USN | | | | | | | | | | 18AI743

Seventh Semester B.E. Degree Examination, Dec.2023/Jan.2024
Semantic Web and Social Networks

Time: 3 hrs.   Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. How www is managing knowledge and supporting information revolution? **(10 Marks)**
   b. How intelligent ubiquitous devices improve productivity? **(10 Marks)**

OR

2 a. Explain Web Ontology Language (OWL). **(10 Marks)**
   b. What are the limitations of current web? How will the semantic web overcome these limitations? **(10 Marks)**

Module-2

3 a. Explain in detail: (i) Computational Logic (ii) Artificial Intelligence **(10 Marks)**
   b. Explain different parts of RDF documents. **(10 Marks)**

OR

4 a. Explain the types of philosophical and mathematical logic. **(10 Marks)**
   b. Explain basic elements of RDF (Resource Description Framework). **(10 Marks)**

Module-3

5 a. Explain different Ontology mapping tools. **(06 Marks)**
   b. Explain Resource Description Framework (RDF) properties. **(04 Marks)**
   c. Differentiate between forward and backward chaining. **(10 Marks)**

OR

6 a. Explain the steps involved in constructing ontology. **(10 Marks)**
   b. Explain conditional and bi-conditional rule with an example. **(10 Marks)**

Module-4

7 a. Write five steps involved in creating an OWL – S based Ontology. **(05 Marks)**
   b. Explain the major components of Swoogle architecture. **(05 Marks)**
   c. Explain how semantic search methods improve traditional search methods. **(10 Marks)**

OR

8 a. Explain the role of semantic web in e-learning and bio-informatics. **(10 Marks)**
   b. Explain the three types of process defined by OWL. **(10 Marks)**

Module-5

9 a. Explain how network analysis methods are applied on real world network. **(10 Marks)**
   b. Explain core periphery c/p structure. **(10 Marks)**

OR

10 a. Explain how affiliation networks are transformed into regular one mode network. **(10 Marks)**
    b. Explain macro structure of social networks. **(10 Marks)**

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