Sentence and Proposition

Sentence

- Sentence = वाक्य, Proposition = तर्कवाक्य/
  प्रतिज्ञपति = Statement
- Sentence is the unit or part of some language.
- Sentences can be expressed in all tense (present, past or future)
- Sentence is not able to explain quantity and quality.
- A sentence may be interrogative (प्रश्नवाचक), simple or declarative (घोषङ्गात्मक), command or imperative (आदेशात्मक), exclamatory (विस्मय बोधक), indicative (निर्देशङ्गात्मक), affirmative (भावात्मक), negative (निषेधात्मक), skeptical (संदेहात्मक) etc.
- Note: Only indicative sentences (संकेतात्मक वाक्य) are proposition.
• All kind of sentences are not proposition, only those sentences are called proposition while they will determine or evaluate in terms of truthfulness or falsity.
• Sentences are governed by its own grammar. (for exp- sentence of hindi language govern by hindi grammar)
• Sentences are correct or incorrect / pure or impure.
• Sentences are may be either true or false.
Proposition

- Proposition are regarded as the material of our reasoning and we also say that proposition and statements are regarded as same.
- Proposition is the unit of logic.
- Proposition always comes in present tense. (sentences - all tenses)
- Proposition can explain quantity and quality. (sentences- cannot)
- Meaning of sentence is called proposition.
- Sometime more then one sentences can expressed only one proposition.

Example:

1. पानी बरस रहा है . (Hindi)
2. पावुष पड़तो (Sanskrit)
3. It is raining (English)

All above sentences have only one meaning or one proposition.
Sometimes a sentence may express different propositions in different contexts. Example: *Present P.M. is Intelligent.* (In 1947 context- Pt. Nehru, In 2020 context- Mr. Narendra Modi)

- Sentences are expressed through its own language. But Propositions are Language neutral.
- Proposition must be either True or False. (Truth and Falsity can be applied only to proposition)
- When a sentence both terms like subject and predicate are regarded as noun, then the sentence is called a proposition.
- We can say that all propositions are sentences, but not all sentences are propositions.
Components of Proposition (Terms)

- There are three components in every proposition, which are known as **term**.
- By term, we mean any word or word phrase, which is used in a proposition as a subject or predicate.
- **Subject term** - It refers to the assertion or denying something.
- **Predicate term** - It refers to the assertion or denying of what.
- **Copula** - It is defined as negative or affirmative. It comes between subject and predicate term.

E.g.- **Ram is a good person.**

(sub) (copula) (predicate)
Classification/ Types of Proposition

• There are 3 types of proposition according to the relation of terms.

• **Categorical Proposition** - There are no condition (Unconditional) for their assertion.

• **Conditional or Hypothetical Proposition** - It is also known as a type of compound proposition. This proposition is false, when the antecedent is true and the consequent is false.

• **Distinctive proposition** - It is also known as a type of compound proposition. It says that this proposition is true, if at least one of the component of proposition are also true.
Categorical Proposition

- It is regarded as a statement which talks about the relationship between categories/classes.
- It shows the complete, partial or complete separate connection of one category with another category.
- The Deductive argument formulated by the categorical propositions.
- Categorical propositions are known as the fundamental elements, the building blocks of argument, in the classical account of deductive logic.
Four kinds of Categorical Propositions

- **(A) Acc. to Quantity**
  1. Universal
  2. Particular

- **(B) Acc. To Quality**
  1. Affirmative
  2. Negative

According to quantity and quality we can find **four categorical propositions** (निरपेक्ष प्रतिज्ञापि):

1. Universal Affirmative (सर्वव्यापी स्वीकारात्मक) - A Proposition
2. Universal Negative (सर्वव्यापी निषेधात्मक) - E Proposition
3. Particular Affirmative (अंशव्यापी स्वीकारात्मक) - I Proposition
4. Particular Negative (अंशव्यापी निषेधात्मक) - O Proposition
# Identification of Categorical Proposition

## 1. A – Proposition

<table>
<thead>
<tr>
<th>Main Identity</th>
<th>Other words to identify</th>
<th>Standard Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>• All</td>
<td>• Each, every, any, always, certainly, absolutely, in all cases, necessarily</td>
<td></td>
</tr>
<tr>
<td>• सभी</td>
<td>• If these words comes along with ‘Not’ (e.g. not each…) then it will became O proposition</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• All S is P</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• All politicians(S) are liars(P)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• S $\neg P = 0$</td>
<td></td>
</tr>
</tbody>
</table>

## 2. E – Proposition

<table>
<thead>
<tr>
<th>Main Identity</th>
<th>Other words to identify</th>
<th>Standard Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>• No</td>
<td>• Never, none, in no case, not a single</td>
<td></td>
</tr>
<tr>
<td>• कोई.....नही</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• No S is P</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• No politicians(S) are liars(P)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• S $P = 0$</td>
<td></td>
</tr>
</tbody>
</table>
# Identification of Categorical Proposition

## 3. I – Proposition

<table>
<thead>
<tr>
<th>Main Identity</th>
<th>Other words to identify</th>
<th>Standard Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Some&lt;br&gt;• कुछ</td>
<td>• A few, the few, sometimes, almost all, generally, most, many, perhaps, frequently, often, majority, minority, usually, all but one</td>
<td>• Some S is P&lt;br&gt;• Some politicians(S) are liars(P)&lt;br&gt;• S P ≠ 0</td>
</tr>
</tbody>
</table>

## 4. O – Proposition

<table>
<thead>
<tr>
<th>Main Identity</th>
<th>Other words to identify</th>
<th>Standard Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Some…..not&lt;br&gt;• कुछ…..नही</td>
<td>• Few, hardly any, scarcely any, seldom</td>
<td>• Some S is not P&lt;br&gt;• Some politicians(S) are not liars(P)&lt;br&gt;• S P̅ ≠ 0</td>
</tr>
</tbody>
</table>