Name: - Nandini Gupta
Roll no: - 220950320079

Database Technologies
Assignment -01

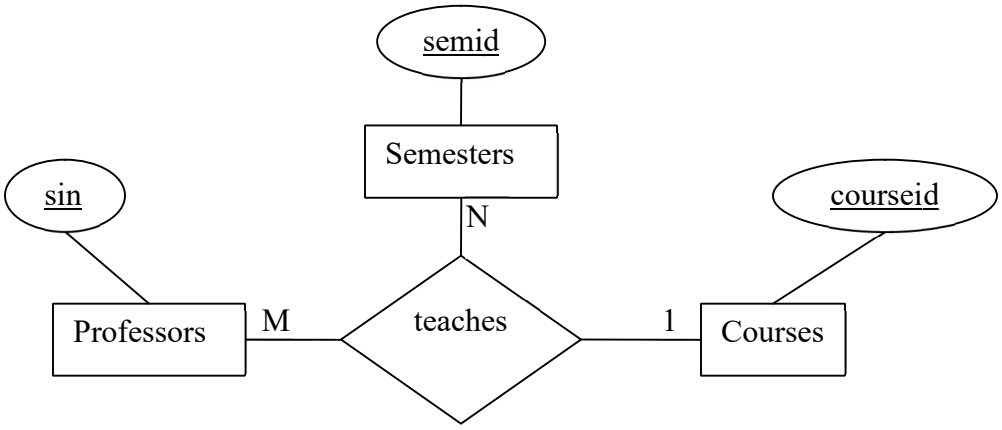
**1**

**a)** Entity sets

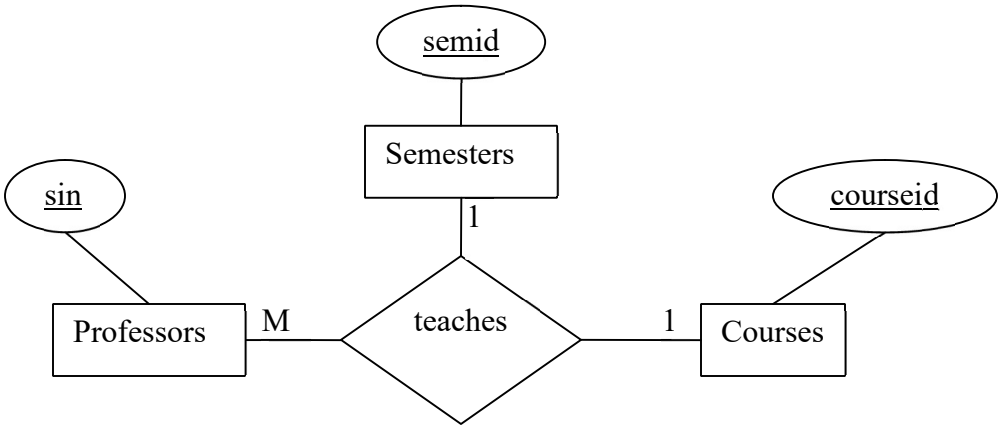
- professor: with “sin” underlined as the primary key,
- course: with “courseid” underlined as the primary key,
- semester: with “semid” underlined as the primary key.

Relationship set

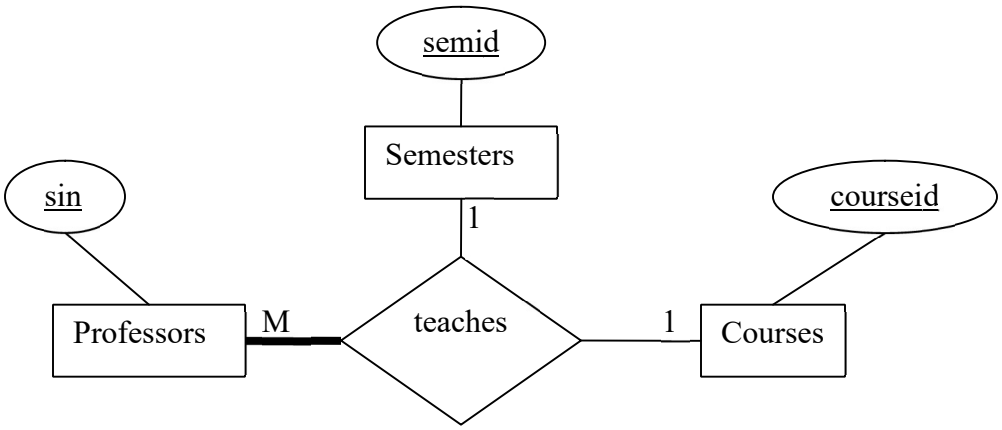
- teaches : associates professor, course and semester. No other attributes. The cardinality constraint is m-to-m. There is a single candidate key of the teaches relationship: {“sin”,”coursed”,”semid” }. The participation constraint can be anything; let say that it is total on professor and course entity sets.



**b)** Semester does not need to be an entity set here. Teaches is a binary relation between professor and course. Semester is attribute of teaches. The key o f teaches is {semid, courseid}.




**c)** This means total participation from professors and total participation from courses. Because it is still m-to-m, the candidate key remains { semid, courseid }.



**d)** This time the relationship is 1-to-1. There are now two candidate keys: either {semid} or {courseid }.