

Code No.: IT743PE

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**CMR ENGINEERING COLLEGE:: HYDERABAD**  
**UGC AUTONOMOUS**  
**IV-B.TECH-I-Semester End Examinations (Supply) - April- 2024**  
**SEMANTIC WEB & SOCIAL NETWORKS**  
**(IT)**

[Time: 3 Hours]

[Max. Marks: 70]

**Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

**PART-A**

**(20 Marks)**

1. a) Define artificial intelligence. [2M]
- b) Explain in detail about ontology. [2M]
- c) Develop the XML schema for website Design. [2M]
- d) Elaborate about the OWL. [2M]
- e) What is e-learning? [2M]
- f) List out the features of the knowledge base. [2M]
- g) Justify the OWL-S ontology. [2M]
- h) Spell out the random graph model. [2M]
- i) Make use of referral chaining in social network analysis. [2M]
- j) Compare blogs and online communication. [2M]

**PART-B**

**(50 Marks)**

2. Discuss the development of information age and how the Web contributes. [10M]
- OR**
3. Distinguish the Software agents, Machine Intelligence. [10M]
  4. Explain the advantages of XML over HTML and also its limitations. How does RDF address these limitations? [10M]
- OR**
5. Compare ontology engineering and ontology development tools. [10M]
  6. Contrast between finding the minimum necessary expressive power and the maximum possible reasoning capability for the semantic web. [10M]
- OR**
7. Make use of logic, inference engines and rules. [10M]
  8. Elaborate the OWL-S service profiles and how OWL-S ontology is created for web services? [10M]
- OR**
9. Tell about the building blocks for the next generation of web services and Semantic web services. [10M]
  10. Develop a semantic web application development using Sesame, the RDF data repository. [10M]
- OR**
11. Explain in detail about Web-based networks. [10M]

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