Final Solution

Time Allotted: 50mins
Points: 20

1. If you were to assign an element a unique value through an attribute, what data type would you assign to that attribute in the DTD? __ID__________ [2 pts]

2. Will the XML document in listing 1.1 load without errors in IE6? [y/n] ___y___
   There is no DTD reference even though the DTD is not valid. [2 pts]

3. Will the XML document in listing 1.2 load without errors in IE6? [y/n] ___n___
   The elements in the instance document are not in the correct sequence enforced by DTD. [2 pts]

4. Which of these DTD fragments is valid? ___c___
   a. <!ELEMENT paragraph (emphasis |crossref |#PCDATA)+>
   b. <!ELEMENT paragraph (crossref |#PCDATA |emphasis)+>
   c. <!ELEMENT paragraph (#PCDATA |emphasis |crossref)+>
   d. none of the above
   #PCDATA should always be the first element in such a content model. [1 pt]

5. Which of the following is not possible using CSS with an XML document? ___b___
   a. Formatting the contents of an element in bold.
   b. Creating a table with headers not present in the XML document
   c. Creating a table with data in XML document
   d. All of the above [2 pts]

6. For the XML document in listing 2, write an XSLT template that prints in bold every second LINE in a STANZA that contains the word “human”. (hint: use and in the match predicate) [2 pts]
7. Consider the XSLT document in listing 3. Which of the templates can be deleted from the document without affecting the formatted output? (you may encircle the appropriate templates on the listing with your pencil.)

Ans: AUTHOR, POEM, /

In each of the three templates the default template that applies template to all the children kicks in. Another way to look at it is, they do not have any XHTML elements inside them.

[2 pts]

8. The result elements of an XSLT transform must always belong to XHTML (XML compliant HTML). [y/n] _____n______

[2 pts]

9. Consider the following XML Schema fragment.

Which of the following DTD fragments is this equivalent to? _____d______

a. <!ELEMENT checkbook (transactions*, balance, accountholdername>  
b. <!ELEMENT checkbook (transactions, balance?, accountholdername>  
c. <!ELEMENT checkbook (transactions | balance | accountholdername)+>  
d. none of the above

[1 pt]

There is no construct in DTDs that allows any ordering of constituent elements.
10. Name the mechanism that allows an XML schema document to contain more than one element with the same name. **Namespaces**

11. For the XSD document in listing 4, what are the URIs for the:
   a. Default Namespace: [http://www.w3.org/2001/XMLSchema](http://www.w3.org/2001/XMLSchema)
   b. Target Namespace: [http://www.cdcatalog.org](http://www.cdcatalog.org)
Listing 1.1

```xml
<?xml version="1.0"?>
<pizza>
  <price>$13.00</price>
  <topping>onion</topping>
  <size>medium</size>
</pizza>
```

Listing 1.2

```xml
<?xml version="1.0"?>
<!DOCTYPE pizza SYSTEM "pizza.dtd">
<pizza>
  <price>$13.00</price>
  <topping>onion</topping>
  <size>medium</size>
</pizza>
```

Listing 2

```xml
<?xml version="1.0"?>
<!DOCTYPE pizza SYSTEM "pizza.dtd">
<pizza>
  <price>$13.00</price>
  <topping>onion</topping>
  <size>medium</size>
</pizza>
```

```xml
<POEM>
  <TITLE>Lines Written in Early Spring</TITLE>
  <AUTHOR>
    <FIRSTNAME>William</FIRSTNAME>
    <LASTNAME>Wordsworth</LASTNAME>
  </AUTHOR>
  <STANZA>
    <LINE N="1">I heard a thousand blended notes,</LINE>
    <LINE N="2">While in grove I sate reclined,</LINE>
    <LINE N="3">In that sweet mood when pleasant thoughts</LINE>
    <LINE N="4">Bring sad thoughts to the mind.</LINE>
  </STANZA>
  <STANZA>
    <LINE N="5">To her fair works did nature link</LINE>
    <LINE N="6">The human soul that through me ran;</LINE>
    <LINE N="7">And much it griev'd me my heart to think</LINE>
    <LINE N="8">What man has made of man.</LINE>
  </STANZA>
</POEM>
```
Listing 4