4 Venn Diagrams and Syllogism

Introduction

Venn diagram and syllogism-based questions are very common in the logical reasoning section of MBA Entrance exams such as SNAP, NMAT, CMAT, TISSNET, MAT, etc. They test a candidate's ability to draw conclusions based on the given information.

Understanding the Venn diagram helps in solving not only the Venn Diagram-based questions but also the syllogism questions, as we will be discussing the 'Venn Diagram-Based Approach' to solve the syllogism questions.

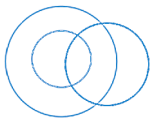
Venn Diagrams

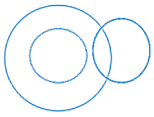
Venn diagrams are used to represent sets. The sets can be groups of students, players, letters, numbers, etc. Figures such as squares, circles, rectangles, triangles, etc., are used to represent such groups and the relationship that exists among these groups.

Let's look at a few examples!

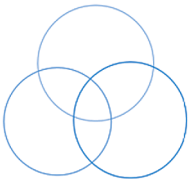
Example 1:

1. Which of the following diagrams indicates the best relation between doctors, husbands, males? [Select option (E) if none of the given options is correct].

(A) 

(B) 

(C) 

(D) 

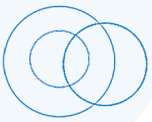
Solution: (A)

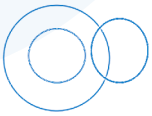
All husbands are males and some husbands and some males may be doctors.

Hence, option (A) is the correct Venn diagram representation of the given sets.

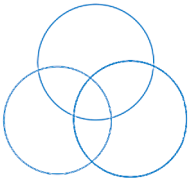
Hence, option (A) is correct.

2. Which of the following diagrams indicates the best relation between women, sisters, and mothers? [Select option (E), if none of the given options is correct.]

(A) 

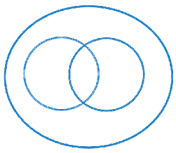
(B) 

(C) 

(D) 

Solution: (E)

All the mothers and sisters are women. Also, some mothers may be sisters. So, the set of mothers and sisters should be inside the set of women, and there has to be an intersection between the set of mothers and sisters. Hence, none of the given figures is the correct representation of the given 3 sets. The correct diagram should be as follows:

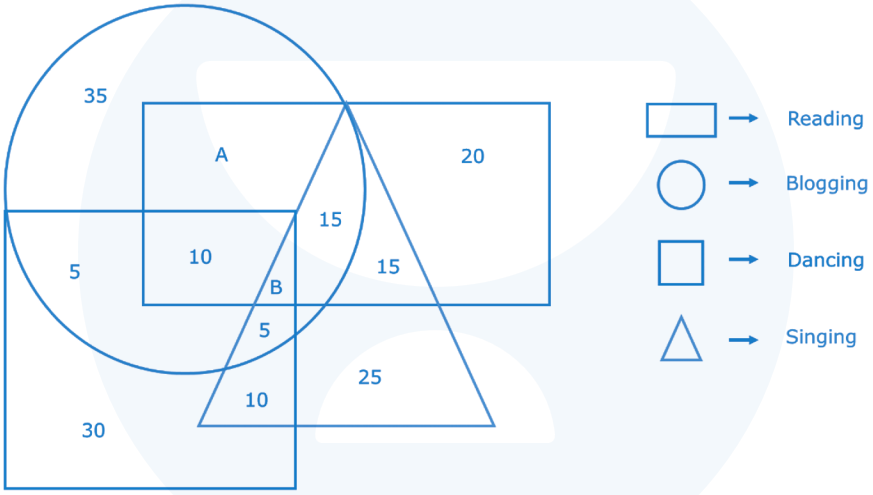


Hence, option (E) is correct.

Example 2:

Answer the questions based on the information given below.

The following Venn diagram represents the number of people pursuing various hobbies in a particular locality. (Consider the value of A as 10, wherever required).



1. Which of the following is a correct description of the region represented by B?

(A) Those who pursue blogging, dancing, and singing but not reading as their hobby.
(B) Those who have all the four hobbies.
(C) Those who have all the hobbies except blogging.
(D) None of these.

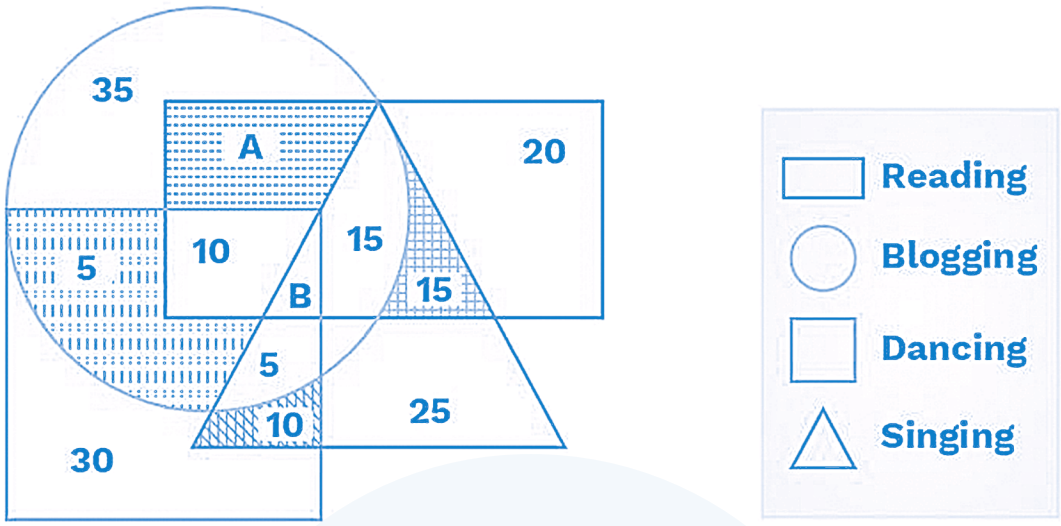
Solution: (B)

Region B is at the intersection of all the four sets. So, it represents people who have all the four hobbies.
Hence, option (B) is correct.

2. How many people pursue exactly two hobbies in the given locality?

(A) 25
(B) 30
(C) 40
(D) 45

Solution: (C)
The regions representing people who pursue exactly two hobbies are highlighted below:



So, the required answer is = 10 + 5 + 10 + 15 = 40 (∵ value of A is 10)
Hence, option (C) is correct.

3. How many people pursue singing as a hobby in the given locality?
(A) 25
(B) 70
(C) 70 + B
(D) 60 + B

Solution: (C)
The sum of all the numbers inside the triangle will be the required value.
So, the required answer is 15 + 15 + 25 + 10 + 5 + B = 70 + B.
Hence, option (C) is correct.

Keynote

IMP Words

ALL

SOME

SOME NOT

NO

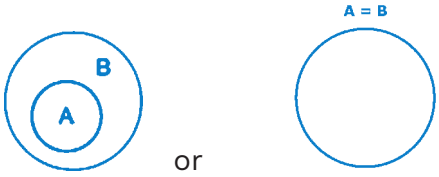
Syllogism

Syllogism deals with a type of argument that helps to draw a conclusion based on a set of propositions. There are many ways to solve syllogism but the best way to solve questions on syllogism is through Venn diagrams. Let's understand how to draw Venn diagrams for each concept one by one.

All

Statement: All A are B.

The Venn diagrams for 'all A are B' can be:



'Definitely true' conclusions that follow are:

- Some A are B.
- Some B are A.

OMET Mantra

While answering the questions, only those conclusions should be considered which are 'definitely true'.

'Possibly true' conclusions are not considered.

Example 3:

Statements:

All A are B.

All B are C.

Conclusions:

I. All A are C.

II. Some B are A.

(A) Only I follows.

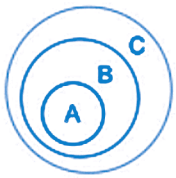
(B) Only II follows.

(C) Both I and II follow.

(D) None of the conclusion follows.

Solution: (C)

One of the many possible Venn diagrams is shown below:



'Definitely true' conclusions are:

- All A are C.
- Some A are C.
- Some A are B.
- Some C are B.
- Some C are A.
- Some B are A.
- Some B are C.

So, both the given conclusions follow.

Hence, option (C) is correct.

Previous Years' Question

1. In the following question, two statements are given followed by two conclusions numbered I and II.

Choose the right answer from the given option.

Statements:

I. All huts are bungalows.

II. All bungalows are churches.

Conclusions:

I. Some churches are huts.

II. Some churches are bungalows.

(A) If only conclusion II follows.

(B) If either conclusion I or II follows.

(C) If only conclusion I follows.

(D) If both conclusion I and II follow.

Example 4:

In the question given below, two statements are given, followed by conclusions I, II, III, and IV. Consider the given statements to be true even if they seem to be at variance from the commonly known facts.

Statements:

All Bhopal are MP.

All MP. are India.

Conclusions:

I. Some Bhopal are MP.

II. All India are MP.

III. Some MP. are Bhopal.

IV. Some Bhopal are India.

(A) Only I follows.

(B) Only I, III, and IV follow.

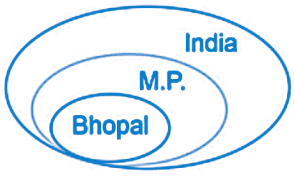
(C) Only I, II, and IV follow.

(D) All follow.

Keynote

In syllogism, 'some' means at least 1.

Solution: (B)
One of the many possible Venn diagrams is shown below:



Let's evaluate each conclusion one by one.

Conclusion I: Some Bhopal are MP.
It can clearly be seen in the Venn diagram that all Bhopal comes under MP.
So, some Bhopal are MP. follows.

Conclusion II: All India are MP.
It can clearly be seen in the Venn diagram that some part of India may be outside MP.
So, all India are MP. does not follow.

Conclusion III: Some MP. are Bhopal.
It can clearly be seen in the Venn-diagram that some part of MP. are Bhopal.

So, some MP. are Bhopal follows.

Conclusion IV: Some Bhopal are India.
It is clearly seen in the Venn diagram that all Bhopal comes under India.
So, some Bhopal are India follows.
Hence, option (B) is correct.

Rack Your Brain

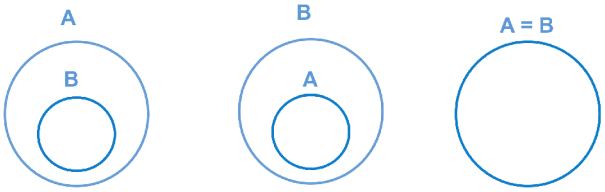
1. **Statements:**

   All cars are wheels.
   Some cars are bike.
   All bikes are plane.

   Conclusions:

   I. All cars being bike is a possibility.
   II. Some cars are planes.
   (A) Only I follows.
   (B) Only II follows.
   (C) Both I and II follow.
   (D) None follows.

