SSN COLLEGE OF ENGINEERING, KALAVAKKAM – 603 110
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
B.E. (CSE) VII SEMESTER IT6801 SERVICE ORIENTED ARCHITECTURE
Aca. Year: 2016-2017 ODD UNIT TEST – 1 Batch: 2013-2017
Date: 12.08.2016 Time: 90 minutes Marks: 50

Part – A (5*2 = 10)

1. Write any four advantages of using XML (K1,CO1)
2. Is the following XML well-formed? Why or why not? (K2,CO1)

```
<XML_Notes>
        <Note number=”1”> XML is a computer language</Note>
        <Note number=”2”>XML is a markup language </Note>
</XML_Notes>
```

3. Distinguish between CSS and XSL (K2,CO2)
4. Mention the use of XSL-FO technology and analyse whether it is better than HTML (K2,CO2)
5. Enumerate the different ways in which XML can be integrated with SQL. (K1,CO2)

Part – B (16+8+16)

6. (K3,CO1)

a. Build a DTD for XML files that store data about a music library. (8+8)

- A music library consists of any number of songs under albums.
- An album must have a title, artist, year, and two or more tracks. An album may have one or more producers.
- The “artist” for an album has name and a band name.
- Each track on an album must have a song and a length.
- A song must have a title and may have a year. It may also have information about who wrote the lyrics and one or more composers.

b. Write a small example of XML data for a single album that will accept this XML.

(OR)

7. (8+8)

a. Build a XML schema for question 6(a). Enforce any two integrity constraints.
b. Write a small example of XML data for a single album that can be validated against this schema.

8. (K3,CO1)

a. How Xlink and Xpointer are different? With an example explain how XML documents can be linked using Xlink and Xpointer. (4)
b. Consider the following XML document.

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

```
<bookstore>
<!-- a bookstore database -->
        <book isbn= <book isbn= 111111 cat= fiction > “111111” cat=“fiction”>
        <!-- a particular book -->
                <title lang=“chn”>Harry Potter</title>
                <price unit=“us”>79.99</price>
        </book>
        <book isbn=“222222” cat=“textbook”>
                <title lang=“eng”>Learning XML</title>
                <price unit=“us”>69.95</price>
        </book>
        <book isbn="333333" cat="textbook">
                <title lang="eng">Intro. to Databases</title>
                <price unit="usd">39.00</price>
        </book>
</bookstore>
```

Write Xpath expressions (2+2)

1. To find the title and price of non fiction books with a price more than 50USD.
2. To find the titles of textbooks on XML.

9 (K3,CO2)

a. Write a Java code snippet that uses DOM parser to create the following XML Document (8)

```
<library>
        <book>
                <title>  xxx </title>
                <author> yyy</author>
                <publisher> zzz </publisher>
                <year> 1998 </year>
        </book>
</library>
```

b. Consider the following XML document

```
<Items>
        <item id=xx>
                <name>Ram</name>
                <price> 110.00 </price>
                <quantity> 10</quantity>
        </item>
        <item id=yy>
                <name>John</name>
                <price> 98</price>
```

```
        <quantity> 5</quantity>
    </item>
    <item id=zz>
        <name>Prince</name>
        <price> 55</price>
        <quantity> 6</quantity>
    </item>
</items>
```

Write a Java code snippet that creates a SAX parser and uses SAX APIs and handlers to count the number of items present in the document and print the name of the items. (8)

(OR)

10. (K3,CO2)

a. Consider the following XML document

```
<productListing title="ABC Products">
 <product>
        <name>Product One</name>
        <description>Product One is an exciting new widget that will
          simplify your life.</description>
        <cost>$19.95</cost>
        <shipping>$2.95</shipping>
 </product>
  <product>
        <name>Product Two</name>
        <description>This is such a terrific widget that you will
          most certainly want to buy one for your home and another one
          for your office!</p>
        <cost>$24.95</cost>
        <shipping>$4.00</shipping>
 </product>
</productListing>
```

Write .xsl program with XSLT rules that transforms the above XML file to produce HTML document that generates the following output when rendered in a browser. (8)

Products Details

Name: Product One

Description: Product One is an exciting new widget that will simplify your life

Cost: $19.95

Shipping: $2.95

****

Name: Product Two

Description: This is such a terrific widget that you will most certainly want to buy one for your home and another one for your office!

Cost: $24.95

Shipping: $4.00

b. (K2,CO2)

i. Discuss the steps involved in mapping SQL to XML. (4)

ii. Discuss the steps involved in binding XML to Java using JAXB and to retrieve XML data using Java APIs. (4)

************B E S T O F L U C K************

Prepared by	

Reviewed by HOD-CSE