Id:									Family:	Given:
ITB295/ITN295 – XML									Tutor:	Timeslot:

Review Questions on XML Schema Part 0
http://www.w3.org/TR/xmlschema-0/

Q1. Consider the following XML Schema fragment:

```
1. <xsd:simpleType name="GenderType">
2.  <xsd:restriction base="xsd:string">
3.   <xsd:enumeration value="F"/>
4.   <xsd:enumeration value="M"/>
5.  </xsd:restriction>
6. </xsd:simpleType>
```

This is known, in XML Schema terminology, as a:

_____

Hint: See XML Schema Part 0, intro to section 2.2. Also, have a look at the title of that section.

Q2. Consider the following XML Schema fragment:

```
1. <xsd:element name="Person">
2.  <xsd:complexType>
3.   <xsd:sequence>
4.    <xsd:element name="Name" type="xsd:string"/>
5.    <xsd:element name="Sport" type="xsd:string"
6.                 maxOccurs="unbounded"/>
7.   </xsd:sequence>
8.  </xsd:complexType>
9. </xsd:element>
```

This is known, in XML Schema terminology, as a:

_____

Hint: See XML Schema Part 0, intro to section 2.2. Also, have a look at the title of that section.

Q3. Consider the following XML Schema fragment:

```
1. <xsd:attribute name="sex" type="GenderType"/>
```

This is known, in XML Schema terminology, as a:

_____

Hint: See XML Schema Part 0, intro to section 2.2. Also, have a look at the title of that section.

Q4. The following XML Schema declaration is valid.

```
1. <xsd:attribute name="birthPlace">
2.  <xsd:complexType>
3.   <xsd:sequence>
4.    <xsd:element name="town" type="xsd:string"/>
5.    <xsd:element name="state" type="xsd:string"/>
6.   </xsd:sequence>
7.  </xsd:complexType>
8. </xsd:attribute>
```

a. True

b. False

Hint: See XML Schema Part 0, section 2.2.

Q5. If the declaration of element A makes reference to element B, then element B's declaration must be the child of which XML Schema element?

_____

Hint: See XML Schema Part 0, section 2.2.2.

Q6. What is the default value for each of the following attributes?

minOccurs _____

maxOccurs _____

Hint: See XML Schema Part 0, section 2.2.1.

Q7. What is the attribute declaration equivalent of the `minOccurs` and `maxOccurs` attributes for element declarations?

_____

Hint: See XML Schema Part 0, section 2.2.1.

Q8. Which of the following *attribute* declaration fragments are valid?

```
[ ] use="optional"   default="4001"
[ ] use="required"   default="compulsory"
[ ] use="prohibited" default="never"
[ ] use="required"   fixed="help"
```

`[ ] use="optional"  fixed="loser"`

Hint: See XML Schema Part 0, section 2.2.1.

Q9. Neither `minOccurs` nor `maxOccurs` may appear in the declaration of a global element.

a. True

b. False

Hint: See XML Schema Part 0, section 2.2.2, table 1.

Q10. Global declarations may not make use of the `ref` attribute.

a. True

b. False

Hint: See XML Schema Part 0, section 2.2.2.

Q11. The following schema fragment is valid.

```
<xsd:schema>
 xmlns:xsd="http://www.w3.org/2001/XMLSchema">
 <xsd:element name="person" type="xsd:string"/>
 <xsd:element name="engineer" ref="person"/>
```

a. True

b. False

Hint: See XML Schema Part 0, section 2.2.2.

Q12. It is possible to declare two elements with the same name in the same schema.

a. True

b. False

Hint: See XML Schema Part 0, section 2.2.3.

Q13. Consider 21st century dates written in the form DD-MMM-YYYY, for example, 19-MAR-2007 and 01-APR-2010. Which of the following do you think are reasonable patterns? (None of them is perfect.)

`[ ] 99-[A-Z]{3}-2099`

`[ ] d{2}-[A-Z]{3}-20d{2}`

`[ ] \d{2}-[A-Z]{3}-20\d{2}`

`[ ] [0-3][0-9]-[A-Z]{3}-20[0-9]{2}`

Hint: See XML Schema Part 0, section 2.3.

Q14. Unit codes in the Faculty of Improbable Technology are formed from the letters IT followed by either the letter B or the letter N followed in turn by three digits. A suitable pattern would be:

`[ ] IT(B|N)\d{3}`

`[ ] IT(N|B)999`

`[ ] [A-Z]{2}(B|N)9{3}`

`[ ] IT(N|B)[0-9]{3}`

Hint: See XML Schema Part 0, section 2.3.

Q15. Suppose a complex type `CX` has already been defined. It is allowable therefore to define a list of complex elements of this type.

a. True

b. False

Hint: See XML Schema Part 0, section 2.3.1.

Q16. A type definition without a `name` attribute is referred to as what kind of type?

_____

Hint: See XML Schema Part 0, section 2.4.

Q17. Suppose we have a fragment of XML as follows:

```
<state code="QLD">Queensland</state>
```

The first child of the corresponding complexType element in the declaration of the state element is:

_____

Hint: See XML Schema Part 0, section 2.5.1.

Q18. Consider the DTD:

```
sentence (#PCDATA|em|tt)*
```

and the XML Schema expression

```
<xsd:element name="sentence">
 <xsd:complexType mixed="true">
  <xsd:sequence>
   <xsd:element name="em" type="..."/>
   <xsd:element name="tt" type="..."/>
  </xsd:sequence>
 </xsd:complexType>
</xsd:element>
```

These two forms are equivalent.

a. True

b. False

Hint: See XML Schema Part 0, section 2.5.2.

Q19. Given a “shorthand” empty-content element declaration:

```
<xsd:element name="state">
 <xsd:complexType>
  <xsd:attribute name="code"    type="xsd:string"/>
  <xsd:attribute name="capital" type="xsd:string"/>
 </xsd:complexType>
</xsd:element>
```

Consider the following XML:

```
<state code="NSW
 capital="Sydney">
</state>
```

And the following:

```
<state code="NSW" capital="Sydney"/>
```

These two forms are equivalent.

a. True

b. False

Hint: See XML Schema Part 0, section 2.5.3.

Q20. When no type is given in an element declaration, the default is:

_____

Hint: See XML Schema Part 0, section 2.5.4.

Q21. A complex type to capture all the ways we may contact one another has been defined. It allows for the fact that some people have two email addresses but some people don't have a mobile:

```
 <xsd:complexType name="Contact">
  <xsd:all>
  <xsd:element name="address" type="xsd:string">
  <xsd:element name="mobile"  type="xsd:string"
                              minOccurs="0"/>
  <xsd:element name="email"   type="xsd:string"
                              maxOccurs="2"/>
  </xsd:all>
 </xsd:complexType>
```

The above definition is valid.

a. True

b. False

Hint: See XML Schema Part 0, section 2.7.