

GUJARAT TECHNOLOGICAL UNIVERSITY**ME - SEMESTER-IV • EXAMINATION – SUMMER 2013****Subject Code: 742301****Date: 14-05-2013****Subject Name: Web 2.0 & Semantic Web****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a) 07**
 (i) Document object model is an object oriented representation of which types of documents? Which method of the Document object model tells how many “input” elements are defined in the document? Write code snippet. **04**
 (ii) Why excessive use of callbacks should be avoided? **03**
- (b) 07**
 What care should be taken to use tables correctly? What is a linear alternative to tables and how it can be achieved?? Write an XML that represents purchase of the book for year 2012 and shows data of four library networks – North,East,south,west, the url is provided for that network and total books in that library network. Write stylesheet to be applied to the XML so that data is displayed as a table.
- Q.2 (a) 07**
 (i) Write the purpose behind XML topic map(XTM). Write an XML to show following topics with association. **04**
- ```

graph TD
 Rohan([Rohan]) -- student --> Lives_in[Lives in]
 Surat([Surat]) -- city --> Lives_in

```
- (ii) Explain high level web usage mining process. **03**
- (b) 07**  
 Irrespective of the implementation details, which five aspects the developer need to pay attention when developing a service for web?
- OR**
- (b) 07**  
 Explain relational and compound microformats.
- Q.3 (a) 07**  
 (i) Prepare a JSON document with items in which each item has name and value. And How a JSON document is parsed and interpreted in JavaScript? **04**  
 (ii) For what purpose XPath is used in XML document? **03**
- (b) 07**  
 Define screen scraping. Write benefits and drawbacks of screen scraping.
- OR**
- Q.3 (a) 07**  
 (i) Give example of XML schema. **04**  
 (ii) Give example of schema language Relax NG. **03**
- (b) 07**  
 Distinguish between Descriptive,container and documents and encoding formats.
- Q.4 (a) 07**  
 (i) Is function overloading supported in JavaScript? Write add function that can take any number of arguments including no argument at all. **04**  
 (ii) Why ontologies are created? **03**

- (b) Prepare term document matrix for following documents with given keywords. **07**  
 Also prepare normalized term document weight matrix. Assume necessary data.  
 Document 1 – book, sale, revenue, author, customer, rating, version, publisher  
 Document 2 – item, sale, cost, salesman, region, customer, rating, revenue  
 Document 3 – automobile, sale, model, cost, customer, rating, color, company  
**OR**
- Q.4 (a)** **07**  
 (i) How other scripting language like PHP differ from Javascript? What steps should be taken to keep Javascript download time minimum? **04**  
 (ii) Explain the three components used by an RDF model. **03**  
**(b)** How precision and recall measures are used by information retrieval? **07**
- Q.5 (a)** What is directed labeled graph? Explain metadata graph and metadata graph with URI references. **07**  
**(b)** Explain the 3 phases involved in the construction of the decision tree. **07**  
**OR**
- Q.5 (a)** Explain rough set theory. **07**  
**(b)** Explain a priori candidate generation method ,pruning algorithm. **07**

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