Some
Statement: Some A are B.
The Venn diagrams for some A are B can be:



The conclusions that follow are:
Some B are A.

Statements:
Some A are B.
Some B are C.
One of the possible Venn diagrams is:

The conclusions that follow are as follows:
- Some B are A.
- Some C are B.

Note: There is no direct connection between A and C. So it is not possible to derive any relation between A and C.

Example 5:

In the question provided below, three statements are given, followed by conclusions I, II, III, and IV. Consider the given statements to be true even if they seem to vary from the commonly known facts.

Previous Years' Question

2. Statements:

Some nurses are nuns.

Maya is a nun.

Conclusions:

I. Some nun are nurses.

II. Some nurses are not nuns.

(A) If only conclusion I follows.

(B) If only conclusion II follows.

(C) If either conclusion I or II follows.

(D) If neither conclusion I nor II follows.

Statements:
Some solar are furniture.
All furniture are wood.
Some wood are trees.
Conclusions:
I. Some wood are solar.
II. Some furniture are solar.
III. Some trees are furniture.
IV. Some trees are wood.
(A) Only I follows.
(B) Only I and II follow.
(C) Only I, II, and IV follow.
(D) All follow.

Solution: (C)
One of the possible Venn diagrams is shown below:

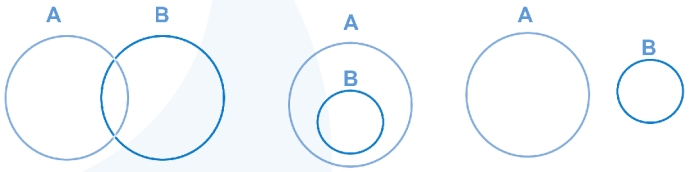
Conclusion I: Some wood are solar.
It can clearly be seen in the Venn diagram that there is some common relationship between solar and wood.
So, some wood are solar follows.

Conclusion II: Some furniture are solar.
It can clearly be seen in the Venn diagram that there is some common relation between furniture and solar.
So, some furniture are solar follows.

Conclusion III: Some trees are furniture.
In the Venn diagram, it can clearly be seen that there is no relation or direct connection between trees and furniture.
So, some trees are furniture conclusion does not follow.

Conclusion IV: Some trees are wood.
In the Venn diagram, it can clearly be seen that there is some common relation between wood and trees.
So, some trees are wood follows.
Hence, option (C) is correct.

Some Not
Statement: Some A are *not* B.
The Venn diagrams for some A are *not* B can be:



Note: There is no direct connection between A and B. So, it is not possible to derive any definite relation between A and B.
Hence, no conclusion follows.

OMET Mantra

When 'no' comes in statement, 'some not' should follow in conclusion.

No
Statement: No A is B.
The diagram for No A is B will be:

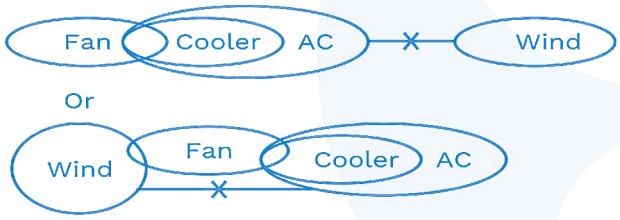
The conclusions that follow are:
- No B is A.
- Some A are not B.
- Some B are not A.

Example 6:

In the question given below, three statements are given, followed by conclusions I and II. Consider the given statements to be true even if they seem to vary from the commonly known facts.

Statements:
Some fans are coolers.
All cooler are A.C.
No A.C. is wind.
Conclusions:
I. No wind is fan.
II. No wind is cooler.
(A) Only I follows.
(B) Both I and II follow.
(C) Only II follows.
(D) Neither I nor II follows.

Solution: (C)
Some of the possible Venn diagrams are shown below:



Conclusion I: No wind is fan.
As per the statements, there is no complete negative relation between wind and fan (or as seen from the second diagram, some wind can be fan).
Hence, no wind is fan does not follow.

Conclusion II: No wind is cooler.
As per the diagram, there is a negative relation between AC and wind and all coolers come under AC Hence, all coolers will also have a negative relation with wind and vice-versa.
So, no wind is cooler follows.
Hence, option (C) is correct.

Rack Your Brain

2. **Statements:**
Only cars are wheels.
Some cars are bikes.
All bikes are planes.
Conclusions:
I. All cars being bike is a possibility.
II. Some cars are plane.
(A) Only I follows.
(B) Only II follows.
(C) Both I and II follow.
(D) None follows.

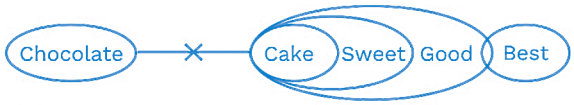
Example 7:

In the question below, four statements are given, followed by conclusions I, II, and III. Consider the given statements to be true even if they seem to vary from the commonly known facts.

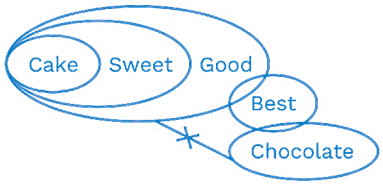
Statements:
All cakes are sweet.
All sweets are good.
Some goods are best.
No good is chocolate.
Conclusions:
I. No chocolate is best.
II. No chocolate is cake.
III. No chocolate is good.
(A) Only I and II follow.
(B) Only III follows.
(C) All follow.
(D) Only II and III follow.

Solution: (D)

One of the possible Venn diagrams is shown below:



Or



Conclusion I: No chocolate is best.
As per the diagram, there is no complete negative relation between chocolate and best.
Hence, no chocolate is best does not follow.

Conclusion II: No chocolate is cake.
As per the diagram, there is a negative relation between chocolate and good and all cake comes under good. Hence, all cakes will also have a negative relation with chocolate and vice-versa.
So, no chocolate is cake follows.

Conclusion III: No chocolate is good.
As per the diagram, there is a negative relation between chocolate and good.
So, no chocolate is good follows.
Hence, option (D) is correct.

The following table is the summary of what we have discussed till now:

Statement	Definite Conclusion	Possible Conclusion
All A are B	Some A are B . Some B are A	All B are A Some B are not A
Some A are B	Some B are A	All A are B All B are A Some A are not B Some B are not A
Some A are not B	x	Some A are B No A is B No B is A Some B are not A All B are A
No A is B	No B is A Some A are not B Some B are not A	x

Case of complementary pair

Being synchronously true or false is considered a complementary pair.

If one statement is true, the other has to be false.

Given below are the conditions for two propositions to be a complementary pair.

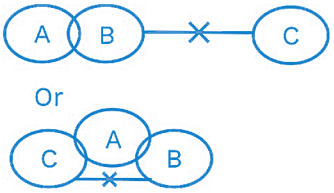
Cases		
Condition 1	Some + Some not	Some A are B + Some A are not B or Some B are A + Some B are not A
Condition 2	Some + No	Some A are B + No A is B or Some B are A + No A is B
Condition 3	All + Some not	All A are B + Some A are not B is a complementary pair but All A are B + Some B are not A is not a complementary pair (Important)

Example 8:

1. **Statements:**
   Some A are B.
   No B is C.

   Conclusions:
   I. Some A are C.
   II. No A is C.
   (A) Only I follows.
   (B) Only II follows.
   (C) Both follow.
   (D) Either I or II follows.

Solution: (D)
Venn diagram



Conclusion I: Some A are C.
In the Venn diagram, it can be clearly seen that there is no relation between A and C. So, some A are C does not follow.
Conclusion II: No A is C.
In the Venn diagram, it can be clearly seen that there is no complete negative relation between A and C.
So, no A is C does not follow.
If noticed, both conclusions are false, and both have the same elements (A and C). One is positive and the other is negative which satisfies all the rules of a complementary pair.
So, either I or II follows.
Hence, option (D) is correct.

Rack Your Brain

3. Statements:

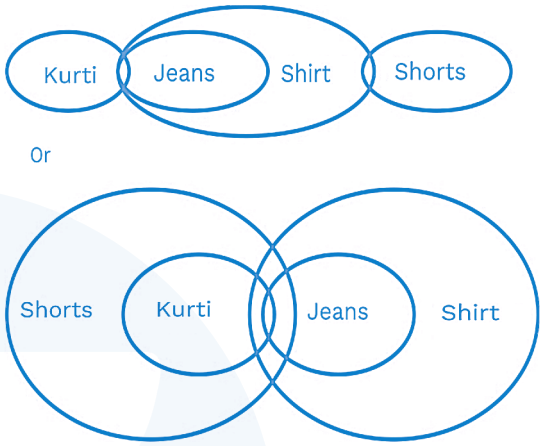
Some Facebook are Telegram.
No Telegram is Instagram.
Some Instagram are Skype.

Conclusions:

I. Some Facebook are Instagram.
II. No Skype is Telegram.
(A) Only I follows.
(B) Only II follows.
(C) Both I and II follow.
(D) None follows.

2. Statements:

Some kurtis are jeans.
All jeans are shirts.
Some shirts are shorts.
Conclusions:
All kurtis are shorts.
Some kurtis are shirts.
Some kurtis are not shorts.
(A) Only II follows.
(B) Only II and either I or III follow.
(C) Only III follows.
(D) All follow.
Solution: (B)
Venn diagram



Conclusion I: All kurtis are shorts.
In the Venn diagram, it can be clearly seen that there is no relation between kurti and shorts.
So, all kurtis are shorts does not follow.
Conclusion II: Some kurtis are shirt.
In the Venn diagram, it can be clearly seen that there is some common relation between kurti and shirt.
So, some kurtis are shirt follows.
Conclusion III: Some kurtis are not shorts.
In the venn diagram, it can be clearly seen that there is no negative relation between kurtis and shorts.
So, some kurtis are not shorts does not follow.
If noticed, both conclusions I and III are false and both have the same element (kurtis and shorts). One is positive and another one is negative and it satisfies all the rules of a complementary pair.
So, only II and either I or III follow.
Hence, option (B) is correct.

OMET Mantra

Case of Possibilities

If the conclusion is in 'possibility' case, then these rules must be

applied:

If 'All A is B', then 'Some B is not A is a possibility'.

If 'All A is B', then 'All B is A is a

possibility'.

If 'Some A is B', then 'All A is B is a possibility'.

If 'Some A is B', then 'All B is A is a possibility'.

If 'Some A is B', then 'Some A is

not B is a possibility'.

If 'Some A is B', then 'Some B is

not A is a possibility'.

If 'Some A is not B', then 'All B is A is a possibility'.

If 'Some A is not B', then 'No B is A is a possibility'.

If 'Some A is not B', then 'Some B is A is a possibility.

If 'Some A is not B', then 'Some B is not A is a possibility'.

If 'No A is B', then 'No possibility

can exist'.

