

INDIAN STATISTICAL INSTITUTE BANGALORE CENTRE
Documentation Research and Training Centre

M.S. in Library and Information Science
Semester IV, Mid-Term Exam (AY 2025-26)

Paper 17: Web Based Information Systems and Services

Date: 23rd Feb 2026

Max. Marks: 40
Duration: 1 hour 30 minutes

Answer any 4 questions. All questions carry equal marks.

1. How is REST architectural style different from SOAP? Describe in detail the architectural constraints of RESTful API.
2. What are the types of metadata? Discuss two descriptive metadata standards.
3. How well-formed and valid XML documents differ? Explain XML Schema and XML DTD along with their differences.
4. a) Write an XML version for the following tabular data. (5)
b) Also write the applicable DTD for the XML file. (5)

ID	Title	Author	Year	Publisher
1001	Introduction to Library Science	S. R. Ranganathan	1931	Madras Library
1002	The Organization of Knowledge	Bliss	1929	H.W. Wilson
1003	Metadata Basics	Jane Smith	2015	TechPress

5. a) Write DTD for which the following XML document will be valid. (5)
b) Rewrite the same XML document in a valid JSON format. (5)

```
<?xml version="1.0" encoding="UTF-8"?>
<catalog>
  <record type="physical">
    <id>201</id>
    <name>Smartphone</name>
    <category>Electronics</category>
    <quantity>15</quantity>
    <price>18000</price>
  </record>

  <record type="digital">
    <id>202</id>
    <name>Online Course</name>
    <category>Education</category>
    <quantity>1</quantity>
    <price>999</price>
  </record>
</catalog>
```