

INDIAN STATISTICAL INSTITUTE

BANGALORE CENTRE

Documentation Research and Training Centre

M. S. (Library and Information Science) 2021 -23

Second Year, Semester IV (Mid-term)

Paper 17: Web Technology and Web-based Information Services

**Date: 21<sup>st</sup> February 2023**

**Duration: 1.5 hours**

**Full marks: 40**

**Instructions**

Answer any two questions from each of the four sections.

All Sections carry equal marks.

**I HTML**

1. What are HTML semantic tags? Give two examples.
2. State the importance of the <head> html element and name at least three other elements that it can contain?
3. What is SEO, and provide some examples of best practices for optimizing a website for search engine?
4. What is a responsive web site, and how is it achieved?

**II CSS**

5. What is CSS, and why should it be used?
6. Explain different types of CSS selectors with suitable examples.
7. What is the box model in CSS and how does it work?
8. What is CSS specificity, and how does it work?

**III XML and DTD**

9. What is an XML namespace and why is it used?
10. What is the difference between well-formed XML and valid XML?
11. What is a DTD in XML and what is it used for?
12. What is the difference between PCDATA and CDATA in an XML document?  
Give an example of each.

#### **IV XML, XSD, XSL, and XPATH**

13. What is XPath and what is it used for?
14. What is XSLT and what is it used for?
15. In the context of data management, what is a crosswalk?
16. Write an XML that will validate against the following XSD:

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:element name="note">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="to" type="xs:string"/>
      <xs:element name="from" type="xs:string"/>
      <xs:element name="heading" type="xs:string"/>
      <xs:element name="body" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:schema>
```