Rack Your Brain

4. Statements:

Only ears are noses.

Only a few ears are lips.

Some lips are eyes.

Conclusions:

I. Some eyes can be ears.

II. All eyes can be lips.

(A) Only I follows.

(B) Only II follows.

(C) Both I and II follow.

(D) None follows.

Only a Few

Statement: Only a few A are B.

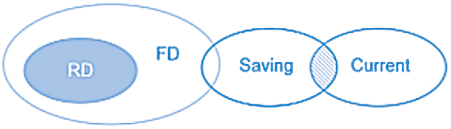
The diagram for only a few A are B is:

It should be treated the same as some A are B, excluding

the cases where all A are B.

Example 9:
Statements:
Only FD is RD.
Some FD is saving.
Only a few savings are current.
Conclusions:
I. All RD can be saving.
II. Some FD are saving.
III. All current can be saving.
(A) Only II follows.
(B) Only II and III follow.
(C) Only III follows.
(D) All follow.

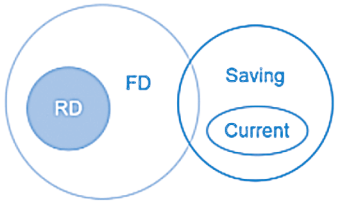
Solution: (B)
Venn diagram



Conclusion I: All RD can be saving.
In statement 1, it is given that only FD is RD which means RD cannot be shared by anyone except FD.
So, all RD can be saving is not possible.

Conclusion II: Some FD are saving.
In the Venn diagram, it can be clearly seen that there is a common relation between FD and saving.
So, some FDs are saving follows.

Conclusion III: All current can be saving.
In statement III, it is given that only a few savings are current which means all savings are not current but all current can be saving, as shown below:



So, all current can be saving follows.
So, only conclusions II and III follow.
Hence, option (B) is correct.

Practice Exercise

Level of Difficulty – 1

Directions for Questions 1 to 5: The following questions have a few statements followed by some conclusions. Read the statements carefully and logically, and select the conclusions that can follow the statements.

1. Statements:
All India is Asia.
All Asia is world.
Conclusions:
I. All India is World.
II. All Asia is India.
(A) Both I and II follow.
(B) Only I follows.
(C) Only II follows.
(D) None follows.

2. Statements:
Some laptops are Lenovo.
Some Lenovo are mobile.
Conclusions:
I. Some laptops are mobiles.
II. Some mobile are Lenovo.
III. Some Lenovo are laptops.
(A) Only I and II follow.
(B) Only II and III follow.
(C) Only III and I follow.
(D) All follow.

3. Statements:
Some A are B.
No B is D.
All C is D.
Conclusions:
I. Some A are not D.
II. No B is C.
(A) Only I follows.
(B) Only II follows.
(C) Neither I nor II follows.
(D) Both I and II follow.

4. Statements:
Some bags are pens.
No pen is a book.
Some books are notes.
Conclusions:
I. Some bags are books.
II. No note is a pen.
(A) Only I follows.
(B) Only II follows.
(C) Both I and II follow.
(D) Neither I nor II follows.

5. Statements:
Some lion is deer.
No deer is cat.
Some cat is tiger.
Conclusions:
I. Some lion is not tiger.
II. Some tiger is deer.
(A) Only I follows.
(B) Only II follows.
(C) Both I and II follow.
(D) Neither I nor II follows.

Directions for Questions 6 to 10: The following questions have a few statements followed by a few conclusions. Read the statements and logically select the conclusions that can follow the statements.

6. Statements:
Only a few TV are remotes.
All remotes are LED.
Conclusions:
I. All TV are remotes is a possibility.
II. All LED are remotes.
(A) Only I follows.
(B) Only II follows.
(C) Both I and II follow.
(D) Neither I nor II follows.

7. Statements:
No sky is earth.
Some earth are atmosphere.
All atmosphere are universe.
Conclusions:
I. Some atmospheres are earth.
II. Some atmospheres are not earth.

(A) If only conclusion I follows.
(B) If only conclusion II follows.
(C) If neither conclusion I nor II follows.
(D) If both conclusions I and II follow.

8. Statements:
All petrol is diesel.
No diesel is CNG.
No CNG is LPG.
Conclusions:
I. All LPG can be petrol.
II. Some diesel are not LPG.
(A) Only I follows.
(B) Only II follows.
(C) Both I and II follow.
(D) Neither I nor II follows.

9. Statements:
Only a few pens are erasers.
All erasers are staplers.
All staplers are pencils.
Conclusions:
I. All pen being eraser is a possibility.
II. All pen being pencil is a possibility.
(A) Only I follows.
(B) Only II follows.
(C) Neither I nor II follows.
(D) Both I and II follow.

10. Statements:
Only a few copies are pen.
No phone is a pen.
No copy is a bag.
Conclusions:
I. All phones being copy is a possibility.
II. Some pen are not bag.
(A) Only I follows.
(B) Only II follows.
(C) Neither I nor II follows.
(D) Both I and II follow.

Directions for Questions 11 to 14: In the following questions, some statements are followed by two conclusions.

Mark your answer as:

(A) If only conclusions I follows.
(B) If only conclusions II follows.
(C) If both conclusions follow.
(D) If neither of the conclusions follows.

11. Statements:
No mountain is river.
Some mountains are trees.
Conclusions:
I. Trees that are mountains are not rivers.
II. No tree is a river.

12. Statements:
Some sauce is pickle.
No pickle is salt.
All salt is sugar.
Conclusions:
I. Some pickle are sugar.
II. Some sauce are not salt.

13. Statements:
All flowers are plants.
Some plants are trees.
No tree is a river.
Conclusions:
I. Some plant is a river.
II. Some trees are flowers.

14. Statements:
Some books are copies.
Only copy is pen.
Some copy is stapler.
Conclusions:
I. All copies can be books.
II. No book is stapler.

Directions for Question 15: In the following question, some statements are followed by three conclusions. Select the most appropriate option.

15. Statements:
Some A are B.
All B are C.
No C is D.
Conclusions:
(I) All A being D is a possibility.
(II) All C being B is a possibility.
(III) All B being D is a possibility.
(A) Only II follows.
(B) Only II and either I or III follow.
(C) Only III follows.
(D) All follow.

Level of Difficulty – 2

Direction for Questions 1 and 2

The following questions have a few statements followed by conclusions with some blanks. Read the statements and logically select the options which can fill the blanks in the conclusions, in the given order.

1. Statements:
Some chips are cakes.
All cakes are biscuits.
All biscuits are good.
Conclusions:
I. —— biscuit can be cake.
II. —— good is cake.
(A) All and Some
(B) No and Some
(C) Some and Some
(D) Some and All

2. Statements:
All jungles are trees.
No tree is big.
All trees are green.
Conclusions:
I. —— green are jungle.
II. —— jungle is not big.
(A) All and Some
(B) Some and Some
(C) Some and All
(D) Both B and C follow

3. Statements:
All black are white.
All grey are white.
Only white is pink.
Conclusions:
I. Some black can be grey.
II. Some pink can be grey.
III. All white can be black.
(A) Only I and II follow.
(B) Only II and III follow.
(C) Only I follows.
(D) None follows.

4. Statements:
Only a few blue are red.
All blue is yellow.
All red is pink.
Conclusions:
I. All pink can be yellow.
II. All yellow can be red.
(A) Only I follows.
(B) Only II follows.
(C) Both I and II follow.
(D) None follows.

5. Statements:
Only ear is nose.
Only a few ears are lips.
Some lips are eyes.
Conclusions:
I. Some eyes can be ears.
II. All eyes can be lips.
(A) Only I follows.
(B) Only II follows.
(C) Both I and II follow.
(D) None follows.

Directions for Questions 6 to 10

In each question, three statements followed by two conclusions numbered I and II have been given. You have to take the given statements to be true even if they seem to vary with commonly known facts and then decide which of the given conclusions logically follows from the given statements.

6. Statements:
All pink are green.
Some green are not red.
All red are yellow.
Conclusions:
I. Some green are pink.
II. Some red are not pink.
(A) If only conclusion I follows.
(B) If only conclusion II follows.
(C) If neither conclusion I nor II follows.
(D) If both conclusions I and II follow.

7. Statements:
Only a few papers are copies.
No pencil is copy.
Only paper is a book.
Conclusions:
I. All pencils being paper is a possibility.
II. All books being copy is a possibility.
(A) If only conclusion I follows.
(B) If only conclusion II follows.
(C) If neither conclusion I nor II follows.
(D) If both conclusions I and II follow.

8. Statements:
Only a few biscuits are toffees.
No toffee is sweet.
Some chips are sweet.
Conclusions:
I. All chips can never be toffees.
II. All biscuits being sweet is a possibility.
(A) If only conclusion I follows.
(B) If only conclusion II follows.
(C) If neither conclusion I nor II follows.
(D) If both conclusions I and II follow.

9. Statements:
All friends are best.
No best is enemy.
All enemy are liar.
Conclusions:
I. All friends being enemy is a possibility.
II. Some liars are not enemies.
(A) If only conclusion I follows.
(B) If only conclusion II follows.
(C) If neither conclusion I nor II follows.
(D) If both conclusions I and II follow.

10. Statements:
At least sun are moon.
Only a few stars are moon.
No galaxy is sun.
Conclusions:
I. All stars being moon is a possibility.
II. No galaxy is a star.
(A) If only conclusion I follows.
(B) If only conclusion II follows.
(C) If neither conclusion I nor II follows.
(D) If both conclusions I and II follow.

Directions for Questions 11 to 15

In the questions, three statements followed by two conclusions numbered I and II have been given. You have to take the given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions logically follows from the given statements.

11. Statements:
0% trees are plants.
All leaves are trees.
A few fruits are plants.
Conclusions:
I. Not a single plant is a leaf.
II. A good number of fruits are not trees.
(A) If only conclusion I follows.
(B) If only conclusion II follows.
(C) If neither conclusion I nor II follows.
(D) If both conclusions I and II follow.

12. Statements:
All radios are speakers.
No remote is radio.
Some TVs are remotes.
Conclusions:
I. At least some TVs are radio.
II. No TV is a radio.
(A) If only conclusion I follows.
(B) If only conclusion II follows
(C) If either conclusion I or II follows.
(D) If both conclusions I and II follow.

13. Statements:
All train are buses.
All buses are trucks.
Some trucks are cycles.
Conclusions:
I. No bus is cycle.
II. Some buses are cycles.
(A) If only conclusion I follows.
(B) If only conclusion II follows.
(C) If either conclusion I or II follows.
(D) If both conclusions I and II follow.

14. Statements:
Only cars are Alto.
No car is a bike.
All bikes are ninja.

Conclusions:

I. All cars can never be ninja.

II. Some ninja are not cars.

(A) If only conclusion I follows.

