



SYLLOGISM

Syllogism is a “Greek” word that means inference or deduction. As such inferences are based on logic, then there inferences that are called **logical deduction**. These deductions are based on propositions or premises. Different types of questions covered in this chapter are two, three or four statements along with multiple conclusions.

Various types of Syllogism based **logical reasoning** questions are being asked in different government examinations, which makes them the most important sections under the verbal reasoning section.

What is Syllogism?

Syllogism is a part of logical reasoning, especially **analytical reasoning**. It consists of some statements, and candidates need to derive conclusions from the given statements. The statements and conclusions may seem to be illogical, but while solving questions related to syllogism in reasoning, candidates must assume the given statements to be 100% true.

Syllogism reasoning questions check the basic aptitude and ability of a candidate to derive inferences from given statements using step-by-step methods of solving problems. Let us now understand the various types of Syllogism from below.

Types of Syllogism in Reasoning

As now we know what is Syllogism, let us see the various types of syllogism questions in the reasoning section below.

1. Basic Syllogism

In these type of syllogism reasoning questions, the conclusions must be 100% true. Conclusions which are 99% true will be considered as False.

2. Either – or Case

In these type of syllogism reasoning questions, when the conclusions are not 100% true but the two given conclusions are 50% true then the either-or case will be formed.

3. Coded Syllogism

In these types of syllogism reasoning questions, statements and conclusions are given in coded form. Candidates need to decode the statements and conclusions to find the answer.

4. Sequential Syllogism



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In these type of syllogism reasoning questions, statements are given followed by the options. Candidates need to choose the set in which the third statement can be logically deduced from the first two statements.

How to Solve Syllogism Questions in Reasoning– Tips and Tricks

Candidates can find various tips and syllogism logical reasoning tricks from below for solving the questions in this section.

Tip # 1: If a definite conclusion is false in any of the possible diagrams, then the definite conclusion is considered to be false.

Tip # 2: If all statements are positive, then all negative conclusions will be false in definite cases and vice versa.

Tip # 3: Subject and Predicate can interchange for the complementary pair “Some + No”

Tip # 4: In a syllogism reasoning problem, if two conclusions have the same subject & predicate and consist of a complementary pair but only one of the conclusions is true, then it will not form an either-or case. Do not consider “Some + Some” as a complementary pair for Either or case.

Tip # 5: If a possible conclusion is true in any one of the possible diagrams, then the possibility is considered to be true.

Tip # 6: “Only a few” means both conclusions are definitely true.

Therefore, the conclusion, some A are B and some A are not B will be definitely true.

Tip # 7: In a syllogism reasoning problem, complementary pairs for Either or case are, “Some + N” and “All + Some not”

Tip # 8: Both conclusions should consist of one of the above complementary pairs. Subject and Predicate of the two conclusions should be the same and they cannot interchange. The answer of both the conclusions should be can't be said.

Tip # 9: Candidates need to keep the following things in mind while solving the syllogism based questions.

Get more insights on [Order and Ranking](#)

Statement	Definite Conclusion	Possible Conclusion
All A are B	- 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 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	Some A are not B	- 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 A is B	No possibility is true



	○ No B is A	
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Syllogism Sample Questions in Reasoning

Basic Syllogism:

Question 1:

Statements:

All roses are flowers.

Some flowers are red.

Conclusion:

I. Some roses are red.

II. All red things are roses.

Select the correct conclusion(s):

A) Only conclusion I

B) Only conclusion II

C) Both conclusions I and II

D) Neither conclusion I nor II

Answer:

A) Only conclusion I

Explanation:

Conclusion I is valid as it follows from the two statements (All roses are flowers, and some flowers are red). Conclusion II is not valid because we cannot infer that all red things are roses based on the given statements.

Question 2:

Statements:

All dogs are mammals.

Some mammals are carnivores.

Conclusion:

I. Some dogs are carnivores.

II. All carnivores are dogs.

Select the correct conclusion(s):

A) Only conclusion I

B) Only conclusion II

C) Both conclusions I and II

D) Neither conclusion I nor II

Answer:

D) Neither conclusion I nor II

Explanation:

Neither conclusion I nor II is valid based on the given statements. The first statement only establishes a relation between dogs and mammals, and the second statement establishes a relation between mammals and carnivores. We cannot directly relate dogs to carnivores based on the given information.

Either - or Case:



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Question 3:

Statements:

All doctors are educated.

Some educated people are researchers.

Conclusion:

I. Some researchers are doctors.

II. Either some doctors are researchers, or all researchers are doctors.

Select the correct conclusion(s):

A) Only conclusion I

B) Only conclusion II

C) Both conclusions I and II

D) Neither conclusion I nor II

Answer:

B) Only conclusion II

Explanation:

Conclusion II is valid as it includes both possibilities based on the given statements. It covers the case where some doctors are researchers (as per the first conclusion) and also the possibility where all researchers are doctors (as per the second conclusion).

Question 4:

Statements:

All lions are fierce.

Some fierce animals are predators.

