Syllogism concepts

It strengthens logical reasoning, problem-solving, and decision-making abilities, applicable in professional contexts. Commonly asked in Accenture, TCS, Infosys, Cognizant, Capgemini, Microsoft, Deloitte, etc.

Syllogism is one of the concepts of reasoning in which a conclusion is drawn from two or more given statements. It uses deductive reasoning. You have to take the given statements to be true, even if they are at a variance from commonly known facts.

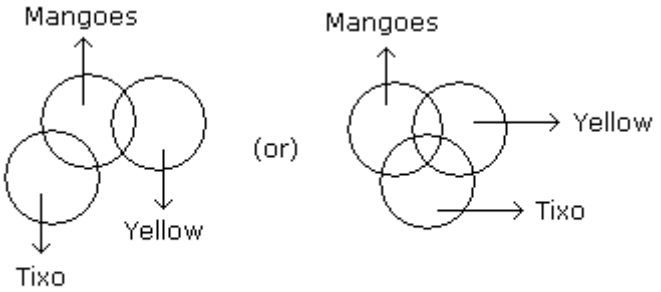
There are many ways of solving questions of syllogisms. The most effective and efficient method of all is using a Venn diagram. Based on the given statements, one should draw all the possible diagrams and then solve each of these diagrams separately. Finally, the answer common to all the diagrams is taken as the correct one.

Key points to remember

1) While drawing Venn diagram from given statements, all the probable conditions should be taken into consideration, and the possible number of diagrams should be drawn.
2) During conclusion, consider a conclusion correct if it is certain or justify the statement with 100% probability.

Question1. Statements: Some mangoes are yellow. Some tixo are mangoes.

Solution: To solve this question 2 diagram can be possible.



None of the two follows.

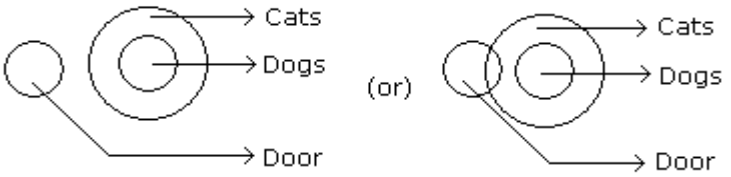
Conclusions:

1. **Some mangoes are green** – This conclusion doesn't match with the Venn. Hence is a wrong conclusion.
2. **Tixo is a yellow** – This conclusion is wrong as per the 1st diagram and right as per first diagram, hence becomes a probable case and cannot be considered a correct.

Therefore, the correct answer is **None of the two follows.**

Question2: Statements: No door is dog. All the dogs are cats.

Solution:



Only (3) follows.

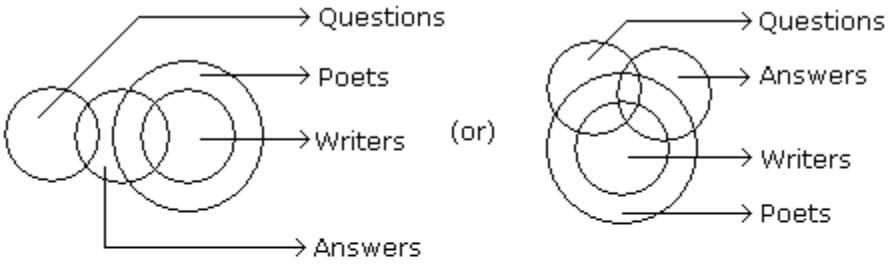
Conclusions:

1. **No door is cat** – as per the first diagram it is correct, but second diagram shows this statement wrong, though it become a probable case and probable case will not be considered a correct conclusion.
2. **No cat is door** - as per the first diagram it is correct, but second diagram shows this statement wrong, though it become a probable case and probable case will not be considered a correct conclusion.
3. **Some cats are dogs** – it is 100% evident from the diagrams that the conclusion is true.
4. **All the cats are dogs** – All cats are dog cannot be possible, since Venn of dogs are inside the Venn of Cat, hence all the cats are dogs is wrong.

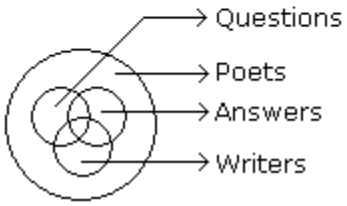
So, only statement III follows.

Question3: Statements: Some questions are answers. Some answers are writers. All the writers are poets.

Solution: To solve this question, there can be three possible diagrams.



(or)



Only (1) and (4) follow.

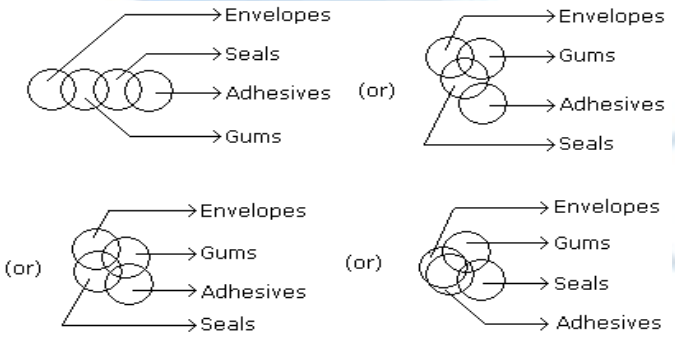
Conclusions:

1. **Some writers are answers** – This conclusion justifies all the diagrams, and it is a right conclusion.
2. **Some poets are questions** – This conclusion wrong as per 1st diagram and correct as per 2nd and 3rd diagram, hence it becomes a probable conclusion and has to be considered wrong.
3. **All the questions are poets** – only figure 3 justify this conclusion, rest two don't. Hence again it is a probable conclusion and has to be considered wrong.
4. **Some poets are answers** – This conclusion justify all the three diagrams and is a correct statement.

Therefore, correct answer is only (1) and (4) follow.

Q4. **Statements:** Some envelops are gums. Some gums are seals. Some seals are adhesives.

Solution: To answer this question 4 possible diagrams can be drawn.



Only (3) follows.

Conclusions:

1. **Some envelopes are seals** – 1st diagram contradict this conclusion, rest are justifying hence it become a probable case which cannot be considered correct.
2. **Some gums are adhesives** – 1st and 2nd diagram contradict this conclusion rest are justifying again it becomes a probable case which is again wrong.
3. **Some adhesives are seals** -This conclusion is justifying all the mentioned diagrams, hence considered correct.
4. **Some adhesives are gums** - 1st and 2nd diagram contradict this conclusion rest are justifying again it becomes a probable case which is again wrong.

Therefore, correct answer is only statement 3 follows.