(B) If only conclusion II follows.

(C) If either conclusion I or II follows.

(D) If both conclusions I and II follow.

15. Statements:

Only a few keys are locks.

All locks are strong.

Some folders are keys.

Conclusions:

I. No folder is strong.

II. Some folders are strong.

(A) If only conclusion I follows.

(B) If only conclusion II follows.

(C) If either conclusion I or II follows.

(D) If both conclusions I and II follow.

Level of Difficulty – 3

Directions for Question 1

In the question below, some statements are given, followed by some conclusions. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Statements:

All clocks are bakes.

No bake is a trap.

Some traps are squares.

All squares are pools.

Conclusion:

I. Some pools are bakes.

II. Some traps are clocks.

III. No pool is a bake.

IV. Some squares are bakes.

(A) None follows.

(B) Only II follows.

(C) Only III follows.

(D) Only I follows.

(E) Only either I or III follows.

Directions for Questions 2 to 5

In the questions, three statements followed by two conclusions numbered I and II have been given. You have to take the given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions logically follows from the given statements.

2. Statements:

No heaven is hell.

All hell is life.

Only a few life is sweet.

Conclusions:

I. All life is sweet is a possibility.

II. No heaven is sweet.

(A) If only conclusion I follows.

(B) If only conclusion II follows.

(C) If neither conclusion I nor II follows.

(D) If both conclusions I and II follow.

3. Statements:

Only SNAP is XAT.

Some SNAP is NMAT.

No NMAT is Bank.

Conclusions:

I. No Bank is SNAP.

II. All Banks being SNAP is a possibility.

(A) If only conclusion I follows.

(B) If only conclusion II follows.

(C) If neither conclusion I nor II follows.

(D) If both conclusions I and II follow.

4. Statements:

Only a few sand are rocks.

Some rocks are stones.

All stones are hard.

Conclusions:

I. All hard being rocks is a possibility.

II. All sand is rock is a possibility.

(A) If only conclusion I follows.

(B) If only conclusion II follows.

(C) If neither conclusion I nor II follows.

(D) If both conclusions I and II follow.

5. Statements:

All blue are green.

Some green are yellow.

No blue is orange.

Conclusions:

I. All green can be orange.

II. Some green are not orange.

(A) If only conclusion I follows.

(B) If only conclusion II follows.

(C) If neither conclusion I nor II follows.

(D) If both conclusions I and II follow.

Directions for Questions 6 to 11

In the question, two conclusions have been given followed by four sets of possible statements. You have to take the given conclusions to be true even if they seem to vary with the commonly known facts and then decide whether the conclusions logically follow the given statements disregarding commonly known facts.

6. Statements:

(A) All fans are papers. Some papers are tables. No table is mobile.

(B) All fans are papers. No paper is a table. All tables are mobile.

(C) Some fans are papers. All papers are tables. No table is mobile.

(D) Some fans are papers. All papers are tables. All tables are mobile.

Conclusions:

I. Some fans are mobile.

II. Some tables are fans.

7. Statements:

(A) All dogs are cats. Some cats are bats. Some bats are rats.

(B) Some dogs are cats. Some cats are bats. All bats are rats.

(C) No dog is a cat. All cats are bats. Some bats are rats.

(D) All dogs are cats. Some cats are bats. Some bats are rats.

Conclusions:

I. Some bats are not dogs.

II. Some bats are cats.

8. Statements:

(A) Only movies are stories. Few movies are scripts. Some stories are screenplays. No screenplay is a script.

(B) No screenplay is a movie. Some movies are scripts. All movies are stories. No screenplays are scripts.

(C) All movies are stories. Some movies are scripts. No script is a screenplay. Some stories are screenplays.

(D) All movies are stories. No movie is script. All stories are screenplays. All scripts are screenplays.

Conclusions:

I. At least some scripts are stories.

II. No movies is screenplay.

9. Statements:

(A) All chairs are sticks. No stick is a bat. Some bats are tables.

(B) Some chairs are sticks. All sticks are tables. Some tables are bats.

(C) All sticks are chairs. All chairs are tables. No table is a bat.

(D) Some sticks are tables. Some tables are chairs. Some bats are tables.

Conclusions:

I. Some chairs are not bats.

II. Some sticks are tables.

10. Statements:

(A) Some stars are nights. All stars are galaxies. No galaxy is a day.

(B) All stars are galaxies. All days are galaxy. No galaxy is night.

(C) All days are stars. Some stars are nights. Some nights are galaxies.

(D) All day are stars. All stars are nights. No night is a galaxy.

Conclusions:

I. No day is night.

II. Some stars are galaxies.

11. In the following question there are five statements followed by four conclusions.

Consider the given statements to be true even if they seem to vary with the commonly known facts. Read all the conclusions and then decide which of the given conclusions does not logically follow from the given statements using all statements together.

Statements:

All watches are mice.

All mice are rice.

No desktop is mice.

All bags are wine.

Some bags are desktops.

Conclusions:

I. Some wines are not watches.

II. All wine being rice is a possibility.

III. Some rice are not desktops.

IV. Some desktops are not rice.

Directions for Questions 12 and 13

In the following questions, three statements are given, followed by four conclusions numbered I, II, III, and IV. You have to take the given statements to be true even if they seem to vary with the commonly known facts and judge the conclusions on the basis of it. Choose the options based on the conclusions chosen.

12. Statements:

Some cars are jeeps.

All bikes are cycles.

Some jeeps are not bikes.

Conclusions:

I. Some jeeps are not cycles.

II. Some cycles are not bikes.

III. Some jeeps are cars.

IV. No cycle is jeep.

(A) Only conclusion III follows.

(B) Only conclusions III and IV follow.

(C) Only conclusions I and IV follow.

(D) Only conclusions I and III follow.

13. Statements:

Some channels are mobiles.

Some mobiles are computers.

Some computers are stations.

Conclusions:

I. Some stations are channels.

II. Some mobiles are stations.

III. Some computers are channels.

IV. All channels are stations.

(A) Only conclusions II and III follow.

(B) Only conclusions I and II follow.

(C) Only conclusions I, II, and III follow.

(D) None follows.

Directions for Questions 14 and 15

In each question, three statements followed by three conclusions numbered I, II, and III have been given. You have to take the given statements to be true even if they seem to vary with the commonly known facts and then decide which of the given conclusions logically follows from the given statements.

14. Statements:

Some monkeys are donkeys.

Some donkeys are tigers.

Some tigers are lions.

Conclusions:

I. Some tigers are monkeys.

II. Some tigers are donkeys.

III. No lion is donkey.

(A) If only conclusion I follows.

(B) If only conclusion II follows.

(C) If neither conclusion I nor II follows.

(D) If both conclusions I and III follow.

15. Statements:

All sugar is salt.

Some salt is jeera.

No sugar is milk.

Conclusions:

I. Some sugar is jeera.

II. Some milk can be salt.

III. No milk is jeera.

(A) If only conclusions I and II follow.

(B) If only conclusion II follows.

(C) If only conclusions I and III follow.

(D) None follows.

Solutions

Level of Difficulty – 1

1. (B)

Venn diagram:

Conclusion I: All India is world.
With the help of the Venn diagram, it is clearly seen that all of India comes under the world.
∴ Conclusion I follows.
Conclusion II: All Asia is India.
In the Venn diagram, it is clearly seen that some part of Asia is outside India, therefore it can be concluded that all of Asia is not India.
So, conclusion II does not follow.
Correct answer: Only conclusion I follows.
Hence, option (B) is correct.

2. (B)

Venn diagram:

Conclusion I: Some laptops are mobile.
With the help of Venn diagram, it is clearly seen that there is no link between laptop and mobile.
∴ Conclusion I does not always follow.
Conclusion II: Some mobiles are Lenovo.
In the Venn diagram, it is clearly seen that Lenovo and mobile share some common parts. There is a link between them.
∴ Conclusion II follows.
Conclusion III: Some Lenovo are laptops.
Similarly, Lenovo and laptop are linked with each other directly.
∴ Conclusion III follows.
Correct answer: Only conclusions II and III follow.
Hence, option (B) is correct.

3. (D)

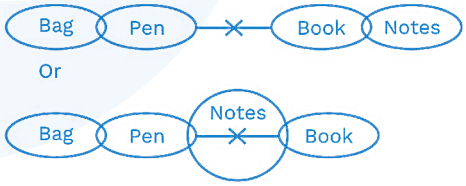
Venn diagram:

Conclusion I: Some A are not D.
In the Venn diagram, there is no relation between B and D whereas A and B share some common parts. That common part of A and B has no relation to D.
∴ Some A are not D follows.
So, the conclusion I follows.

Conclusion II: No B is C.
In a Venn diagram, it is clearly seen that there is no relation between B and D and C (whole part) comes under D.
∴ There is no relation between B and C also.
So, conclusion II follows.
Correct answer: Both conclusions I and II follow.
Hence, option (D) is correct.

4. (D)

Venn diagram:

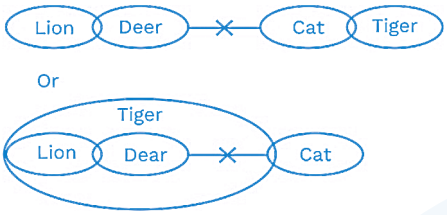


Conclusion I: Some bags are book.
In the Venn diagram, it can be clearly seen that there is no link between bag and book.
So, some bag are book conclusion does not follow.
So, conclusion I does not follow.

Conclusion II: No notes is pen.
No notes is pen means that there is a complete negative relation between notes and pen but in the Venn diagram,

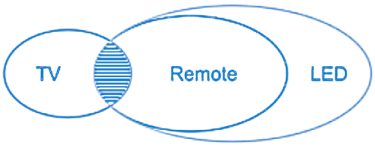
it is clearly seen that there is no complete negative relation between pen and notes.
So, conclusion II does not follow.
Correct answer: Neither conclusion I nor II follows.
Hence, option (D) is correct.

5. (D)
Venn diagram:



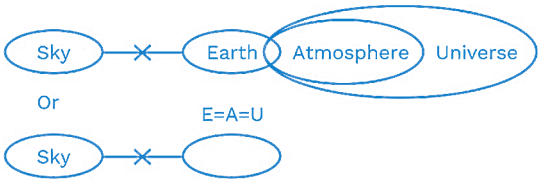
Conclusion I: Some lions are not tigers.
From the Venn diagrams, there is no complete negative relation between lion and tiger. So, it would not be correct to say that some lions are not tigers.
So, conclusion I does not follow.
Conclusion II: Some tigers are deer.
In one of the Venn diagrams, there is no link between tiger and deer.
So, conclusion II does not follow.
Correct answer: Neither conclusion I nor II follows.
Hence, option (D) is correct.

