

Philosophy

Question:
**Differentiate Between
Inductive And Deductive
Method: (CSS-2016)**

1: Introduction:

Inductive and deductive methods are philosophical methods of reasoning used to know the nature, history, epistemology of the knowledge. These methods differ in nature from general to specific and specific to general. Both methods have different types. Some philosophers are proponents of inductive reasoning and some are advocates of deductive reasoning. Both methods are used to obtain knowledge and reason behind it.

2: Differences Between Inductive and deductive Methods:

Firstly, we understand the terms inductive and deductive reasonings.

2.1: Understanding The Terms Inductive and deductive methods:

Deductive reasoning methods is a Top-bottom approach leading from general to specific knowledge.

For example: All flowers are beautiful, rose is a flower, so rose is beautiful.

Inductive reasoning method is the method of gaining knowledge leading from specific to general observations. It is a bottom up approach for example sparrow has wings so all birds will have wings.

2.2: Types Of Inductive and Deductive Reasoning:

Both the methods have different types such as;

2.2.1:- Types of Deductive Reasoning:

Deductive method has following three types.

I: Syllogism:

Syllogism refers to formation of different predicates.

These predicates

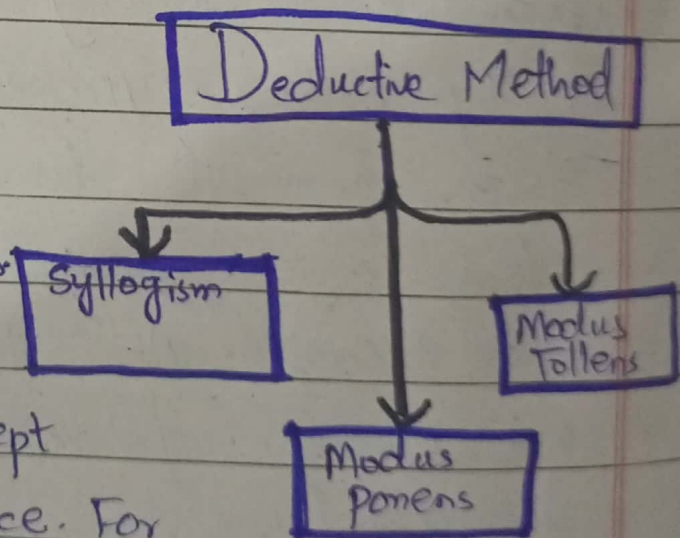
can deny or accept each other's stance. For

the conclusion to be true there should be coherence between all conditional predicates.

e.g.: (i) All stars are bright.

(ii) Sun is a star.

(iii) So sun is bright.



All the predicates are correct and affirm each other.

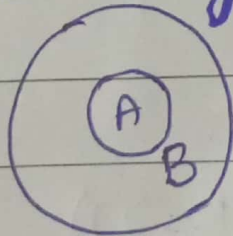
II Modus Ponens :

Modus Ponens means predicate affirm each others and accept things.

For example:

- (i) All human are mortal. (conditional)
- (ii) Socrates is a human. (Affirmation)
- (iii) Socrates is mortal. (Conclusion)

Another example of Modus Ponens is explained with the help of venn diagram.



$A \Rightarrow B$
(Modus Ponens)

III Modus Tollens:

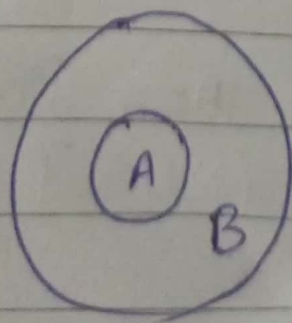
This type of deductive Reasoning is denying the conditions. No affirmation of predicates.

For example:

- (i) All dogs have four legs. (condition)
- (ii) Zoro has two legs. (Denial)
- (iii) Zoro is not a dog. (Conclusion)

There is no coherence. One predicate rejects the other predicate.

Another example is explained by Venn diagram.



$B \Rightarrow A$
(Modus Tollens)

2-2-2: Types Of Inductive Reasoning:

There are two types of Inductive reasonings.

I Strongly Inductive Reasoning:

This type of reasoning refers to the method in which you are sure about the prior knowledge and the conclusion's validity.

- (i) For example there are many white swans.
- (ii) Black swans are also seen in Africa.
- (iii) Swans can be black and white.

II Weakly Inductive Reasoning:

This method refers to reasoning

in which we are not sure about the conclusion.

For example

(i) Many students are preparing for CSS exam - 2025.

(ii) Many go to the famous "A" academy for preparation.

(iii) All the students go to the Academy "A".

We are not sure about the conclusion.

2.3: Type of Approach:-

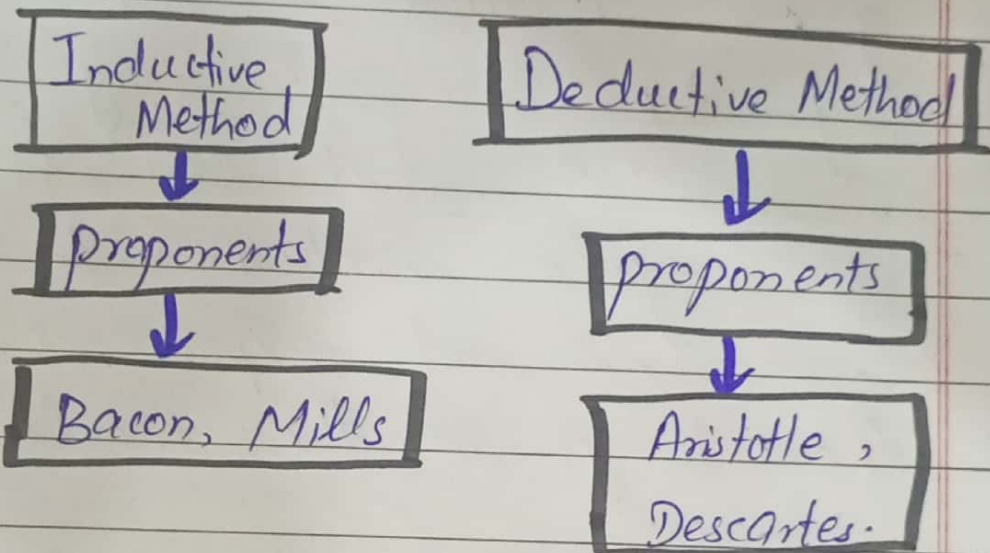
I Inductive reasoning moves from specific to general and is called as bottom-up approach.

II Deductive reasoning moves from

general to specific so it is called as Top-down approach.

2.4: Proponents of Both Methods

Different philosophers advocated different methods of reasoning.



2.5: Criticism of Inductive and Deductive Reasoning

Many philosophers criticise deductive method and its types— Modus Tollens and Modus

ponents due to lack of assurity and validity of coherence, acceptance and rejection of predicates.

Inductive reasoning is criticized because it is based on prior knowledge therefore called as educated guess, because the knowledge of the observant may be limited which can lead to false conclusion because one can not experience all the things in the world.

3: Conclusion:

Inductive and deductive methods are used for reasoning and gaining knowledge. Deductive is moving from general to

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specific and inductive is moving from specific to general. Both has different types but deductive reasoning is more reliable than inductive reasoning.