Conclusion:

I. Some lions are predators.

II. Either some predators are lions, or all lions are predators.

Select the correct conclusion(s):

A) Only conclusion I

B) Only conclusion II

C) Both conclusions I and II

D) Neither conclusion I nor II

Answer:

D) Neither conclusion I nor II

Explanation:

Neither conclusion I nor II is valid based on the given statements. The first statement establishes a relation between lions and being fierce, and the second statement establishes a relation between fierce animals and predators. We cannot directly relate lions to being predators based on the given information.

Coded Syllogism:

Question 5:

In a coded language, "pit na lo" means "red apple" and "lo pa re" means "juicy fruit." What does "re ki" stand for in the same coded language?

A) apple red

B) fruit juicy

C) juicy red



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D) red fruit

Answer:

C) juicy red

Explanation:

From the given coded language, "re" stands for "juicy," and "ki" stands for "red." Therefore, "re ki" translates to "juicy red."

Question 6:

In a coded language, "so ta po" means "big blue sky" and "ta ma li" means "beautiful white flower." What does "ma li" stand for in the same coded language?

A) white flower

B) beautiful sky

C) big white

D) beautiful big

Answer:

A) white flower

Explanation:

From the given coded language, "ma" stands for "beautiful," and "li" stands for "flower." Therefore, "ma li" translates to "beautiful white flower."

Sequential Syllogism:

Question 7:

Arrange the following statements in a logical sequence:

I. All birds have wings.

II. Some birds are parrots.

III. All parrots can talk.

A) I, II, III

B) II, III, I

C) III, II, I

D) II, I, III

Answer:

A) I, II, III

Explanation:

The correct logical sequence is: All birds have wings (I) → Some birds are parrots (II) → All parrots can talk (III).

Question 8:

Arrange the following statements in a logical sequence:

I. All cars are vehicles.

II. Some vehicles are buses.

III. All buses are public transport.

A) II, I, III

B) III, II, I

C) I, III, II

D) I, II, III

Answer:



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D) I, II, III

Explanation:

The correct logical sequence is: All cars are vehicles (I) → Some vehicles are buses (II) → All buses are public transport (III).

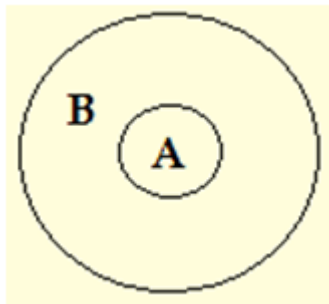
If you want more questions, check out the [Syllogism Reasoning Questions](#).

Check out details on [Venn Diagrams](#)

Types of Syllogism Questions

1. All A are B

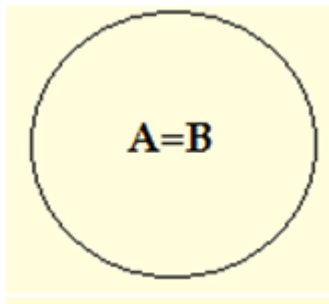
This phrase means that A is contained in B but not necessarily vice versa. This means A is a subset of B, but B may not be a subset of A. The Venn diagram for this is:



In this diagram, it is visible that circle A is inside the circle B, which means that B contains the entire A, i.e. All A are B.

2. A = B

In this case, the conclusion is similar to the first type, i.e. “All A are B”. Here not only “All A are B”, but also “All B are A”. This means A is a subset of B and B is also a subset of A. The Venn diagram is:



Here A is contained in B and so is B contained in A. So, here A contains all B and again B also contains all A.



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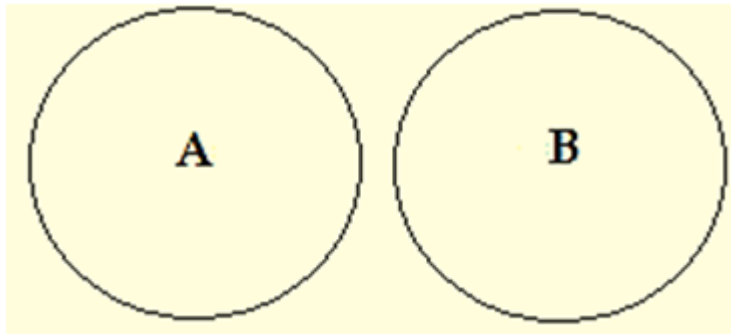
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3. No A are B

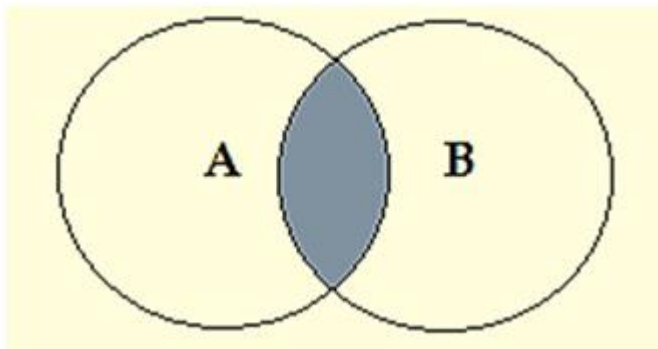
It is simply understandable that B does not contain any of A and so A is not contained in B. This means that A and B are disjoint sets. The Venn diagram for this case is:



Here no part of A is present inside of B and similarly, no part of A is present in A. So neither A nor B contain any part of B or A respectively.

