

G.R. No.	
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Paper code: U359-123(G1) / U359-143(G1)

**OCTOBER 2019/INSEM (T1)**

**T. Y. B. TECH. (COMPUTER ENGINEERING/INFORMATION TECHNOLOGY)**  
**(SEMESTER -I)**

**COURSE NAME: DATABASE MANAGEMENT SYSTEM**

**COURSE CODE: CSUA31173/ITUA31173**

**(PATTERN 2017)**

Time: [1Hour]

[Max. Marks: 30]

**Instructions to candidates:**

- 1) Answer Q.1 OR Q.2 and Q.3 OR Q.4.
- 2) Figures to the right indicate full marks.
- 3) Use of scientific calculator is allowed.
- 4) Use suitable data wherever required.

- Q.1) a) Explain drawbacks of file processing system over DBMS. [6]  
 b) Draw an ER diagram for online Book shop which should consists of entity set, attribute, relationship, mapping cardinality and keys, it will maintain information about all customers, books, book author, publisher, billing etc. [6]  
 c) Define following terms with suitable example: a) Foreign key [4]  
 b) Super key.

**OR**

- Q.2) a) Draw and explain overall structure of Database System. [6]  
 b) Draw an ER diagram for University examination which should consists of entity set, attribute, relationship, mapping cardinality and keys, it will maintain information about all students, courses, patterns, subjects, examination fees etc. [6]  
 c) Define following terms with suitable example: a) Weak entity set [4]  
 b) Strong entity set.

- Q.3) a) Consider the following database schema: [6]  
 physician(reg\_no, physician\_name, tel\_no, city)  
 patient(patient\_id, patient\_name, street, city)  
 visit(patient\_id, reg\_no, date\_of\_visit, fee)  
 i) Find name of all patients with 'Pune' city.  
 ii) Find name of physician whose fee is less than 500 rupees.  
 iii) Find name and registration number of physician with visit date '01-06-2019'.

- b) Explain any two types of join operations with example. [4]  
c) Explain concept of Stored Procedures and Cursors. [4]

OR

Q.4) a) Consider the following database schema: [6]

Persons(Person\_Id, Name, Address, City)  
Orders(P\_Id, Person\_Id, Order\_date)  
Product(P\_Id, Product\_Name)

- i) Find name of all Persons with 'Mumbai' city.  
ii) Find Product names which are ordered on date '01-06-2019'.  
iii) List all the persons and their orders.

b) Discuss any two fundamental operations in relational algebra [4]  
with example.

c) Explain concept of Functions and Triggers. [4]