Q.1. What is an xml Element? explain with example.

Soln: An xml (Extensible Markup language) element is a fundamental building block in an xml document. It consists of a start tag, content and end tag.

Start tag: Begin with < and ends with >. eg. <name>

Content: The actual data

End tag: Begin with </ & ends with >. eg. </name>.

eg.

```
<person>
    <name> MEPA </name>
    <age> 21 </age>
    <city> SHD </city>
</person>
```

explanation:

<person> is the parent element, and it contains child elements.

<name> MEPA </name> is a child element of <person>

<age> & <city> are also child elements, holding the values 21 and SHD, respectively.

Q.2. What is DTD? Explain the purpose of DTD.

Soln: A Document Type Defination (DTD) is a set of rules and declarations that defines the structure and legal elements of an xml document

Purpose:

1) Validation: Ensures that the xml document adheres to a predifined structure and rules.

2) Consistency: Provides a standardized format for xml documents, ensuring data integrity across different systems.

3. Interoperability: facilates data exchange between systems by defining a common structure that both sender and receiver understand.

4. Documentation: Serves as a blueprint for developers, making it clear how the xml document should be organized.

Q3. What is XSL and how it works?

Soln: XSL (Extensible Stylesheet language) or is a family of technologies used to transform and render xml documents.

It allows developers to define how xml data should be displayed or transformed into other formats like HTML, plain text, etc.

How it works:

1) xml source document: contains the raw data in xml format.

2) xml stylesheet: Contains transformation rules written in XSLT to define how the xml should be processed and displayed.

3) xml Processor: Reads the xml document and applies the xml stylesheet to produce the desired output format.

Q.4. What is the need of XML?

Soln:

1) Data interchange Across Platform:
   xml allows seamless data exchange

between system built on different technologies and platform.

2) Platform & language independance:
   XML is a plain text, making it readable and writable in any programming environment or operating system.

3) Flexible data representation:
   XML provider a hierarchical structure to represent complex relationships between data elements.

4) Standardized structurer:
   XML ensurer data consistency through Document Type definationn (DTD) or XML schemar (XSD).

5) Facilitater Web Servicer:
   XML is a cornerstone of web technologies like SOAP and REST, enabling communication between system & Internet.