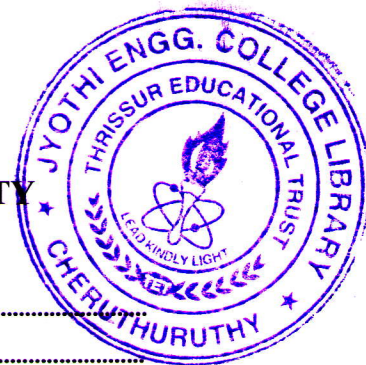


APJ ABDULKALAM TECHNOLOGICAL UNIVERSITY
08 PALAKKAD CLUSTER



Q. P. Code : CSE0821321B-I

(Pages: 2)

Name:

Reg. No:

THIRD SEMESTER M.TECH. DEGREE EXAMINATION DECEMBER 2021

Branch: Computer Science and Engineering Specialization: Computer Science and Engineering

08CS7021(B) SEMANTIC WEB

(Common to CSE)

Time: 3 hours

Max. Marks: 60

Answer all six questions.

Modules 1 to 6: Part 'a' of each question is compulsory and answer either part 'b' or part 'c' of each question.

Q. No.	Module 1	Marks
1.a	“Semantic web differ from normal web” comment your views.	3
Answer b or c		
b	With the help of an example, justify how metadata markup and common vocabulary gives an extra edge to semantic web search engine over traditional web search engine.	6
c	Discuss the limitations of DC metadata format for semantic web applications. Use appropriate DC tags to markup the details of a writing pen.	6
Q. No.	Module 2	Marks
2.a	Defend the statement “XML is not enough to support semantic web”. Summarize the advantages of RDF over XML with example.	3
Answer b or c		
b	Develop an RDF document with appropriate tags to describe a XYZ model mobile phone of ABC company with camera capacity 48MP and battery 4000mah.Do the same with DC markup. Which one is a better markup language for the purpose, Elaborate	6
c	Explain with an example how RDF markup can help in aggregation of distributed information. What are the important principles involved?	6
Q. No.	Module 3	Marks
3.a	What is ontology? Is it true that OWL is the only way of representing ontology? Justify through Comment.	3

Answer b or c

- b** 1) Compare and contrast RDFS and OWL? **6**
2) What is ontology matching? What are the constructs in OWL which helps in ontology matching?
- c** Explain how expressiveness of OWL in case of property definitions overcomes limitations of RDFS. **6**

Q. No.	Module 4	Marks
4.a	What are web services? What are the major enabling standards for web services? Explain a typical activity flow for using web services.	3

Answer b or c

- b** What are the important UDDI data structures involved in making a UDDI entry about a web service? Elaborate. **6**
- c** What are the typical problems involved in web service discovery? Do D-U-N-S Number and NAICS Categorization information in UDDI entry reduce the complexity in web service discovery? Elaborate. **6**

Q. No.	Module 5	Marks
5.a	Is OWL-S a framework or a language? What are the main components of OWL-S?	4

Answer b or c

- b** What are the steps involved in mapping OWL-S to UDDI registry service? **8**
- c** "OWL-S and WSDL are complementary", comment on this viewpoint w.r.t OWL-S grounding ontology and WSDL **8**

Q. No.	Module 6	Marks
6.a	What are Semantic Web Documents (SWD)? How does SWOOGLE's metadata collection component help in SWD search?	4

Answer b or c

- b** How can FOAF vocabulary help in personal information mark-up and discovery? Is it a better solution than custom made namespaces? Comment. **8**
- c** (i) Compare and contrast horizontal indexation and vertical indexation. **8**
(ii) Why semantic mark-up of webpages is a difficult task? Explain the significance of SMORE in this context.