Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER–IV • EXAMINATION – SUMMER 2015

Subject Code: 742301 **Date: 01/05/2015**

Subject Name: web 2.0 & Semantic web

Time: 2:30 pm to 5:00 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) **03**

```
<ul id="myList">
    <li>Coffee</li>
    <li>Tea</li>
</ul>
```

What output will be generated by above code? Considering HTML DOM structure what line of code should be written to get following output?

- Water
- Coffee
- Tea

(ii) **04**

a. What is the measure of the word ñoperatorò?
b. If the rule (m>1 and *d and *L) Ÿ single letter is applied to the word ñcontrolò and ñrollò, what would be the output?
c. What is the output of ñhappyò and ñskyò if rule applied is (*v*) Y Ÿ I ?
d. What rule is applied if ponies is replaced by poni?

(b) **07**

(i) What are the weaknesses of ID3 algorithm?

(ii) If S is a collection of 14 examples with 9 YES and 5 NO examples then What is the Entropy(S)? What is the interpretation if Entropy(S)=0?

(iii) Consider the following dataset

Matchno	Country	Opponent	Genre	Success/failure
1	India	Australia	T20	success
2	India	Australia	T50	failure
3	India	Bangladesh	T50	success
4	Australia	South Africa	T20	Success
5	Bangladesh	New Zeland	T20	Failure
6	Australia	West indies	T50	failure

Assume suitable data. Build the decision tree, for country India.

Q.2 **(a)** **07**

(i) AJAX changes content

Change Content

(ii) AJAX creats fast and dynamic web pages.

Change Content

Explain the appropriate code that uses AJAX to change the content from (i) to (ii) if Change Content button is clicked in (i).

(b) **07**

(i) What is character data, PCDATA and CDATA in XML? How does XML deal with binary data?

(ii) What are the limitations of Document type definitions?

(iii) Explain the structure of XML schema.

OR

(b) An XML file describes CD with elements title, artist, country, company, price and year. **07**

Write EXtensible Stylesheet Language Transformations (XSLT) which shows title and artist in tabular form and adds a pink background-color to the "Artist" column WHEN the price of the CD is higher than 10.

Q.3 **(a)** What is URL(Uniform resource locator)? Explain the structure of URI(Uniform resource Indicator). **07**

(b) **07**

(i) What is the difference between == and === operator? **03**

(ii) What is JSON? How to describe following XML as JSON object? **04**

```
<college>
  <student>
    <firstName>Ram</firstName> <lastName>Lakshya</lastName>
  </student>
  <student>
   <firstName>Shyam</firstName> <lastName>Lakshya</lastName>
  </student>
  <student>
   <firstName>Bharat</firstName> <lastName>Lakshya</lastName>
  </student>
</college>
```

OR

Q.3 **(a)** Express the fact that ñSchool of Social Science belongs to universityò as an association and write a corresponding XML Topic Map document. **07**

(b) **07**

(i) Consider this code fragment: **03**

```
function addClickHandler(element) {
        element.click = function onClick(e) {
        alert("Clicked the " + element.nodeName  }}
```

What problem can arise if above JavaScript code is executed?

(ii) var person = {fname:"Ray", lname:"Light", age:25}; **04**

Use JavaScript for-in loop to print person object.

Q.4 **(a)** What is the difference between syndication and traditional web browsing? Explain syndication formats. **07**

(b) What is web usage, web content, web structure mining? **07**

OR

Q.4	**(a)**	Write a priori algorithm.	**07**
	(b)	(i) What is RDF? Explain RDF Resource, Property, and Property Value. (ii) What is ontology? What is OWL(Web Ontology Language).	**07**
Q.5	**(a)**	Explain Boolean retrieval model.	**07**
	(b)	Explain REST(representational state transfer) architecture.	**07**

OR

Q.5	**(a)**	Explain five HTTP verbs.	**07**
	(b)	Explain the following. (i) UDDI (Universal description,discovery and integration) (ii) SOAP(Simple Object Access Protocol) (iii) WSDL(Web service description language).	**07**

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