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**Department of Computer Science and Engineering**  
**Motilal Nehru National Institute of Technology Allahabad**  
**Prayagraj-211004 [India]**

**End Semester (Even) Examination 2021-22**

Programme Name: MCA  
Course Code: CS32103  
Duration: 3 Hrs.

Semester: II  
Course Name: XML Applications  
Max. Marks: 60

Instructions: Attempt all questions.

**SECTION A [5 x 2 = 10]**

- 1) a) What is XML Declaration tag?
- ✓ b) What importance does XSLT hold in XML?
- ✓ c) What is Xlink in XML?
- ✓ d) What is DOM? What is it used for?
- ✓ e) Write a code for XML attribute and element.

**SECTION B [5 x 4 = 20]**

- 2) a) Write the following words and equations in mentioned format, in HTML.
  - i)  $\text{CaCO}_3$
  - ii)  $\text{SO}_4$
  - iii)  $a^2 + b^2 + 2ab$
  - iv) ~~Important~~
- ✓ b) Describe XPath.
- ✓ c) Explain the role of SAX and DOM in XML.
- ✓ d) Why the testing of website is essential before their actual implementation?
- ✓ e) What is XSD? Explain XSD with suitable example.

**SECTION C [5 x 6 = 30]**

- 3) a) Define Cascading Style Sheet (CSS). Write different ways of creating CSS.
- b) What is XML? Create an XML document of 10 students of final MCA. Add their roll numbers, Marks obtained in 5 subjects, total marks and percentage. Save this XML document at the server, write a program that accepts student's roll no as an input and returns the students marks, and total percentage, by taking the student's information from the XML document.
- c) Explain the term Document Type Definition (DTD) with the help of suitable examples.
- d) Explain the terms RDF and RDFS.
- e) Explain JENA API.