

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII (OLD) EXAMINATION – SUMMER 2019

Subject Code: 170708

Date: 10/05/2019

Subject Name: Web Data Management

Time: 02:30 PM TO 05:00 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) | Discuss: XML fulfill requirements for semi structured data model. | 07 |
| | (b) | What is XPath Axes? Describe following Axes in brief.
1. Sibling 3. Attribute 5. ancestor
2. Descendant 4. preceding 6. child | 07 |
| Q.2 | (a) | Describe doc() and collection() function with suitable example. | 07 |
| | (b) | Explain XUpdate With Example. | 07 |
| | | OR | |
| | (b) | Explain FLWOR expression based on XQuery. | 07 |
| Q.3 | (a) | Discuss DTD and XSD in detail. | 07 |
| | (b) | What is graph bisimulation? Explain in Detail. | 07 |
| | | OR | |
| Q.3 | (a) | Describe Failure management in distributed system. | 07 |
| | (b) | Differentiate ranked trees and unranked trees. | 07 |
| Q.4 | (a) | Describe RDF and RDFS in detail. | 07 |
| | (b) | Explain Web crawling process in details. | 07 |
| | | OR | |
| Q.4 | (a) | Explain Web graph mining and hot topics in web search. | 07 |
| | (b) | Explain Global-as-view (GAV) and Local-as-view (LAV) mediation with example. | 07 |
| Q.5 | (a) | How data can be exchanged between applications using XML. | 07 |
| | (b) | What is XPath?
Consider bib.xml and write XPath for following.
1. Find all books with a price of \$39.95
2. Find the title of book where last name of author is Stevens
3. Find the title of all books published before 1995 | 07 |
| | | OR | |
| Q.5 | (a) | Explain Recovery techniques of a Distributed system. | 07 |
| | (b) | What is XQuery?
Consider bib.xml and write Xquery for following
1. List books published by Addison-Wesley after 1991, including their year and title.
2. Delete year attribute. | 07 |

bib.xml

```
<bib>
  <book year="1994">
    <title>TCP/IP Illustrated</title>
    <author>
      <last>Stevens</last><first>W.</first>  </author>
    <publisher>Addison-Wesley</publisher>
    <price> 65.95</price>
  </book>
  <book year="1992">
    <title>Advanced XML Programming in the Unix
environment</title>
    <author><last>Stevens</last><first>W.</first></author>
    <publisher>Addison-Wesley</publisher>
    <price>65.95</price>
  </book>
  <book year="2000">
    <title>Data on the Web</title>
    <author><last>Abiteboul</last><first>Serge</first></author>
    <author><last>Buneman</last><first>Peter</first>      </author>
    <author><last>Suciu</last><first>Dan</first></author>
    <publisher>Morgan Kaufmann Publishers</publisher>
    <price> 39.95</price>
  </book>
  <book year="1999">
    <title>The Economics of Technology and Content for    Digital TV</title>
    <editor>
      <last>Gerbarg</last>
      <first>Darcy</first>
      <affiliation>CITI</affiliation>
    </editor>
    <publisher>Kluwer Academic Publishers</publisher>
    <price>129.95</price>
  </book>
</bib>
```
