

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. **07**
1. Sibling 3. Attribute 5. ancestor
2. Descendant 4. preceding 6. child
- 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? **07**
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
- OR**
- Q.5** (a) Explain Recovery techniques of a Distributed system. **07**
(b) What is XQuery? **07**
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.

bib.xml

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<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>
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    <price> 39.95</price>
  </book>
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    <editor>
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      <first>Darcy</first>
      <affiliation>CITI</affiliation>
    </editor>
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