INDIAN STATISTICAL INSTITUTE BANGALORE CENTRE
Documentation Research and Training Centre

M.S. in Library and Information Science
Semester IV, Mid-Term Exam (AY 2024-25)

Paper 17: Web Based Information Systems and Services

Date: 17th Feb 2025

Max. Marks: 40
Duration: 1 hour 30 minutes

Answer any 4 questions. All questions carry equal marks.

1. What are the types of metadata? Discuss two descriptive metadata standards.

2. Discuss importance of data serialization and explain major data serialization formats.

3. Explain XML Schema and XML DTD along with their differences.

4. Write an XML file for the following tabular data. Also write the applicable DTD or XML Schema for the XML file.

ID	Name	Age	Major	Email	Joining Year	Status
1	Alice Johnson	20	Computer Science	alice.johnson@example.com	2022	active
2	Bob Smith	22	Mathematics	bob.smith@example.com	2021	graduated
3	Carol Williams	21	Physics	carol.williams@example.com	2023	active

5. How well-formed and valid XML documents differ? Also write DTD for which the following XML document will be valid:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<library>
    <book id="1" genre="Programming">
        <title>Clean Code</title>
        <author>Robert C. Martin</author>
        <year>2008</year>
        <publisher>Prentice Hall</publisher>
        <isbn>978-0132350884</isbn>
    </book>
    <book id="2" genre="Design">
        <title>Design Patterns</title>
        <author>Erich Gamma, et al</author>
        <year>1994</year>
        <publisher>Addison-Wesley</publisher>
        <isbn>978-0201633610</isbn>
    </book>
</library>
```