6. (D)
Venn diagram:



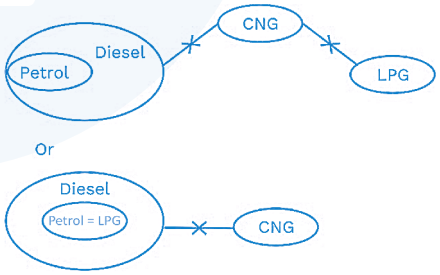
Conclusion I: All TVs are remotes is a possibility.
In the statement, it is given that 'only a few' TVs are remotes, which means there is some part of TV that is not remote, hence all TVs can't be remotes.
So, conclusion I does not follow.
Conclusion II: All LEDs are remotes.
In the Venn diagram, it can be clearly seen that all LEDs are not remotes.
So, conclusion II does not follow.
Correct answer: Neither conclusion I nor II follows.
Hence, option (D) is correct.

7. (A)
Venn diagram:



(E, earth; A, atmosphere; U, universe)
Conclusion I: Some atmospheres are earth.
In the Venn diagrams, it is clearly seen that some part of the earth is the atmosphere.
Hence, conclusion I follows.
Conclusion II: Some atmosphere are not earth.
In the Venn diagrams, it is clearly seen that there is no negative relation between the atmosphere and earth.
Hence, conclusion II does not follow.
Hence, option (A) is correct.

8. (A)
Venn diagram:

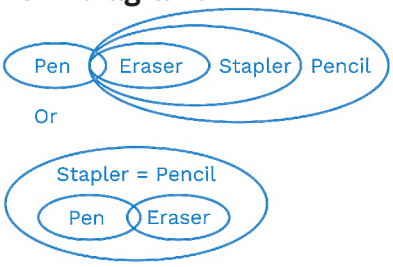


Conclusion I: All LPG can be petrol.
Yes, all LPG can be petrol because there is no negative relation between LPG and petrol.
So, conclusion I follows.
Conclusion II: Some diesel is not LPG.
There is no relation between diesel and LPG. So, it is not right to say anything positive or negative about them.
So, conclusion II does not follow.

Correct answer: Only conclusion I follows.
Hence, option (A) is correct.

9. (B)

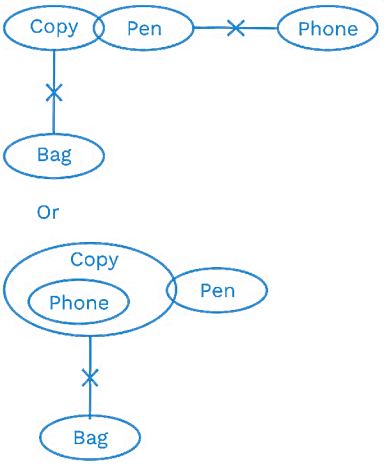
Venn diagram:



Conclusion I: All pens being erasers is a possibility.
In the statement, it is given that 'only a few' pens are erasers, i.e., all pens cannot be erasers.
So, conclusion I does not follow.
Conclusion II: All pens being pencils is a possibility.
In the Venn diagram, it can be clearly seen that some pens are pencils and there is no negative relation between them. So, all pens being pencils is a possibility.
So, conclusion II follows.
Correct answer: Only conclusion II follows.
Hence, option (B) is correct.

10. (D)

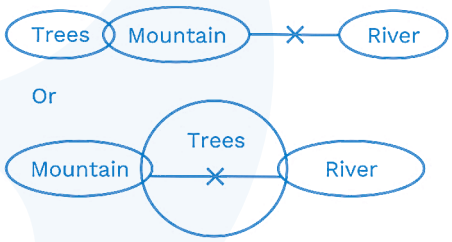
Venn diagram:



Conclusion I: All phones being copies is a possibility.
In the Venn diagram, it can be clearly seen that there is no complete negative relation between phone and copy. So, it is a possibility that all phones can be copies.
Hence, conclusion I follows.
Conclusion II: Some pens are not bags.
In the Venn diagram, it can be clearly seen that some part of pen comes under copy. So, it can be concluded that some portion of pen has a negative relation with bag because copy and bag have a negative relation.
So, conclusion II follows.
Correct answer: Both conclusions I and II follow.
Hence, option (D) is correct.

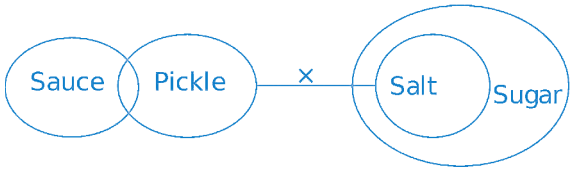
11. (A)

Venn diagram:



Conclusion I. Trees that are mountains are not rivers.
From Venn diagrams, it is clearly visible that there is a negative relation between mountain and river and some trees are the mountains. So, that part of the trees also has a negative relation with river.
Hence, conclusion I follows.
Conclusion II. No tree is river.
In the Venn diagram it is clearly visible that there is no complete negative relation between trees and river.
Hence, conclusion II does not follow.
Hence, option (A) is correct.

12. **(B)**
Venn diagram:



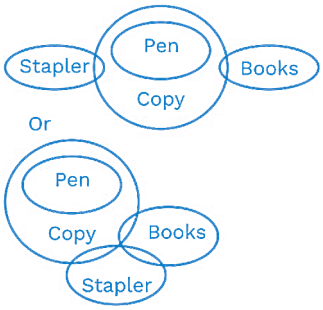
Conclusion I. Some pickle is sugar.
In the Venn diagram, it is clearly visible that there is no relation between pickle and sugar.
Hence, the conclusion I does not follow.

Conclusion II. Some sauces are not salt.
In the Venn diagram, it is clearly visible that there is a negative relation between pickles and salt and some sauces are pickles. So, that part of the sauce also has a negative relation with salt.
Hence, conclusion II follows.
Hence, option (B) is correct.

13. **(D)**
Venn diagram:

Conclusion I. Some plants are rivers.
In the Venn diagram, it is clearly visible that there is no relation between plant and river.
Hence, conclusion I does not follow.
Conclusion II. Some trees are flowers.
In the Venn diagram, it is clearly visible that there is no relation between trees and flowers.
Hence, conclusion II does not follow.
Hence, option (D) is correct.

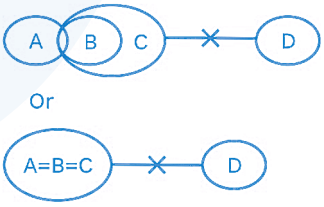
14. **(D)**
Venn diagram:



Conclusion I. All copies can be books.
In the statement, it is clearly given that only copy is a pen, which means a pen cannot be shared with anyone except copy.
Hence, inference I does not follow.

Conclusion II. No book is a stapler.
From the Venn diagrams, it is clearly visible that there is no complete negative relation between Books and Stapler.
Hence conclusion II does not follow.
Hence, option (D) is correct.

15. **(A)**
Venn diagram



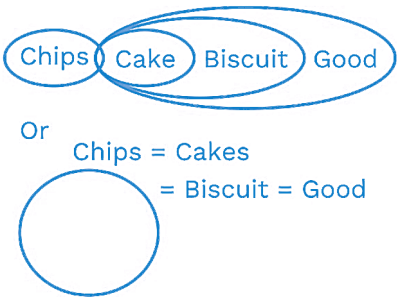
Conclusion I: All A being D is a possibility.
In the Venn diagram, it can be clearly seen that there is a complete negative relation between C and D and some part of A comes under C. Hence, this part of A will also have a negative relation with D. So, all A being D is a possibility does not follow.
Conclusion II: All C being B is a possibility.
In the Venn diagram, it can be clearly seen that there is no negative relation between B and C.

Hence, it is a possibility of all C being B.
So, all C being B is a possibility.
Conclusion III: All B being D is a possibility.
In the Venn diagram, it can be clearly seen that there is a complete negative relation between C and D, and all B comes under C. Therefore, B will also have a negative relation with D.
So, all B being D is a possibility does not follow.
Thus, only conclusion II follows.
Hence, option (A) is correct.

Level of Difficulty – 2

1. (A)

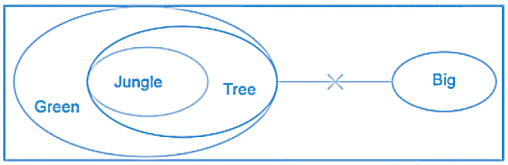
Venn diagram:



Conclusion I: Biscuit can be cake.
In the Venn diagram, it can be clearly seen that there is a possibility of all biscuits being cakes because there is no negative relation between them.
Note: Some biscuits can be cakes does not follow because in the Venn diagram, it can be clearly seen that some biscuit are cake is 'definitely true'. But the conclusion is only asking for a 'possibility of being true' since 'can be' words have been used.
So, no possibility can exist there.
Conclusion II: Good is cake.
It can be clearly seen in the Venn diagram that some good is cake.
Correct answer: All and Some.
Hence, option (A) is correct.

2. (D)

Venn diagram:

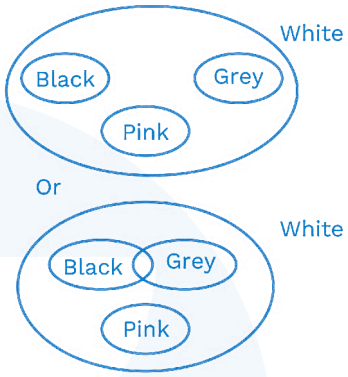


Conclusion I: Green are jungle.
In the Venn diagram, it can be clearly seen that some parts of green are jungle.
So, some green are jungle.

Conclusion II: Jungles are not big.
In the Venn diagram, it can be clearly seen that there is a negative relation between a tree and big and all jungle comes under a tree. So, there will also be a negative relation between Jungle and Big.
Hence, some jungles are not big and all jungles are not big, both follow.
Correct answer: Both B and C follow.
Hence, option (D) is correct.

3. (C)

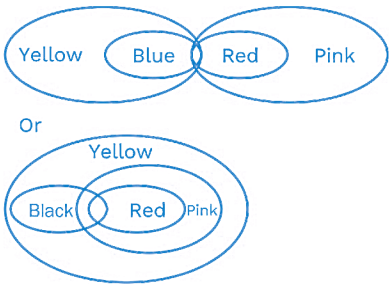
Venn diagram:



Conclusion I: Some black can be grey.
In the Venn diagram, it can be clearly seen that there is no negative relation between black and grey. So, the possibility of some black being grey exists.
So, conclusion I follows.
Conclusion II: Some pink can be grey.
In the statement, it is given that only white is pink, i.e., all pink are white and no portion of pink can be shared by anyone else.
So, conclusion II does not follow.
Conclusion III: All white can be black.
All white can be black but, in this case, it violates our statement that only white is pink, because pink cannot be shared by anyone except white.
So, conclusion III does not follow.
Correct answer: Only conclusion I follows.
Hence, option (C) is correct.

