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GLOSSARY-8

1. **Background knowledge:** It is defined as the knowledge which might be present beforehand about an environment, this knowledge is initially contained in the knowledge base. [1] page: 235
2. **Completeness:** An inference procedure is said to be complete if it can derive any sentence that is entailed and always terminates. [1] page:242
3. **Compositional languages:** A compositional language is defined as a language where the meaning of a sentence is a function of the meaning of its parts. [1] page:286
4. **Epistemological level:** It is defined as a level where the information is an abstract description of what the agent knows about a world. [2] slide: 13
5. **Entailment:** It is defined as a relation between sentences where a sentence follows logically from another sentence. [1] page: 240
6. **Grounding:** It is defined as the connection between the logical reasoning or entailment and the real environment in which an agent exists. [1] page: 243
7. **Inference:** It is defined as a procedure of new statements from the old data. In terms of logic, it means deriving new propositions from old. [1] page:235
8. **Knowledge base:** It is defined as a database which consists of a set of statements. [1] page:235
9. **Knowledge representation language:** It is defined as a formal language which is used to represent a fact in the world. [2] slide: 12
10. **Model:** A model is defined as system or thing which is used as an example or a representation. [3]
11. **Model in propositional logic:** A model is defined as a possible world/environment where an agent might or might not be in. It is an abstraction where each sentence is given a truth value. [1] page: 240
12. **Model checking:** It is defined as an inference procedure which enumerates all the possible models and then checks whether α is true, where ever the KB is true. [1] page:242
13. **Proof:** It is defined as a sequence of derivations/conclusions that leads to a desired goal. [1] page:250
14. **Semantics:** It is defined as the meaning of a sentence. It also defines whether the sentence holds with respect to each possible world. [1] page:240

15. **Sentence:** It is defined as a representation of a fact about the world. [1] page:235
16. **Soundness:** An inference procedure is said to be sound if it directly implements the definition of entailment and derives only entailed sentences. [1] page:242
17. **Syntax:** It is defined as a rule of a language which specifies all the sentences of a language that are well-formed. [1] page:240
18. **Validity:** A logical sentence is said to be valid if it is true in all of the possible models. [1] page:250

Reference:

[1] Artificial Intelligence, A Modern Approach (AIMA), Third Edition, by Russell & Norvig.
[2] Course Handout #11 by Professor Berthe Choueiry.
[3] Dictionary definition from http://www.dictionary.com/browse/model.