21. What is the type of relationship between weak and strong entity?

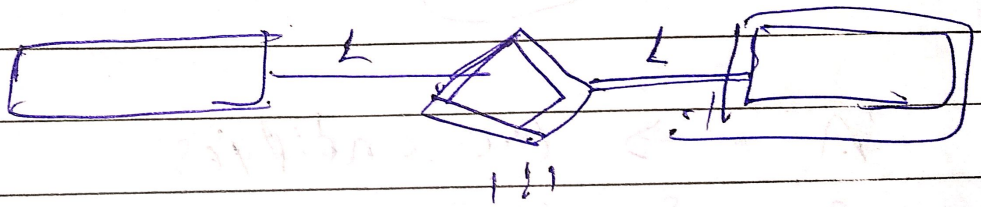
(a) 1 : 1

(b) 1 : M

(c) M : 1

(d) M : N

(a) 21⇒ What is the type of relationship b/w weak & strong entity.



(a) 1 : 1

22. Let R be an RDBMS with attributes A_1, $A_2,\ldots..,A_n$. Let S denotes the set $\{A_1, A_2,\ldots,A_n\}$. Let $T \subset S$ be a set of attributes that forms a candidate key. Then which of the following is/are TRUE?

(P) $T \rightarrow S - T$

(Q) $\exists P \subset T$ s.t. $P \rightarrow S - P$

(R) $\forall Q \supseteq T$ s.t. $Q \rightarrow S - Q$

(a) Only P is TRUE

(b) P and Q are TRUE

(c) P and R are TRUE

(d) Q and R are TRUE

(C) 22⇒ Let R be an RDBMS with attributes, $A_1, A_2, \ldots A_n$. Let S denotes the set $\{A_1, \ldots A_n\}$. Let $T \subseteq S$ be a set of attribute that forms a C.K. Then True.

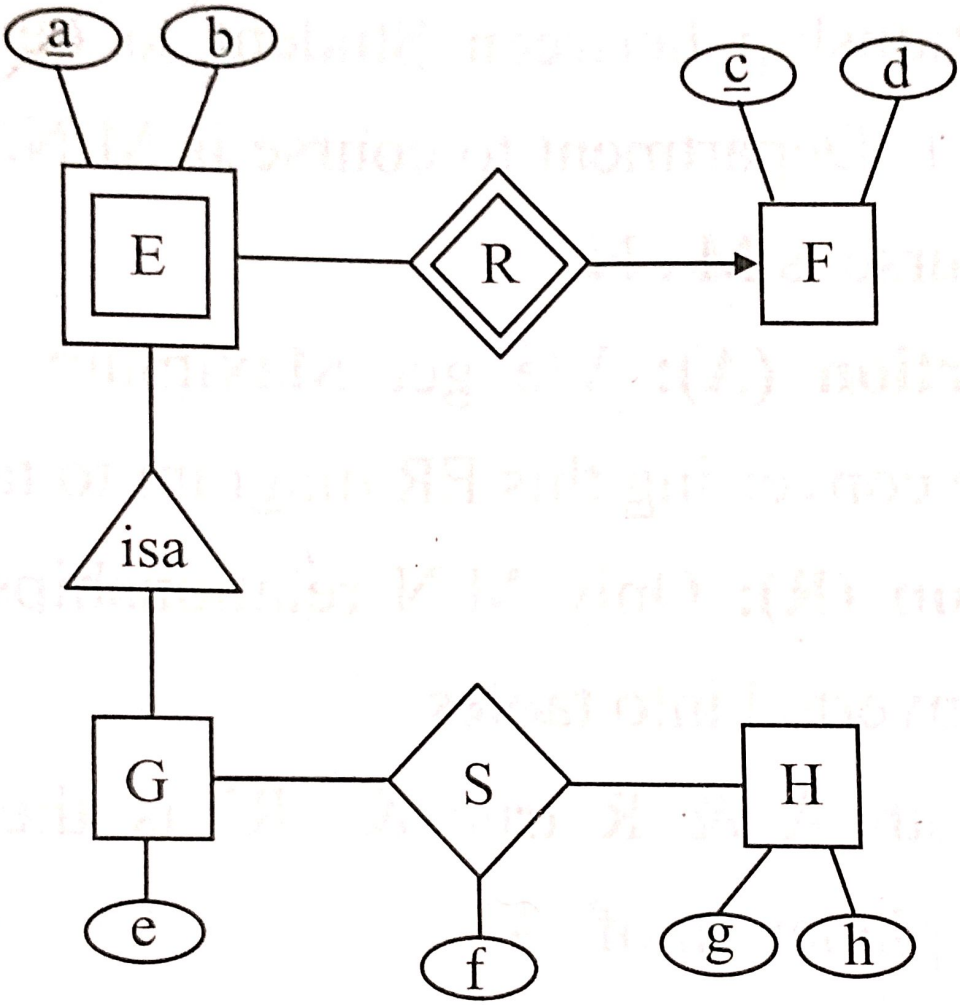
(P) $T \longrightarrow S - T$

(Q) $\exists P \subset T$. s.t $P \rightarrow S - P$

(R) $\forall Q \supseteq T$ s.t $Q \rightarrow S - Q$

(C) P & R are True.

