

Categorical Syllogisms (Argument)

Back Ground

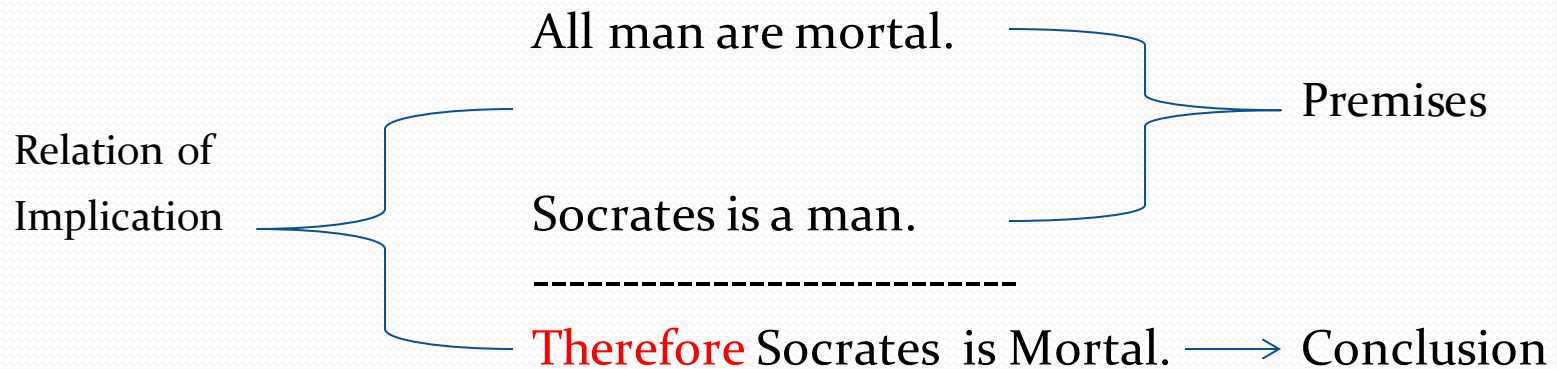
- Logic is the study of the methods and principles used to distinguish good (correct) from bad (incorrect) reasoning. *(Def- by I M Copi & Carl Cohan)*
- Reasoning (tark) is the mental process where we claimed or inferred the truthfulness of one or many beliefs, judgments or statements by the bases of pre-supposed one or many true beliefs, judgments or statements.

Anumana= Inference= Argument

- Reasoning is Known as Anumana (Inference).
- Anumana is a mental process where we deduce or find Unknown knowledge by the means of known knowledge. (From Unknown to Known = deductive argument/ inference)
- Therefore we can say that the completed process of inference is called ARGUMENT.
- According to every probable reasoning or inference there is an argument.

Process of Argument

- Logic deals with the only 'complete process' of an argument. How and Why this process happened? Logic is not interested to deal with this question. (This is subject to Psychology)
- Every Argument has a Structure which have two parts- Premises and Conclusion. Exp-



Some features of argument

- An argument requires at least one premises and one conclusion.
- There is a relation between premises and conclusion that means conclusion should be drawn from the premises.
- Relation between premises and conclusion known as 'relation of implication' (aapadan ka sambandh). In this relation we will deduce/inferred one statement (proposition) from the basis of other statement.
- Argument is not interested to truth and falsity of the propositions. It is more interested to validity or Invalidity. Therefore an **Argument is either VALID or INVALID.**

Types of Inference (Argument)

1. Deductive Argument

- The conclusion of a deductive argument is less pervasive compare to its premises.

Example-

All men are rational.

Arhat is a man.

so Arhat is rational.

2. Inductive Argument

- The conclusion of an inductive argument is always more pervasive compare to its premises.

Example-

Ram is mortal.

Shyam is a Mortal.

Manish is a Mortal.

so All men are Mortal.

Differences between Deduction & Induction

Deduction

- Conclusion is less pervasive compare to its premises.
- Related with only 'formal' truth.
- Move from Universal to Particular. (All to Some)
- It is based on law of identity, law of contradiction, law of sufficient reason and law of exclusiveness (ananya).
- Its premises always assumed as a true.

