Semantic analysis and Representation.

* Semantic Analysis :-

→ Semantic analysis is the process of drawing meaning from text.

→ It allows computers to understand and interpret sentences, paragraphs or whole documents by analyzing their grammatical structure.

→ The Purpose of semantic analysis is to draw exact meaning, or you can say dictionary meaning from the text.

→ Semantic Analysis can be divided into two parts :-

(i) Studying meaning of individual word :- It is the first part of the semantic analysis in which the study of the meaning of individual words is performed. This part is called lexical semantics.

(ii) Studying the combination of individual words :-

__/__/____

(ii) Homonymy:- It may be defined as the words having the same spelling or same form but having different and unrelated meanings.

for Example:- The Word 'Bat' is hamonymy word.

- A bat can be implemented in two ways.
  - → To hit a ball
  - → Bat is nocturnal flying mammal also.

(iii) Polysemy:- Polysemy is a Greek word, that means "many signs".
It is a word or phase with different but related sense.

→ That, Polysemy has the same spelling but different and related meanings.

for Example:- The Word 'bank' is a Polysemy word.

→ A financial word.
→ A Synonym for "to rely on".
→ The building in which such as institution is located.

__/__/__

* Meaning Representation :-

→ The semantic analysis creates a representation of the meaning of sentence.

→ firstly we understand the building block of the semantic system, to understand the concept and approaches related to meaning representation.

• Building Blocks of Semantic System :-

(i) Entities :- It represents the individual such as a particular person, location etc.
for example :- Haryana, Punjab, chirag.

(ii) Concepts :- It represents the general category of the individual such as person, city etc.

(iii) Relations :- It represents the relationship between entities and concepts.
for example :-
Sentence : Ram is a person.

(IV) Predicates :- It represents the verb structure.
for example, Semantic roles, case grammer

__/__/____

* Approaches to Meaning Representations:-

- First Order predicate logic (FOPL).
- Semantic Nets
- Frames
- Conceptual dependency (CD)
- Rule based Architecture
- Case Grammer
- Conceptual Graphs