

7. Consider a MOVIEDatabase in which data is recorded about the movie industry. The data requirements are summarized as follows :

- Each movie is identified by title and year of release. Each movie has a length in minutes. Each has a production company, and each is classified under one or more genres (such as horror, action, drama, and so forth). Each movie has one or more directors and one or more actors appear in it.
- Actors are identified by name and date of birth and appear in one or more movies. Each actor has a role in the movie.
- Directors are also identified by name and date of birth and direct one or more movies. It is possible for a director to act in a movie (including one that he or she may also direct).
- Production companies are identified by name and each has an address. A production company produces one or more movies.

Identify:

- entities of interest.
- attributes for each entity.

Draw an ER diagram for the above database. Also specify clearly all constraints on the relationships in the diagram.

State clearly any assumptions that you make. 10

This question paper contains 8 printed pages]

11/5/2019 (Eve.)

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

S. No. of Question Paper : 2928

Unique Paper Code : 32345201

IC

Name of the Paper : Introduction to Database Systems

Name of the Course : General Elective for Honours :

Computer Science

Semester : II

Duration : 3 Hours

Maximum Marks : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Q. No. 1 is compulsory. Attempt any four questions out of

Q. Nos. 2 to 7. Parts of a question must be answered together.

Marks are indicated against each question.

1. (a) Suggest appropriate data types for the following

attributes :

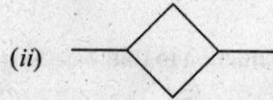
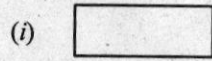
3

(i) Marks in Examination

(ii) Name of an Employee

(iii) Date of Birth.

- (b) What do the following geometrical shapes represent in an ER Diagram ? 3



- (c) In each case, draw the geometrical shape to be used in an ER Diagram : 3

(i) Multivalued attribute

(ii) Weak entity type

(iii) Key attribute.

- (d) For each of the following commands, indicate whether it belongs to DDL or DML : 4

(i) Create table

(ii) Update table

(iii) Drop table

(iv) Delete from table.

- (b) Write SQL query for performing the following tasks on relation schema 4

EMPLOYEE (Eno, Ename, BDate, Address, Dno) :

(i) For displaying employee names having two 'a's in their names.

(ii) For sorting the data of the above table name-wise.

6. (a) EMP_DEPT 6

<u>Ename</u>	<u>Id</u>	<u>Bdate</u>	<u>City</u>	<u>Dno</u>	<u>Dname</u>	<u>DmgrSsn</u>
Kalpna	1	01-05-92	New Delhi	101	Research	3
Daksh	2	02-05-92	Hyderabad	101	Research	3
Nitin	3	11-05-95	Bangalore	102	Admin	4
Anita	4	04-07-92	Mumbai	102	Admin	5
Narayan	5	22-05-82	Hyderabad	105	Headquarter	5

Consider the above relational database schema and give an SQL query for each of the following :

(i) a query that will result in Insertion Anomaly.

(ii) a query that will result in Deletion Anomaly.

(iii) a query that will result in Update Anomaly.

- (b) Differentiate between HAVING and WHERE clause with the help of an example. 4