

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII • EXAMINATION – WINTER 2013****Subject Code: 170708****Date: 03-12-2013****Subject Name: Web Data Management****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)** Discuss : XML fulfil requirements for semistructured data model. **07**
(b) "An XML document is a labeled, unranked, ordered tree." Explain with example. **07**
- Q.2 (a)** How semistructure data model resolves issues in existing web data management? **07**
(b) Discuss importance of DTD and XSD with example. **07**
- OR**
- (b)** How data can be exchanged between application using XML. **07**
- Q.3 (a)** Discuss XPath and XQuery With examples. **07**
(b) Discuss FLWOR expression with example. **07**
- OR**
- Q.3 (a)** What is XPath Axes? Describe following Axes in brief. **07**
1) child 2) ancestor 3) descendant 4) parent 5) attribute
6) following 7) self 8) preceding 9) descendant-or-self
10) ancestor-or-self
- (b)** **GTUStudents.xml** is given, write XPath for following: **07**
a) Select all the name of all students.
b) Select the name of the first student node.
c) Select the text from all the admissionyear nodes where admission year is 2008.
d) Select all the name nodes with a CPI higher than 7.
- Q.4 (a)** Write XML Schema (XSD) for given **GTUStudents.xml** **07**
(b) **GTUStudents.xml** is given, write FLWOR for following:
a) Select all the name of all students where branch is COMPUTER.
b) Select all the name nodes with a CPI less than 8
c) Select all the city nodes.
- OR**
- Q.4 (a)** Discuss advanced features of FLWOR with example. **07**
(b) Explain XLink and XPointer with example. **07**
- Q.5 (a)** What is Ontology? Discuss RDF with example. **07**
(b) Discuss the web crawling. **07**
- OR**
- Q.5 (a)** What is Distributed System? Discuss failure management in brief. **07**
(b) Discuss Required properties of a distributed system. **07**

GTUStudents.xml

```
<?xml version="1.0" encoding="ISO-8859-1"?>

<students>

<student branch="COMPUTER">
  <name>Abdul Quadir</name>
  <city>Ahmedabad</author>
  <admissionyear>2009</admissionyear >
  <CPI>7.5</CPI>
</student>

<student branch="MECHANICAL">
  <name>Joseph Desusa</name>
  <city>Baroda</author>
  <admissionyear>2009</admissionyear >
  <CPI>8.5</CPI>
</student>

<student branch="CHEMICAL">
  <name>Sanjay Patel </name>
  <city>Surat</author>
  <admissionyear>2008</admissionyear >
  <CPI>6.5</CPI>
</student>

<student branch="COMPUTER">
  <name>Riya Sharma</name>
  <city>Baroda</author>
  <admissionyear>2009</admissionyear >
  <CPI>7.0</CPI>
</student>

<student branch="INFORMATIONTECHNOLOGY">
  <name>Sudha Patel</name>
  <city>Ahmedabad</author>
  <admissionyear>2009</admissionyear >
  <CPI>7.3</CPI>
</student>

<student branch="CIVIL">
  <name>Akhilesh yadav</name>
  <city>Mehsana</author>
  <admissionyear>2008</admissionyear >
  <CPI>6.0</CPI>
</student>

</students>
```
