

SNS COLLEGE OF TECHNOLOGY

(Autonomous Institution) COIMBATORE-35 DEPARTMENT OF BIOMEDICAL ENGINEERING



# 23GET276 - VQAR-II UNIT III - VERBAL REASONING II

# Syllogism

## Definition

**Syllogism** has been defined as "A form of reasoning in which a conclusion is drawn from two given or assumed propositions". It is deductive reasoning rather than inductive reasoning. It can be stated that an important part of the exam is Syllogism in reasoning.

Let us take two propositions as follows:

- 1. All men are old.
- 2. All old wear caps.

We can conclude on the basis of the above two statements that "All men wear caps"

However the validity of the conclusion is important. Not all conclusions need to be valid. Only

those two propositions which lead to a valid conclusion are relevant to our cause.

For Example

- 1. All tasks are pending.
- 2. Some books are pending.

The conclusion that "Some books are tasks" is invalid

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## **Basics of Syllogistic Reasoning**

A class is defined to be the collection of all objects that have some characteristics in common". Classes can be related to each other in many ways. If every member of one class is also a member of a second class, then the first class is said to be included or contained in the second. If some but perhaps not all members of one class are also member of another, then the first class may be said to be contained partially in the second class. Of course, there are pairs of classes having no members in common, such as the class of all triangles and the class of all circles.

Now let us take 4 statements

- 1. All persons are kind.
- 2. No person is kind.
- 3. Some persons are kind
- 4. Some persons are not kind.

The first statement is about two classes and clearly defines that the first class is included in the second.

The second statement says that the first class is wholly excluded from the second.

The third statement says that at least one member of class 1 is also a member of class 2.

The fourth similarly implies that at least one person is not kind.

1. <u>Universal Positive Statement:</u> First of all universal means something which is applicable to all and positive means, this is of 'yes' format. Universal positive statement indicates something positive applicable to all the items in that category. This is represented by the letter 'A'.

These statements begin with All, Each and Every.Some Examples are:

- All boys are sharp
- All girls are cute



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- All Indians are kind
- Every computer is a fan
- Each of the colleges is a school.

All these are 'A' type of statements, because they all are conveying universal positive meanings.

## 2. <u>Universal Negative Statement:</u>

Again, in this case, the only difference from the last category is that, in this case, the statement conveys a negative meaning. It implies that it refers to that kind of statements, which are universal and giving a negative impression. These types of statements begin with No, None of the, Not a single etc. and are represented by the letter 'E'. Some examples of these types of statements are:

- No S is P
- No person is intelligent
- No Rita is Meena
- No boy is smart
- None of the girls is busy
- Not a single person is sleeping
- 3. <u>Particular Positive Statement:</u> In this case, the statement given gives a positive impression but it covers only some items and not all. These type of statements begins with some, any, a few and are represented by the letter 'I'. Some examples of I type statements are:
  - Some lawyers are actors,
  - Some fruits are apples
  - Few books are keys
  - Some staplers are mobiles



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- Particular Negative Statement: Here, the statement again covers only some items, but it gives a negative impression. These kinds of statements are represented by the letter 'O'. Some examples of this are
  - Some girls are not crazy,
  - Some files are not pencils,
  - Some m is not n,
  - Some Rohits are not Dhawans.
  - Few vegetables are not green.

The definitions of the A, E, I, O statement are very important and the student must be able to immediately recognize the statement.

Sr. No.	Type of statement	Represented by the letter
1.	Universal Positive	А
2.	Universal Negative	E
3.	Particular Positive	1
4.	Particular Negative	0

With these things in mind, given below is a list of all the four types of statements.

### Syllogism Tricks and Rules

- 1. With two particular statements, no universal conclusion is possible.
- 2. With two positive statements, no negative conclusion is possible.
- 3. With two negative statements, no positive conclusion is possible.
- 4. With two particular statements, no conclusion is possible, except when an 'I' type of statement is given and then by reversing it an 'I' type of conclusion is possible.