4. (A)

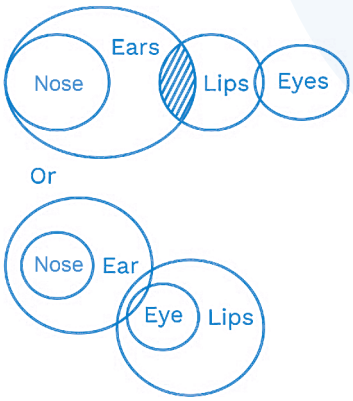
Venn diagram:



Conclusion I: All pink can be yellow.
From one of the Venn diagrams, it can be observed that there is a possibility of all pink being under Yellow.
So, conclusion I follows.
Conclusion II: All yellow can be red.
All yellow can be red is not possible because it violates our statement that only a few blue are red, i.e., all blue cannot be red and all blue comes under yellow. So, definitely some parts of yellow will not come under red.
So, conclusion II does not follow.
Correct answer: Only conclusion I follows.
Hence, option (A) is correct.

5. (C)

Venn diagram:

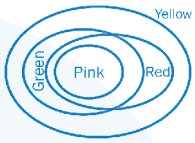


Conclusion I: Some eyes can be ears.
From the Venn diagrams, it can be clearly seen that there is no complete negative relation between eyes and ears. So, some eyes being ear is a possibility.
So, conclusion I follows.
Conclusion II: All eyes can be lips.
From the Venn diagram, it can be clearly seen that there is no negative relation between lips and eyes. So, all eyes can be lips follows.
So, conclusion II follows.
Correct answer: Both conclusion I and II follow.
Hence, option (C) is correct.

6. (A)

Venn diagram:

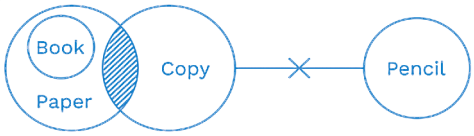
or,



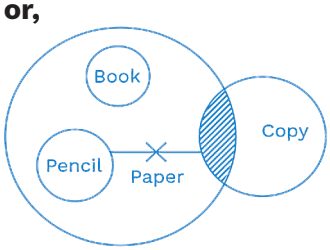
Conclusion I: Some green are pink.
In the Venn diagram, it is clearly seen that all pink comes under green.
Hence, conclusion I follows.
Conclusion II: Some red are not pink.
In the Venn diagram it is clearly seen that there is no negative relation between red and pink.
Hence, conclusion II does not follow.
Hence, option (A) is correct.

7. (A)

Venn diagram:



or,



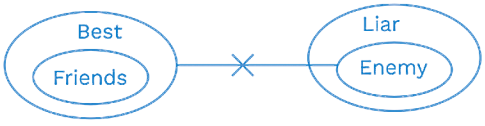
Venn-diagram with possibility

Conclusion I: All pencils being papers is a possibility.
In the Venn diagram, it is clearly seen that there is no direct negative relation between paper and pencil. So, it is a possibility of all pencils being papers and it does not affect our statements.
Hence, conclusion I follows.
Conclusion II: All books being copies is a possibility.
In the third statement, it is given that only paper is book i.e., books cannot be shared by anyone except paper.
Hence, conclusion II does not follow.
Hence, option (A) is correct.

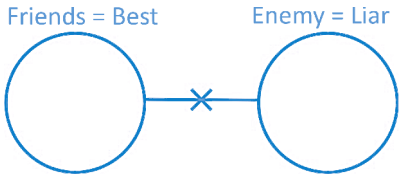
8. (A)
Venn diagram:

Conclusion I: All chips can never be toffees.
In the Venn diagram it is clearly seen that there is some part of chips which also come under sweet, which always have a negative relation with toffee. So, all chips can never be toffees.
Hence, conclusion I follows.
Conclusion II: All biscuits being sweets is a possibility.
In the Venn diagram it is clearly seen that some parts of biscuits which come under toffee which always have a negative relation with sweet. So, all biscuits can never be sweets.
Hence, conclusion II does not follow.
Hence, option (A) is correct.

9. (C)
Venn diagram:

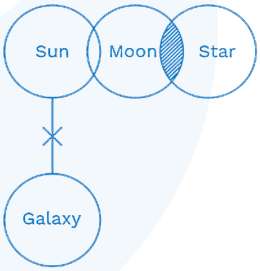


or,

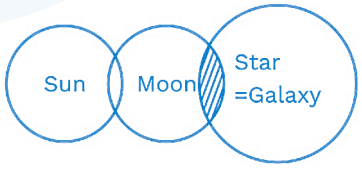


Conclusion I: All friends being enemies is a possibility.
In the Venn diagram, it is clearly seen that there is a complete negative relation between best and enemy and all friends come under best. So, all friends also have a negative relation with the enemy.
Hence, conclusion I does not follow.
Conclusion II: Some liars are not enemies.
In the Venn diagram, it is clearly seen that there is no negative relation between liar and enemy.
Hence, conclusion II does not follow.
Hence, option (C) is correct.

10. (C)
Venn diagram:



or,

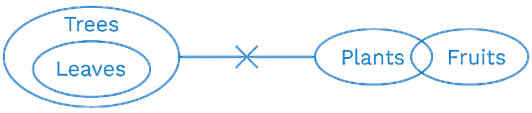


Conclusion I: All stars being moons is a possibility.
In the statement, it is given that only a few stars are moons, which means that all stars cannot be moons.
Hence, conclusion I does not follow.
Conclusion II: No galaxy is star.

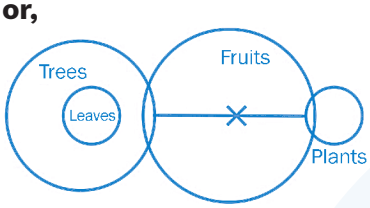
In the Venn diagram, it is clearly seen that there is no negative relation between galaxy and star.
Hence, conclusion II does not follow.
Hence, option (C) is correct.

11. (A)

Venn diagram:



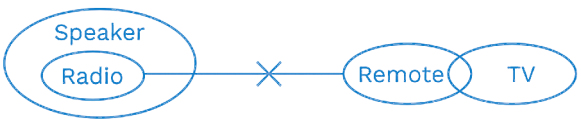
or,



Conclusion I: Not a single plant is leaf.
In the Venn diagram, it is clearly seen that there is a complete negative relation between trees and plants. And all leaves come under trees. So, there is also a negative relation between leaves and plants.
Hence, conclusion I follows.
Conclusion II: A good number of fruits are not trees.
In the statement, it is clearly mentioned that a few fruits are plants and all plants had a complete negative relation with trees. So, that part of fruits also had a negative relation with trees i.e. only a small part of fruits has negative relation with trees.
Hence, conclusion II doesn't follow.
Hence, option (A) is correct.

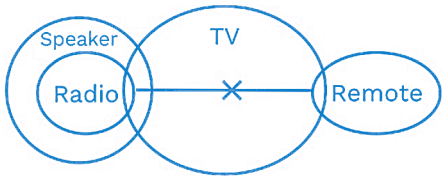
12. (C)

Venn diagram I:



or,

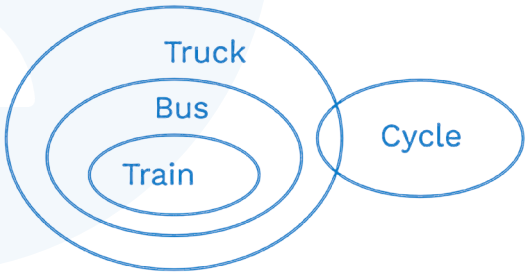
Venn diagram II:



Conclusion I: At least some TVs are Radios.
From first Venn diagram, it is clearly seen that there is no relation between TV and radio.
Hence, conclusion I does not follow.
Conclusion II: No TV is a radio.
In second Venn diagram, it is clearly seen that there is no complete negative relation between radio and TV.
Hence, conclusion II does not follow.
However, after close observation, it is clear that both conclusions together form a complementary pair, and therefore either conclusion I or II definitely follows.
Hence, option (C) is correct.

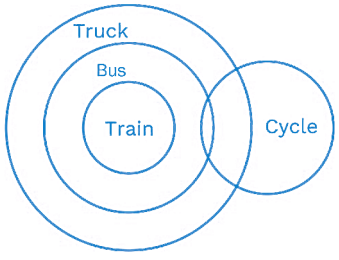
13. (C)

Venn diagram I:



or,

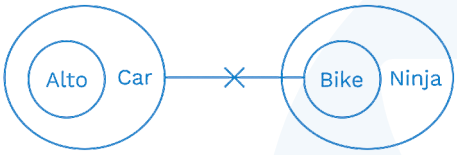
Venn diagram II:



Conclusion I: No bus is cycle.

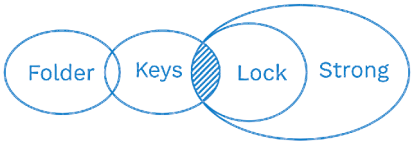
In the second Venn diagram, it is clearly seen that there is no negative relation between bus and cycle.
Hence, conclusion I does not follow.
Conclusion II: Some buses are cycles.
In the first Venn diagram, it is clearly seen that there is no relation between bus and cycle.
Hence, conclusion II does not follow.
However, after close observation, it is clear that both conclusions together form a complementary pair and therefore either conclusion I or II definitely follows.
Hence, option (C) is correct.

14. (D)
Venn diagram:

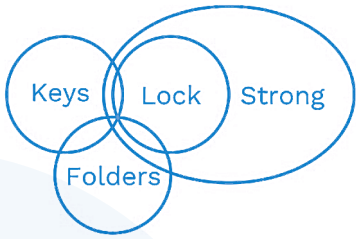


Conclusion I: All cars can never be ninja.
In a statement it is given that only car are Alto, that means Alto cannot be shared by anyone except car. So, it is true that all car can never be ninja.
Conclusion II: Some ninja are not cars.
In the Venn diagram, it is clearly seen that there is a negative relation between car and bike and some ninja are bike and that part of ninja also had a negative relation with car.
So, some ninja are not car conclusion follows.
Hence, both conclusions follow.
Hence, option (D) is correct.

15. (C)
Venn diagram I:



or,
Venn diagram II:



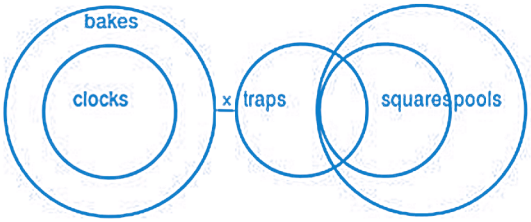
Conclusion I: No folder is strong.
In the second Venn diagram, it is clearly seen that there is no negative relation between folder and strong. So, no folder is strong does not follow.
Conclusion II: Some folders are strong.
In the first Venn diagram, it is clearly seen that there is no relation between folder and strong.
So, some folders are strong does not follow.
However, after close observation, it is clear that both conclusions together form a complementary pair, and therefore either conclusion I or II definitely follows.
Hence, option (C) is correct.