23. Convert the E/R diagram below to a database schema, using the "E/R" method

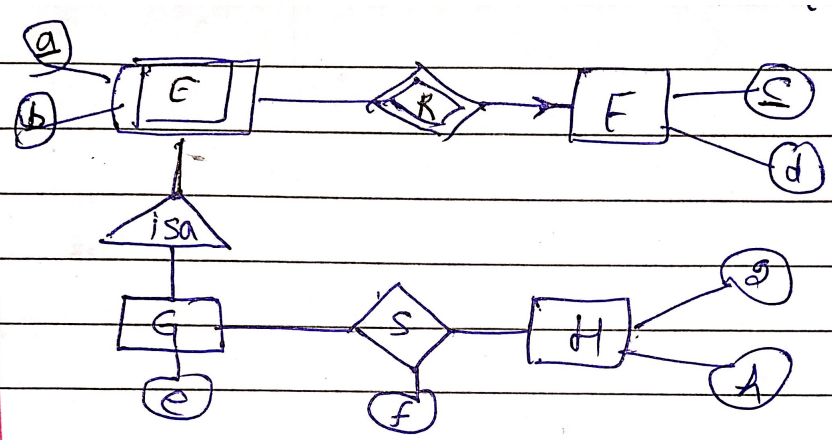


What is the sum of the number of attributes in each of the relation schemas?

(a) 14 (b) 15

(c) 16 (d) 17

(a) 23⇒



③ ER(a, c, b)
④ F(c, d)
⑤ G(a, c, e)
⑥ H(g, h)
⑦ S(a, c, g, f)

(9) Sum of number of attributes = 19

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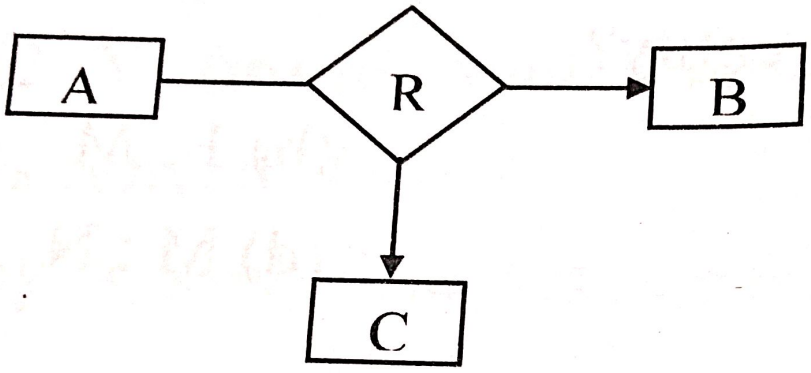
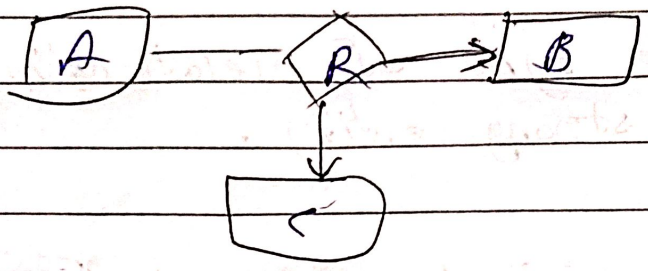
24. Consider the following E/R diagram:



If A has 100 entities, B has 1000 entities, and C has 10 entities, what is the maximum number of triples of entities that could be in the relationship set for R?

