

# EIGHTH SEMESTER B. TECH DEGREE EXAMINATION

2013 scheme

13.801 KNOWLEDGE REPRESENTATION AND REASONING (F)

Time: 3 Hours

Max Marks: 100

## PART –A

*Answer all questions. Each question carries 4 marks.*

1. Explain the concept of Knowledge, Representation and Reasoning with example.
2. What are the type of symbol in FOL. Explain.
3. Write about the critical view of RDF
4. Explain the three sublanguages of OWL
5. Write about Rule Markup Language with example.

**(5 X 4 = 20 marks)**

## PART –B

### MODULE –I

6. (a) What is mean by a Knowledge based system?  
(b) Explain the need for Knowledge Representation **(12 mark)**  
(c) Briefly explain with example the vocabulary needed for building a knowledge base.  
**(8 mark)**

**OR**

7. (a) Explain in detail about the legal syntactic expressions in FOL **(10 mark)**  
(b) Write about the Terminological facts, Entailments and Abstract individuals with example **(10 mark)**

## MODULE -II

8. (a) Write a note on Querying in SPARQL? **(10 mark)**  
(b) Give the basic ideas of RDF Schema. **(10 mark)**

**OR**

9. (a) Write about XML based syntax of RDF. **(10 mark)**  
(b) What is meant by a Statement in RDF?  
Explain about the views of a statement **(10 mark)**

## MODULE III

10. (a) Give the requirements for Ontology languages. **(6 mark)**  
(b) List the requirements of the expressive power of RDF Schema **(8 mark)**  
(c) Explain the layering of OWL **(6 mark)**

**OR**

11. (a) Write about the syntax, header and Class elements of OWL Language. **(10 mark)**  
(b) Explain the special properties of OWL. **(10 mark)**

## MODULE IV

12. (a) Explain the syntax and Semantics of Monotonic Rules **(10 mark)**  
(b) Write a note on Ontology Mapping. **(10 mark)**

**OR**

13. (a) Briefly explain about DLP **(10 mark)**  
(b) Explain Semantic Web rule Language **(10 mark)**