Level of Difficulty – 3

1. (E)

The possible Venn diagram is as shown below.

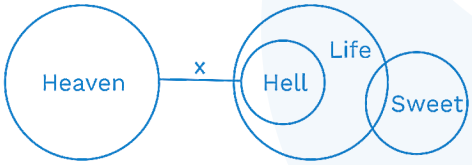
In the following diagram, clearly conclusions II and IV do not follow.



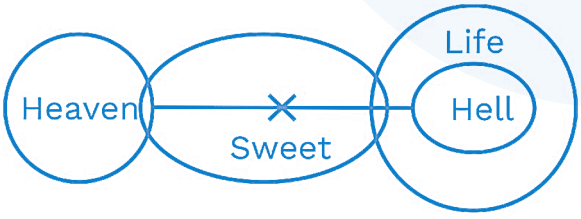
Now, if you observe, conclusions I and III are the complementary conclusions. So, if one is false, the other will be true and vice-versa.
So, either I or III follows.
Hence, option (E) is correct.

2. (C)

Venn diagram:



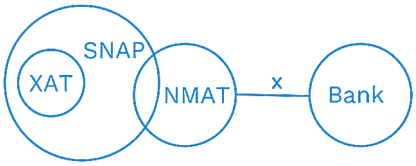
or,



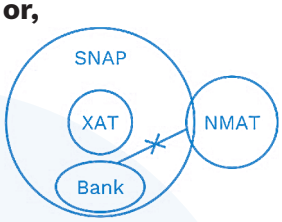
Conclusion I. All life is sweet is a possibility.
In a statement it is clearly given that only a few life is sweet that means all life cannot be sweet.
Hence, conclusion I does not follow.
Conclusion II. No heaven is sweet
From the Venn diagrams, it is clearly visible that there is no complete negative relation between heaven and sweet.
Hence, conclusion II does not follow.
Hence, option (C) is correct.

3. (B)

Venn diagram:



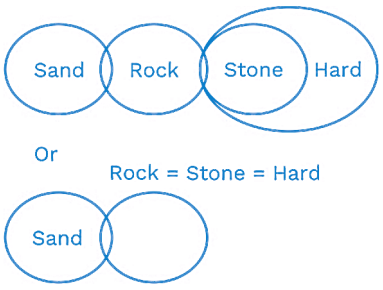
or,



Conclusion I: No Bank is SNAP.
In the Venn diagram it is clearly visible that there is no complete negative relation between Bank and SNAP.
Hence, conclusion I does not follow.
Conclusion II: All Banks being SNAP is a possibility.
In the Venn diagram it is clearly visible that there is no complete negative relation between Bank and SNAP. So, it is a possibility of all Banks being SNAP.
Hence, conclusion II follows.
Hence, option (B) is correct.

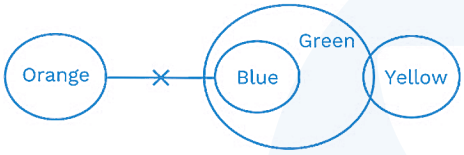
4. (A)

Venn diagram:



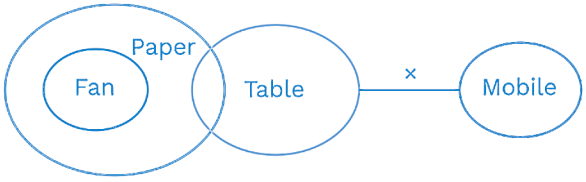
Conclusion I: All hard being rock is a possibility.
From the Venn diagrams, it is clearly visible that there is no negative relation between hard and rock.
So, it is a possibility of all hard being rock and it does not affect our statements.
Hence, conclusion I follows.
Conclusion II: All sand is rock is a possibility.
In a statement, it is given that only a few sands are rock, i.e. all sand cannot be rock.
Hence, conclusion II does not follow.
Hence, option (A) is correct.

5. (B)
Venn diagram:

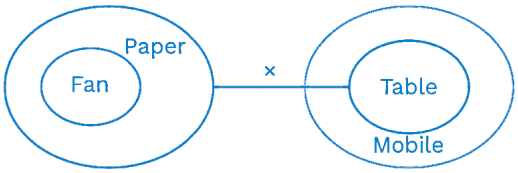


Conclusion I: All green can be orange.
In the Venn diagram it is clearly visible that all blue come under green and there is a negative relation between orange and blue. Therefore, all green can never be orange.
Hence, conclusion I does not follow.
Conclusion II: Some green are not orange.
In the Venn diagram it is clearly visible that all blue come under green and there is a negative relation between orange and blue. So, that part of green also had a negative relation with orange.
Hence, conclusion II follows.
Hence, option (B) is correct.

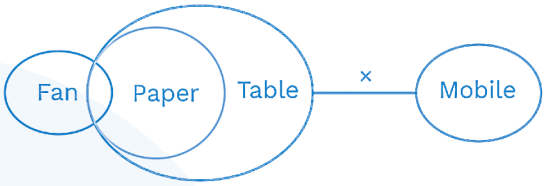
6. (D)
Statement (A): All fans are papers. Some papers are tables. No table is mobile.



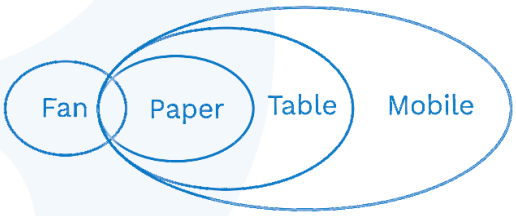
Thus, first conclusion does not follow from the set of statements.
Statement (B): All fans are papers, no paper is table, all tables are mobiles.



Thus, first conclusion does not follow.
Statement (C): Some fans are papers, all papers are tables, no table is mobile.

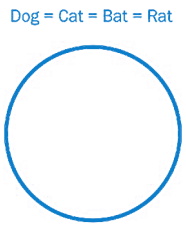


Thus, first conclusion does not follow.
Statement (D): Some fans are papers, all paper are tables, all tables are mobiles.



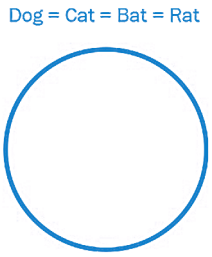
Hence, only statement (D) satisfies the above conclusions.
Hence, option (D) is correct.

7. (C)
Statement (A): All dogs are cats. Some cats are bats. Some bats are rats.
One of the possible Venn diagrams,

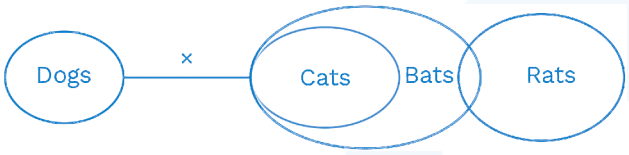


Thus, some bats are not dogs does not follow from this set.
Statement (B): Some dogs are cats. Some cats are bats. All bats are rats.

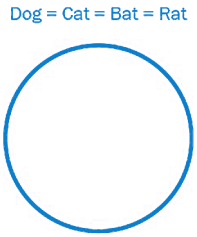
One of the possible Venn diagrams can be as shown below.



Thus, first conclusion does not follow.
Statement (C): No dog is cat. All cats are bats. Some bats are rats.
One of the possible Venn diagrams can be as shown below:



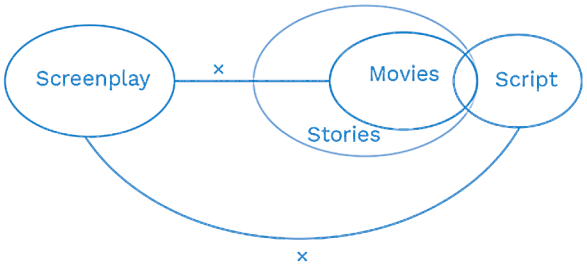
Statement (D): All dogs are cats. Some cats are bats. Some bats are rats.
One of the possible Venn diagrams can be as shown below:



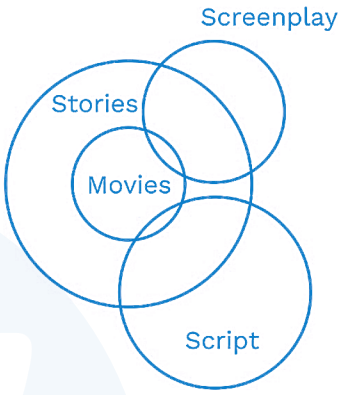
Hence, only statement (C) satisfies the above conclusions.
Hence, option (C) is correct.

8. (B)

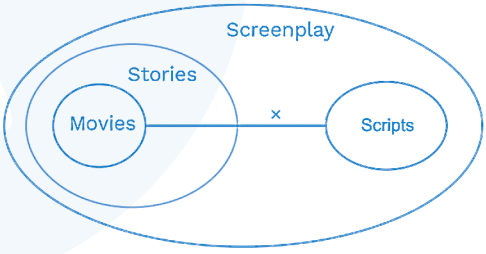
Statement (A): Only movies are stories. Few movies are scripts. Some stories are screenplays. No screenplay is script.
The first and third statements are contradicting each other and hence this cannot be the answer.
Statement (B): No screenplay is movie. Some movies are scripts. All movies are stories. No screenplay is script.



Statement (C): All movies are stories. Some movies are scripts. No script is screenplay. Some stories are screenplays.



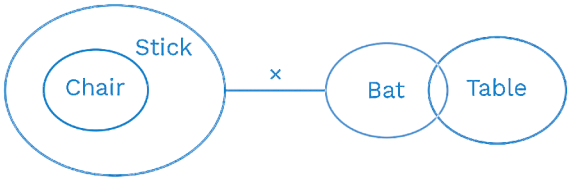
Thus, second conclusion does not follow.
Statement (D): All movies are stories. No movie is a script. All stories are screenplays. All scripts are screenplays.



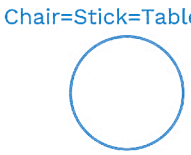
Thus, first conclusion does not follow.
Hence, only statement (B) satisfies the above conclusions.
Hence, option (B) is correct.

9. (C)

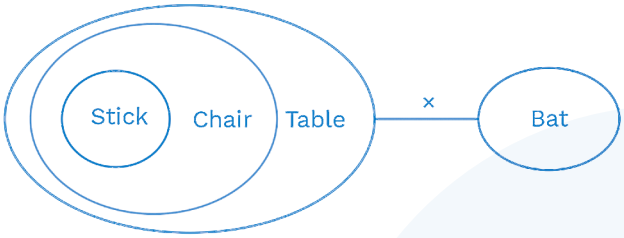
Statement (A): All chairs are sticks. No stick is a bat. Some bats are tables.



