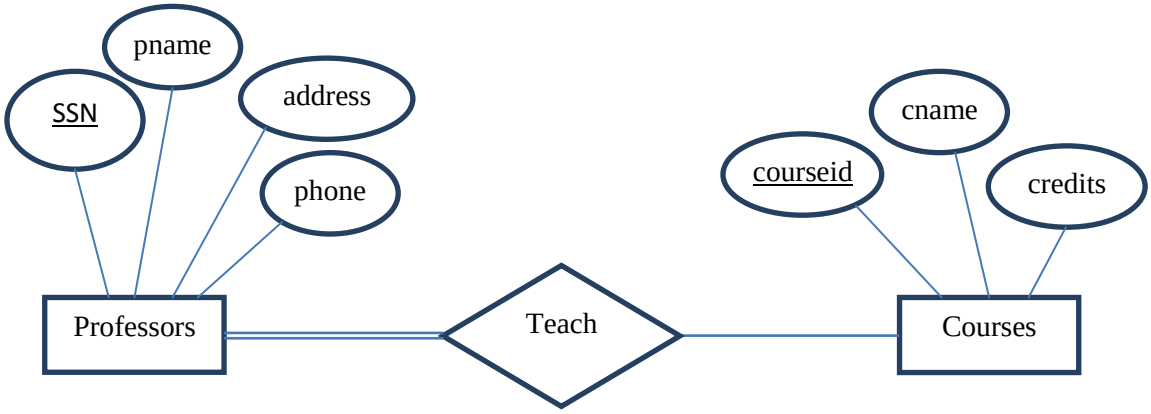
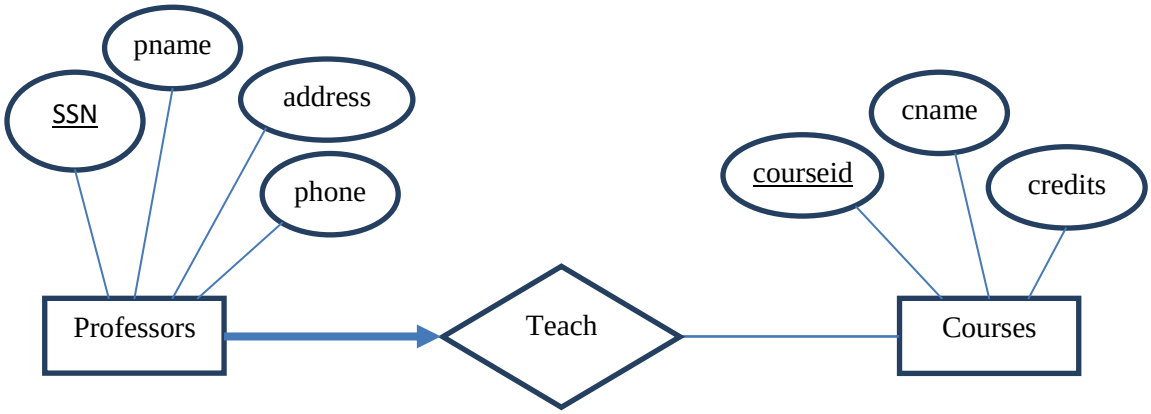
Q1.

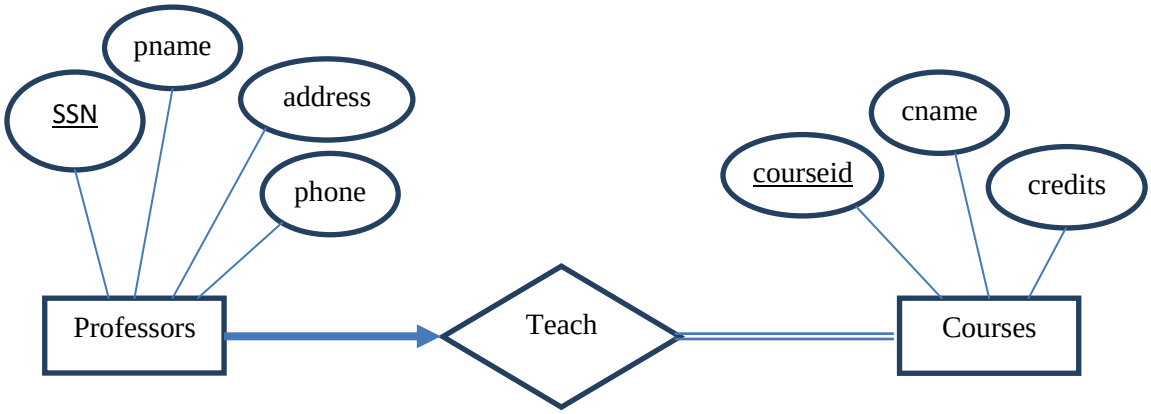
a)