4. Some A are B

This is the case when some of A is in B that is A and B are intersecting, and thus some B are A will also be true. The Venn diagram depiction is as:



Here, the shaded portion indicates that some portion of A is contained in B while the unshaded portion is uncertain portion and does not indicate anything whether A is contained in B or not.

5. Some A are not B

This means that some portion of A is not included in B for sure while the other part of A is uncertain whether it is included in B or not. The Venn diagram is;



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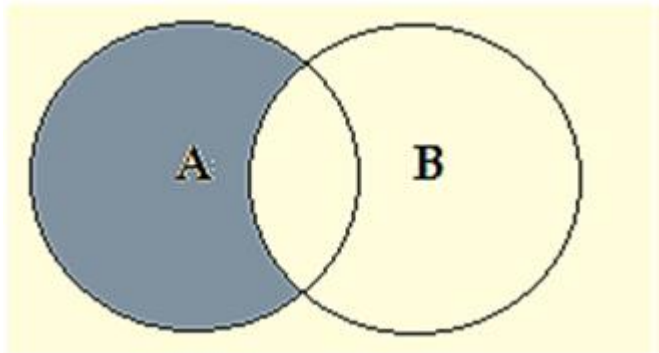
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In this, some portion of A is surely not included in B while there is no surety whether the shaded region is included in B or not.

These are certain universal rules that should be followed while solving the syllogism questions. They are:

1. Any “All” and “All” sentence will always imply an “All” conclusion.
2. Any “All” and “No” sentence will always imply a “No” conclusion.
3. Any “All” and “Some” sentence will always imply a “No” conclusion.
4. Any “Some” and “All” sentence will always imply a “Some” conclusion.
5. Any “Some” and “No” sentence will always imply a “Some not” conclusion.
6. Any “Some” and “Some” sentence will always imply a “No” conclusion.

Tips to solve the questions related to Syllogism:

1. Read the question thoroughly
2. Start drawing the Venn diagram
3. Follow the sequence of the question while drawing
4. Analyse the conclusion from the Venn diagram
5. Check for other alternative solutions at the end

Solved Example

Statements:

1. Some pencils are dogs
2. All dogs are pens
3. All pens are cats

Conclusions:

1. All dogs are cats



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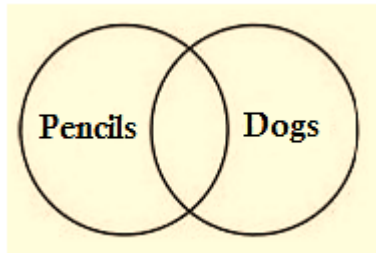


2. Some pens are pencils

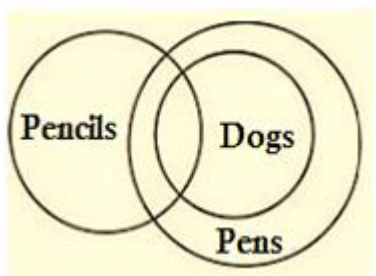
3. Some pencils are cats

Solution:

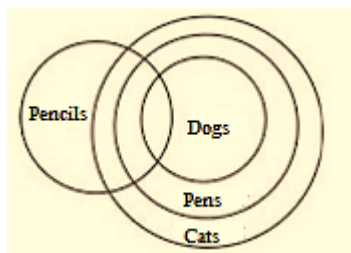
Analysing the first statement, the Venn diagram can be made as;



Now as per the second statement, all dogs are pens, we can draw the Venn diagram as:



Now as per the last statement which says that all pens are cats, we get



This is the total representation of the statements. Now the conclusion needs to be analysed one by one.

For the first conclusion, it is seen that the circle dogs is engulfed inside the circle cats. Thus the conclusion “all dogs are cats” is true.

For the second conclusion, the circles’ pens and pencils intersect each other and hence, the conclusion “some pens are pencils” is also true.



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For the third conclusion, the circles' cats and pencils also intersect each other and hence the conclusion "some pencils are cats" is also true.

Therefore, all the conclusion in this question is true.

In this way, the questions related to syllogism can be easily solved. The only thing that is important is to practice different variations of syllogism related questions and various bank exam questions so as to build up the confidence gradually.

Candidates willing to strengthen their command over this concept can solve more questions based on this topic at the [Syllogism Questions](#) page and apprehend the type of questions which may be asked and analyse their preparation.

Syllogism Tricks and Tips

Candidates can follow the below-mentioned syllogism tricks and tips that may help them solve sylloge questions easily:

1. Always pay attention to words like 'some', 'a few', 'all', 'atleast', etc. These words form the base to solve the syllogism questions.
2. The best syllogism trick is to solve questions in the form of Venn diagrams. This will make the explanation more clear and simplified.
3. Never assume anything while solving the syllogism questions. The only data that has to be followed while solving the question is the data mentioned in the question. No extra assumption must be made while solving questions.