

INDIAN STATISTICAL INSTITUTE BANGALORE CENTRE  
Documentation Research and Training Centre

M. S. (Library and Information Science) 2015-17  
Second Year, Semester III (Mid-Term)

Paper 16: Web Technology and Web based Information Services  
Date: 13th Sep 2016

Duration: 1.5 hours

Full marks: 40

Answer any 4 questions. All questions carry equal marks.

1. Write HTML code for the following table:

ID	Language	Type
1	Java	Compiled
2	C/C++	
3	Python	Interpreted
4	PHP	

2. Describe major features in CSS3, including the usage of pseudo classes.

3. Write DTD for which the following XML document will be valid:

```
<collection>
  <record>
    <title>The Five Laws of Library Science</title>
    <author>S. R. Ranganathan</author>
    <year>2007</year>
  </record>
</record/>
</collection>
```

4. Write an XML document which must validate against the following XML Schema:

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:element name="publication">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="title" minOccurs="1" type="xs:string"/>
      <xs:element name="author" maxOccurs="4" type="xs:string"/>
      <xs:element name="imprint" type="imprintType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="imprintType">
  <xs:sequence>
    <xs:element name="place" minOccurs="0" type="xs:string"/>
    <xs:element name="name" minOccurs="1" type="xs:string"/>
    <xs:element name="year" minOccurs="0" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
</xs:schema>
```

5. Explain the usage of XSLT and XPATH with examples.