



- Notes :
1. All questions carry marks as indicated.
  2. Solve Question 1 OR Questions No. 2.
  3. Solve Question 3 OR Questions No. 4.
  4. Solve Question 5 OR Questions No. 6.
  5. Solve Question 7 OR Questions No. 8.
  6. Solve Question 9 OR Questions No. 10.
  7. Solve Question 11 OR Questions No. 12.

1. a) Explain XML. With its syntax, Draw & explain XML data model. **7**  
b) Write short note on. **6**  
i) X Link ii) X Pointer  
**OR**
2. a) What is Modelling of web data? Explain the web applications. **7**  
b) What is semistructured data? Explain web data management with XML. **6**
3. a) Explain X path & X Query data model for document. **7**  
b) Explain the X Query in detail with its syntax. Describe its features. **6**  
**OR**
4. a) Define X path. Explain in detail X path Basics and X path steps & expressions. **7**  
b) State and explain FLOWR expression in XML in detail. **6**
5. a) State and explain the different XML evaluation techniques. **7**  
b) Write short note on. **6**  
i) Graph semistructured data. ii) Graph Bisimulation.  
**OR**
6. a) State and explain XML schema. Also write down about other schema languages. **7**  
b) Write short note on Automata on ranked trees and unranked trees. **6**
7. a) State and explain the RDF in detail with example also state RDF schema. **7**  
b) Write short notes on. **7**  
i) OWL ii) Ontologies  
**OR**
8. a) Explain Querying data through ontologies. **7**  
b) Explain in detail Querying of RDF data, also explain querying through RDFS **7**
9. a) Write short note on. **7**  
i) P2P Networks ii) Web 2-0  
b) What is distributed system? Explain the different characteristics of distributed system. **7**  
**OR**
10. a) What is page Ranking? Explain it in detail with example. **7**  
b) What is web crawlers? Explain it with example how it works. **7**
11. a) State and explain Hash based structures in detail with neat diagram. **7**  
b) How Map Reduce and PIG is used in distributed computing? Explain. **6**  
**OR**
12. Draw and explain the architecture of HADOOP. Also explain the steps for installing and running HADOOP. in detail. **13**

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