

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII (OLD) EXAMINATION – WINTER 2018****Subject Code: 170708****Date: 15/11/2018****Subject Name: Web Data Management****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) What is DTD? How DTD is declared in XML document? Explain with an example. **07**  
(b) Explain XLink and XPointer in detail, along with an example. **07**
- Q.2** (a) What is FLWOR expression? Explain it with syntax and suitable example. **07**  
(b) Define: XQuery. Explain XQuery syntax with an example. **07**
- OR**
- (b) Discuss required properties of a distributed system. **07**
- Q.3** (a) Explain web graph mining with an example. **07**  
(b) Explain XML query evaluation techniques in brief. **07**
- OR**
- Q.3** (a) Explain Automata on Ranked Trees. **07**  
(b) Write a short note on Peer-to-Peer data management system. **07**
- Q.4** (a) Explain Failure management in distributed system. **07**  
(b) Explain following terms:  
i. OWL **03**  
ii. Web Crawler **04**
- OR**
- Q.4** (a) What is semi structured data? “XML document is a semi structured data model”- Justify with suitable example. **07**  
(b) What is Ontology? Describe RDF, RDFs in brief. **07**
- Q.5** (a) What is XML Typing? Why it is essential in web data management? **07**  
(b) What is XPath? Describe XPath data model with an example. **07**
- OR**
- Q.5** (a) What is the goal of data integration? Differentiate Virtual versus Materialized data integration. **07**  
(b) Write down the steps to develop ontology. Discuss the rules of thumb for ontology development. **07**

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