Induction

- Conclusion is more pervasive compare to its premises.
- Related with 'formal' and 'material' truth both.
- Move from Particular to Universal. (Some to All)
- It is based on similarity of nature and law of causation.
- Its premises based on observation and experience.

Categorical Syllogism

- **Syllogism** -Any deductive argument in which a conclusion is inferred from two premises.
- The term syllogistic argument refers to any argument that either is a standard form categorical syllogism, or can be reformulated as a standard form categorical syllogism without any loss or change of meaning.
- **Categorical syllogism** -A deductive argument consisting of three categorical propositions that together contain exactly three terms (major, minor and middle term), each of which occurs in exactly two of the constituent propositions.

The parts of a categorical syllogism

- A standard form of categorical syllogism has following parts- 3 terms, 2 premises and 1 conclusion.

Major term (P)

- The Predicate terms of the conclusion.

Minor term (S)

- The Subject terms of the conclusion.

Middle term (M)

- The term that appears in both premises but not in the conclusion

Major premise

- The premise containing the Major term(P); This is stated always first.

Minor premise

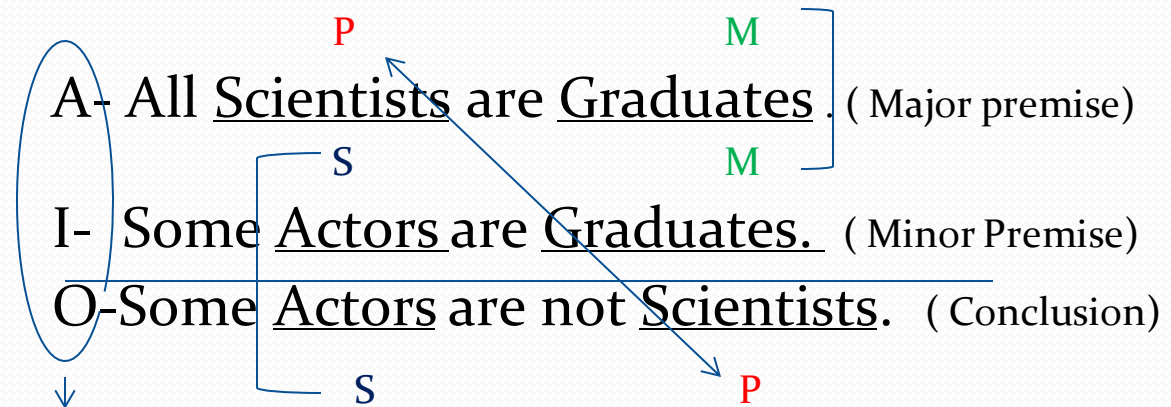
- The Premise containing the Minor term (S).

Conclusion

- Whatever inferred from the premises.

Syllogism and Figure

- Example-



Mood

AIO

Figure

P-M

S-M

S- P

Mood & Figure = AIO- Ist Figure

Figures and Moods

Ist Fig.	IIInd Fig.	IIIrd Fig.	IVth Fig.
<ul style="list-style-type: none"> • M-P • S-M <hr style="width: 50%; margin: 5px 0;"/> • S- P 	<ul style="list-style-type: none"> • P-M • S-M <hr style="width: 50%; margin: 5px 0;"/> • S- P 	<ul style="list-style-type: none"> • M-P • M-S <hr style="width: 50%; margin: 5px 0;"/> • S- P 	<ul style="list-style-type: none"> • P-M • M-S <hr style="width: 50%; margin: 5px 0;"/> • S- P
<p>Total 15 Valid Moods in all Figures</p>			
Barbara- AAA Celarent- EAE Darii - AII Ferio - EIO	Camestres –AEE Cesare - EAE Baroko - AOO Festino - EIO	Datisi - AII Disamis - IAI Bokardo - OAO Ferison - EIO	Camenes – AEE Dimaris - IAI Fresison - EIO