(a) 100
(b) 1000
(c) 1,00,000
(d) 10,00,000

Q) 29 =



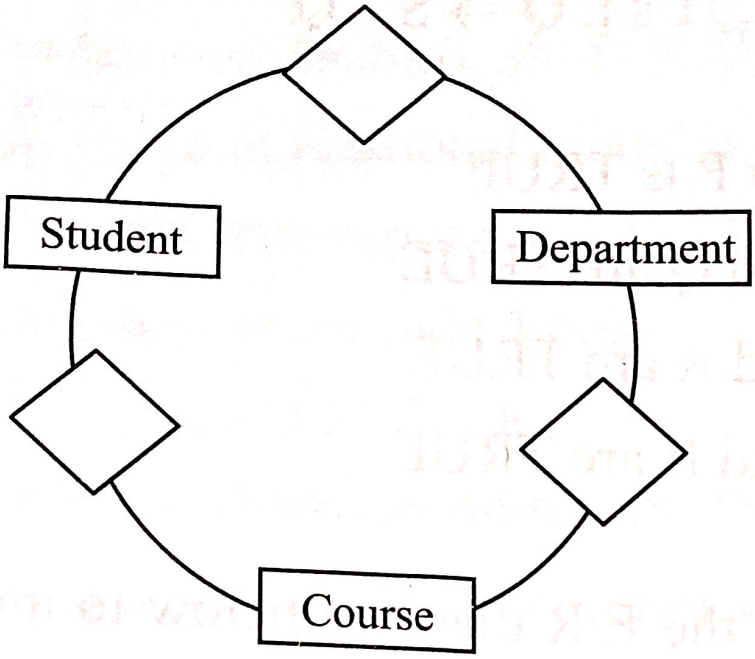
A → 100 entities
B → 1000 ——
C → 10 ——

maximum number of tuples of entities that could be in the relationship set for R ?

(a) 100 Ans

As entity set 'A' is the key to the relationship, the maximum number of tuples in relationship set is, number of tuple in A.

Common Data for Q25 & Q26 is given below:



25. Relationship between Student to department is M:1, Department to course is M:N, Student to course is M : N.

Assertion (A): We get Maximum 5 tables while converting this ER diagram to tables.

Reason (R): Only M:N relationships should be converted into tables

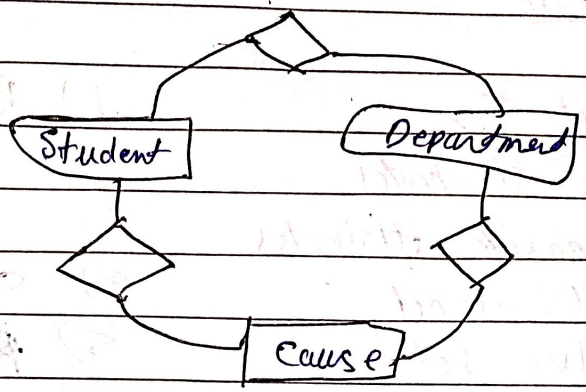
(a) Both A & R true & 'R' is the correct explanation of 'A'

(b) Both A & R true & 'R' is the not correct explanation of 'A'

(c) Both 'A' & 'R' are false

(d) 'A' is true, 'R' is False

Common - 25 & 26



(C) 25⇒ Relationship Student to department 1 : M
Departm— to course — M : N
St. to Cou — M : N

✗ (A) We get max 5 tuples while converting this ER diagram

✗ (B) Only M:N relationships should be converted into tables.

(C) Both False

26. If student entity consists attributes (s1, s2, s3), department with (d1, d2, d3) and course with (c1, c2, c3) then what would be the total number of attributes in Student table on conversion of this ER diagram to tables, if student is a key to the relationship set.. Assume zero attributes for relationships?

(a) 3 (b) 5 (c) 6 (d) 4

(b) 26→

(b) Student table contains P.K of department as Foreign key.

(b) (5) Ans

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27. The terms in list-A have been mapped to list-B so that it corresponds to the mapping process of the ER model into a relational. Which of the following represents the mapping process?

List-A

P. Entity type

Q. Key attributes

R. Composite attributes

S. Multivalued attribute

T. Value set

List-B

1. Primary (or secondary) key
2. Domain
3. Child table
4. Set of simple component attributes
5. Relation

Codes:

	P	Q	R	S	T
(a)	3	1	4	2	5
(b)	5	1	4	3	2
(c)	3	1	4	5	2
(d)	5	1	3	4	2

(b) 97=5

List - A	List - B
P) Entity Type	1) Primary key
Q) Key attributes	2) Domain
R) Composite attributes	3) Child table
S) Multivalued	4) Set of simple compositn
T) Value set	5) Relation

(b) P → S
Q → 1
R → 4
S → 3
T → 2

28. Match the following with most appropriate type of attributes.

List–I

(P) Name of the dependent

(Q) Degree of a person

(R) Telephone number

(S) Date of birth

List–II

1) Stored attribute

2) Composite attribute

3) Multivalued attribute

4) Discriminator attribute

Codes:

(a) P – 4, Q – 3, R – 2, S – 1

(b) P – 4, Q – 2, R – 3, S – 1

(c) P – 4, Q – 1, R – 2, S – 3

(d) P – 4, Q – 1, R – 3, S – 2

(b) 28 ⇒

List - I	List - II
P) Name of department	1) Stored attribute
Q) Degree of person	2) Composite attribute
R) Telephone No.	3) Multivalued
S) DOB	4) Discriminator

(b)

P → 4
Q → 2
R → 3
S → 1

29. Which of the following statement is false?

(a) Every dominant entity is a strong entity

(b) Specialization is done when more than one domain constraint is required on an attribute based on the entity type.

(c) A relationship type can be related to another relationship type

(d) A weak entity will have primary key on its own.

(d) 29→ Which False -

(d) A weak entity will have P.K on its own.

False.