

Duration: 1.5 hours

Full marks: 40

Answer any 4 questions. All questions carry equal marks.

1. Write HTML code for the following table layout:

Header (Full width)	
Sidebar (1/4th width)	Content Area (3/4th width)
Footer (Full width)	

2. Describe major features in CSS3.

3. Explain the difference between DTD and XML Schema.

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

```
<?xml version="1.0"?>
<collection>
  <book>
    <title>Elements of Library Classification</title>
    <author>Ranganathan, S. R.</author>
    <publisher>
      <name>South Asia Books</name>
      <year>1990</year>
    </publisher>
  </book>
</collection>
```

5. 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="record">
    <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="publisher" 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" type="xs:string"/>
      <xs:element name="year" minOccurs="0" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```