diagram and its usage?  
Draw an ER diagram for library management system.  
Consider Books, Publisher and Member as entities.  
Assume the attributes. Show relationship among  
entities and also show primary keys. 7
- (d) Explain the architecture of DBMS with the help of  
diagram. 7

**Unit-II**

- 2. (a) What are the types of Cursor? Write the names of  
implicit Cursor. 2
- (b) What are Constraints? Explain different types of  
constraints. 7
- (c) What is Relational Algebra? Describe the basic  
operations of relational algebra. 7
- (d) What is View? Explain the operations that can be  
performed on view. 7

**Unit-III**

- 3. (a) What are the different types of anomalies available  
in DBMS? 2

- (b) Differentiate DDL, DML and DCL statements. 7
- (c) What is trigger? Explain in detail. Write a PL/SQL  
program to demonstrate 'before insert' trigger. 7
- (d) Explain in cursor with example. 7

**Unit-IV**

- 4. (a) What is ACID property in DBMS? 2
- (b) Define Normalization and its types 1NF, 2NF and  
3NF with example. 7
- (c) Describe multivalued dependency. Explain 4th  
Normal form. 7
- (d) Define Transaction. What are the various states of  
a transaction? 7

**Unit-V**

- 5. (a) Define Indexing. 2
- (b) Enlist Concurrency Control Protocols. Explain any  
one by considering suitable example. 7
- (c) Define Recovery. Explain log-based recovery. 7

(d) Explain in brief B+ Tree and Index Sequential Access Method. 7