ELECTIVE -V – 6 – ONTOLOGY AND SEMANTIC WEB

Unit I

Introduction to the Syntactic web and Semantic Web – Evolution of the Web – The visual and syntactic web – Levels of Semantics – Taxonomies - Logics for Semantic Web – The semantic web architecture and technologies – Applications of the Semantic Web.

Unit II

Ontological Engineering: What are Ontologies – Methods and methodologies for building ontologies – Ontology Development process and Life cycle – Methods for Ontology Learning – Ontology Evolution – Versioning – Ontology Languages.

Unit III

Editing tools for ontology creation – Protégé – OntoEdit – DOE – IsaViz – Ontolingua Altova Semantic Works – OilEd – WebODE – pOWL – Swoop.

Unit IV

The Key Semantic Web Ontology Languages – Semantic Reasoning – Logical Implications and Descriptions – Technical Interpretations of classes and predicates.

Unit V

Case Study: Resource Discovery In a Building – Reasoning about Knowledge Base and Ontologies – Semantic search Engines Based on Data Integration Systems.

Text Book(s)

1. Semantic Web Services – Theory, Tools and Applications, Jorge Cardoso, Information Science Reference, 2007

References

1. Agency and the Semantic Web, Christopher Walton, Oxford University Press, 2007
2. Semantic Web Technologies and e-Business, AF Salam and Jason R Stevens, Idea Group Publications, 2007