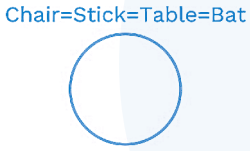
Thus, second conclusion does not follow.
Statement (B): Some chairs are sticks. All sticks are tables. Some tables are bats.



Thus, first conclusion does not follow.
Statement (C): All sticks are chairs. All chairs are tables. No table is a bat.



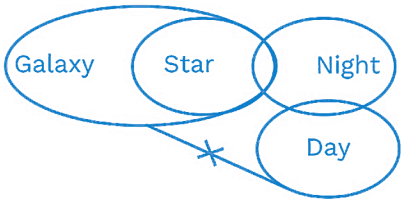
Statement (D): Some sticks are tables. Some tables are chairs. Some bats are tables.



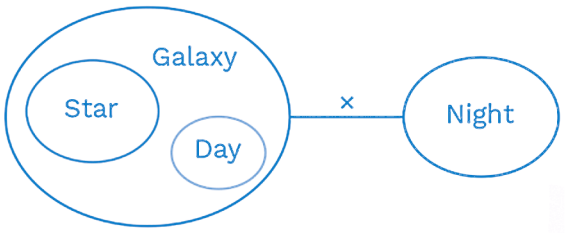
Thus, first conclusion does not follow.
Thus, only statement (C) satisfies the above conclusions.
Hence, option (C) is correct.

10. (B)

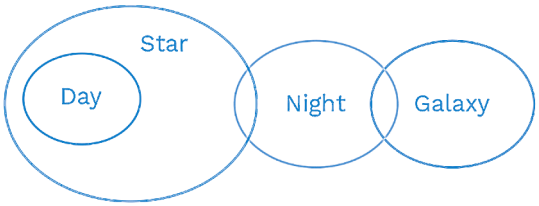
Statement (A): Some stars are nights. All stars are galaxies. No galaxy is day.



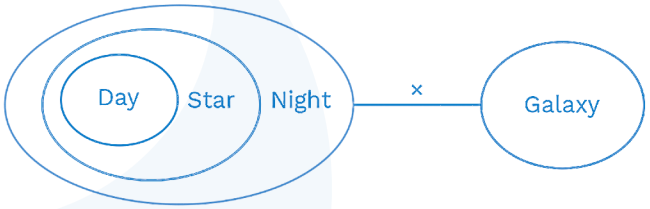
Thus, first conclusion does not follow.
Statement (B): All stars are galaxies. All days are galaxies. No galaxy is night.



Statement (C): All days are stars. Some stars are nights. Some nights are galaxies.



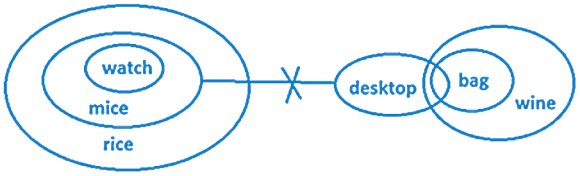
Thus, second conclusion does not follow.
Statement (D): All days are stars. All stars are nights. No night is galaxy.



Thus, first conclusion does not follow.
Hence, only statement (B) satisfies the above conclusions.
Hence, option (B) is correct.

11. (D)

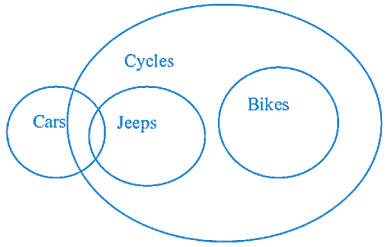
The given statements can be represented by the following Venn diagram,



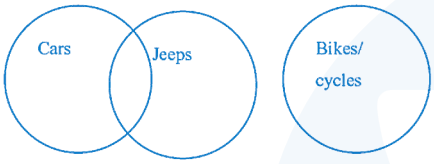
Now let us check the validity of the conclusions using the above diagram,
(A) Some wines are not watches. (True, as some wines, which are a part of the desktop, cannot be watches).
(B) All wine being rice is a possibility. (True, as there is no relation between wine and rice).

(C) Some rice are not desktop. (True, as some rice, which are mice, cannot be desktop).
(D) Some desktops are not rice. (Not true, as all desktops being rice is a possibility).
Hence, all except (D) are true.
Hence, option (D) is correct.

12. (A)

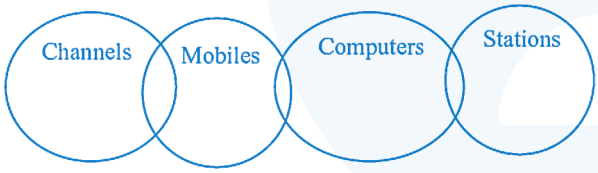


Or,



Therefore, from the above Venn diagrams, we can see that only conclusion III follows.
Hence, option (A) is correct.

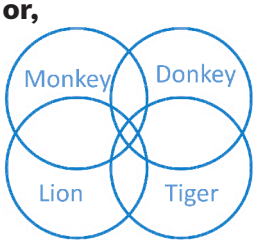
13. (D)



Therefore, from the above Venn diagram, we can see that none of the conclusions follows.
Hence, option (D) is correct.

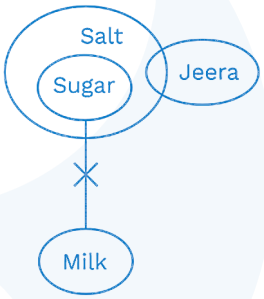
14. (B)
Venn diagram:

or,

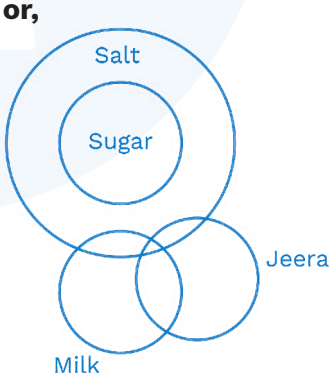


Conclusion I: Some tigers are monkeys.
In the Venn diagram it is clearly seen that there is no common relation between tiger and monkey.
Hence, conclusion I does not follow.
Conclusion II: Some tigers are donkeys.
In the Venn diagram it is clearly seen that there is no complete negative relation between tiger and donkey.
Hence, conclusion II follows.
Conclusion III: No lions are donkeys.
In the Venn diagram, it is clearly seen that there is no negative relation between lion and donkey.
Hence, conclusion III does not follow.
Hence, option (B) is correct.

15. (B)
Venn diagram:



or,



Conclusion I: Some sugar is jeera.
In the Venn diagram it is clearly seen that there is no relation between sugar and jeera.
Hence, conclusion I does not follow.

Conclusion II: Some milk can be salt.
From second Venn diagram it is clearly seen that there is no direct negative

relation between milk and salt. So, it is a possibility of some/all milk being salt.

Hence, conclusion II follows.

Conclusion III: No milk is jeera.

From second Venn diagram it is clearly seen that there is no negative relation between milk and jeera.

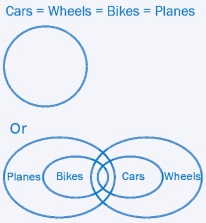
Hence, conclusion III does not follow.

Hence, option (B) is correct.

Rack Your Brain

1. (C)

Venn diagrams:



Conclusion I: All cars being bikes is a possibility.

As there is no negative relation between cars and bikes.

Hence, conclusion I follows.

Conclusion II: Some cars are planes.

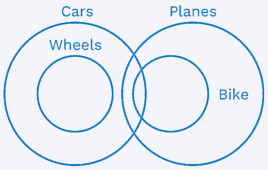
In the Venn diagram, it is clearly seen that some cars are plane. Hence, conclusion II follows.

Hence, option (C) is correct.

Rack Your Brain

2. (B)

Venn diagram:



Conclusion I: All cars being bikes is a possibility.

By statement A, we can say that wheels cannot be shared by anyone except cars. If conclusion I is true, then it will be false.

Hence, conclusion I does not follow.

Conclusion II: Some cars are planes.

In the Venn diagram, it is clearly visible that some cars are planes.

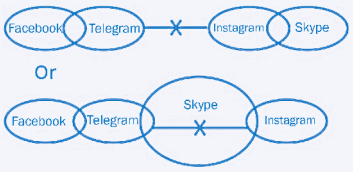
Hence, conclusion II follows.

Hence, option (B) is correct.

Rack Your Brain

3. (D)

Venn diagrams:



Conclusion I: Some Facebook are Instagram.

In the Venn diagram, it is clearly visible that some Facebook are not Instagram.

Hence, conclusion I does not follow.

Conclusion II: No Skype is Telegram.

There is no direct relation between Skype and Telegram.

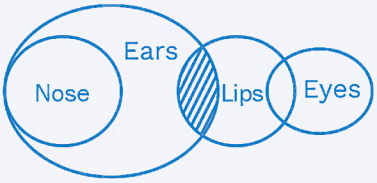
Hence, conclusion II does not follow.

Hence, option (D) is correct.

Rack Your Brain

4. (C)

Venn diagram:



Conclusion I: Some eyes can be ears.

There is no direct relation between eyes and ears. So, some eyes can be ears.

Hence, conclusion I follows.

Conclusion II: All eyes can be lips.

We know that some lips are eyes. So, all eyes can be lips.

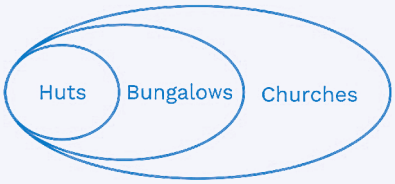
Hence, conclusion II follows.

Hence, option (C) is correct.

Previous Year's Question

1. (D)

Venn Diagram:



Conclusion I: Some churches are huts.

In the Venn diagram, it is clearly seen that some churches are huts.

Hence, conclusion I follows.

Conclusion II: Some churches are bungalows.

In the Venn diagram, it is clearly seen that some churches are bungalows.

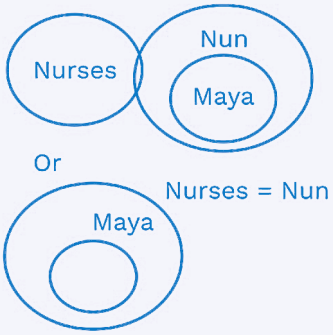
Hence, conclusion II follows.

Hence, option (D) is correct.

Previous Year's Question

2. (A)

Venn diagrams:



Conclusion I: Some nuns are nurses.

In the Venn diagram, it is clearly visible that some nuns are nurses.

Hence, conclusion 1 follows.

Conclusion II: Some nurses are not nuns.

In some of the possible Venn diagrams, all nurses will be nuns.

Hence, conclusion II does not follow.

Hence, option (A) is correct.