pname
SSN
address
phone
cname
courseid
credits
Professors
Teach
Courses

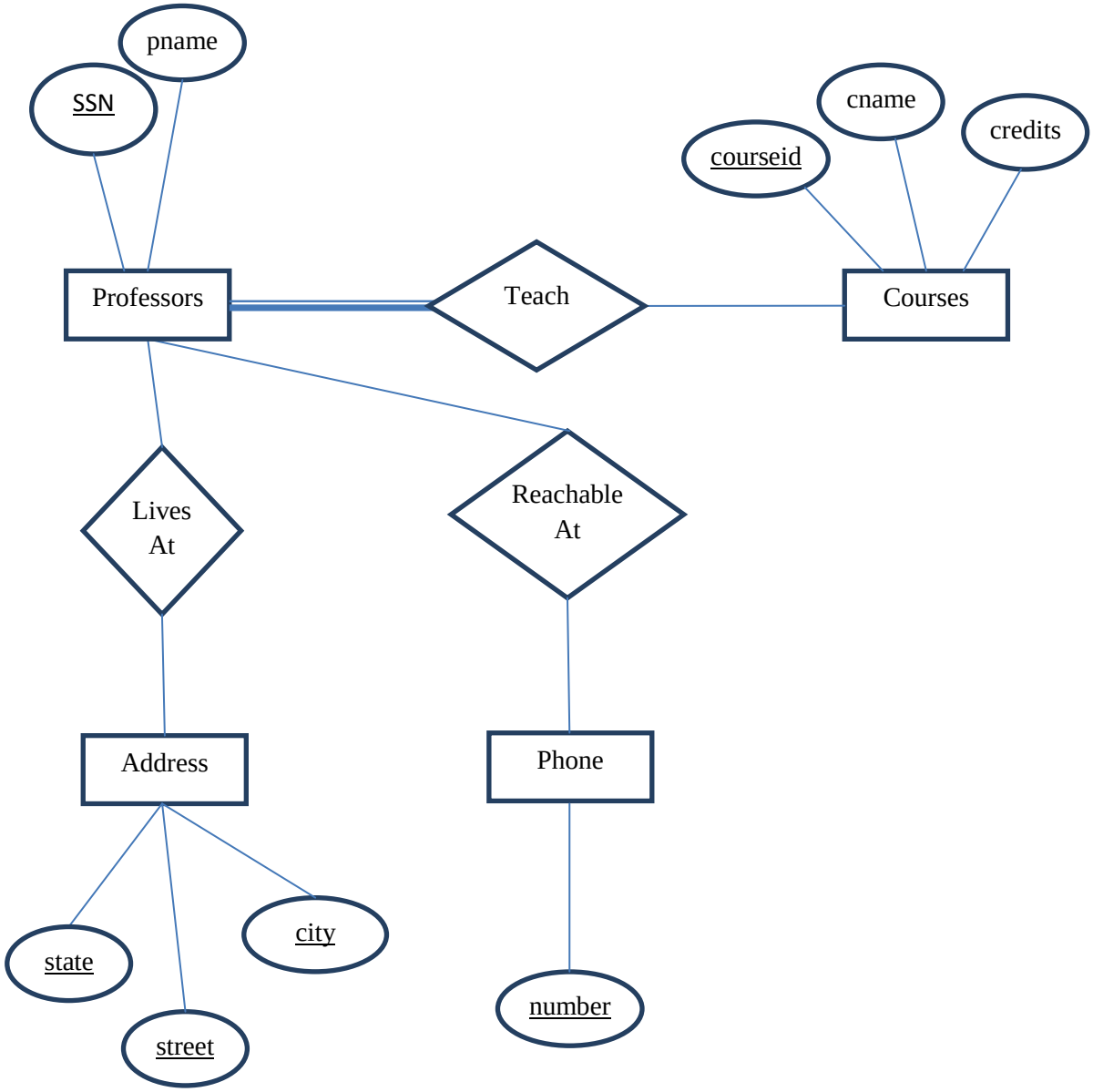
b)


pname
SSN
address
phone
cname
courseid
credits
Professors
Teach
Courses

c)


pname
SSN
address
phone
cname
courseid
credits
Professors
Teach
Courses

d)


pname
SSN
cname
credits
courseid
Professors
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Lives
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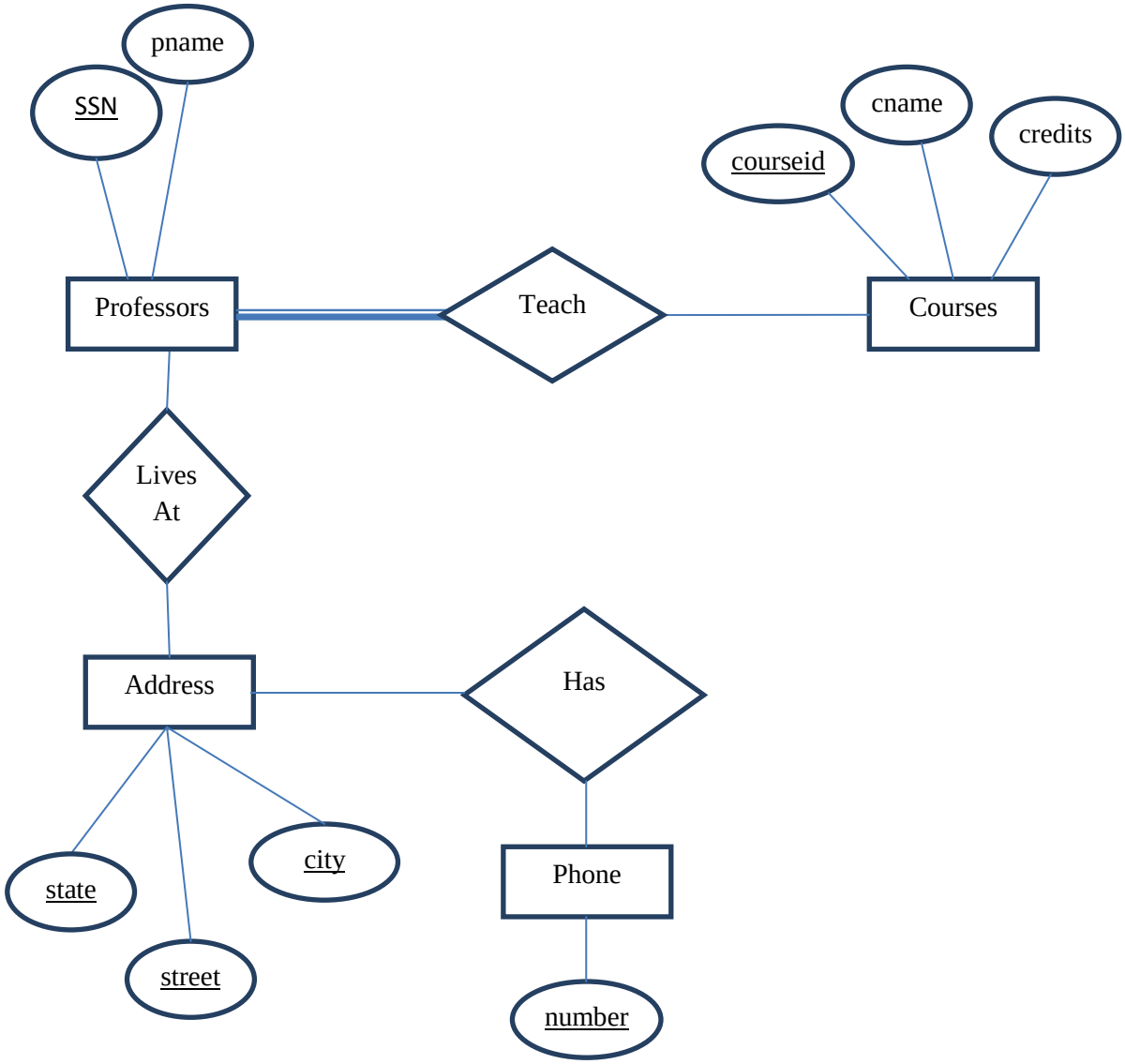
At
Address
Phone
state
city
street
number

e)


pname
SSN
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credits
courseid
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Address
Has
state
city
Phone
street
number

Q2.

a) The set with all tuples (a,b) where one or both of the conditions below are true:
   a = 10 and b is any integer or null.
   a is any integer or null and b = 20.

b) The set containing exactly the tuple (10,20).
c) The set with all tuples (a, b) where a is any integer and is not null, and b is any integer or null.
d) The set of all tuples (a, b) where a and b are the same integer that is not null.

Q3.

a)

```
CREATE VIEW ManagerSummary(DeptName, MgrID, MgrName, MgrSalary,EmpCount) AS

SELECT D.dname, D.managerid, E.ename, E.salary, COUNT(W.eid)

FROM Department D, Employee E, Works W

WHERE D.managerid=E.eid AND D.did=W.did

GROUP BY D.did, D.dname, D.managerid, E.ename, E.salary;
```

b)

```
SELECT DISTINCT MS.MgrSalary

FROM ManagerSummary MS

WHERE MS.DeptName = 'Sales';
```

c)

```
SELECT TMP.MgrName

FROM   (SELECT MS.MgrID, MS.MgrName, SUM(EmpCount) AS TotalEmp

        FROM ManagerSummary MS

        GROUP BY MS.MgrID) TMP

WHERE TMP.TotalEmp = (SELECT MAX(TotalEmp) FROM TMP);
```