APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
08 PALAKKAD CLUSTER

Q. P. code : 1C-16-1   (pages: 2)

Name:

Reg No:

FIRST SEMESTER M.TECH. DEGREE EXAMINATION DEC 2016
Computer Science and Engineering
08CS 6031   ADVANCED DATABASE TECHNOLOGY

Time:3 hours   Max.marks: 60

Answer all six questions. Part 'a' of each question is compulsory.

Answer either part 'b' or part 'c' of each question

Q.no.	Module 1	Marks
1.a	Define Functional Dependencies. Give one example.	3
	Answer b or c	
b	What are the various steps involved in query processing and query optimization? Explain with an example.	6
c	Explain various query processing algorithms used in relational schema design.	6

Q.no.	Module 2	Marks
2.a	Differentiate Parallel systems and Distributed systems.	3
	Answer b or c	
b	Describe how inter and intra query parallelism is obtained in parallel databases?	6
c	Discuss various types of database system architecture with appropriate diagram.	6

Q.no.	Module 3	Marks
3.a	What are the different ways of database storage in a distributed environment?	3
	Answer b or c	
b	Explain how concurrent transactions are managed in a distributed database?	6
c	In what way, query processing and query transformations are carried out in a distributed database? Explain with appropriate example.	6

Q.no.	Module 4	Marks
4.a	Give the significance of using XML as a web database. Also write its structure.	**3**

Answer b or c

b	Name the two mechanisms for specifying XML schema. Explain with an example.	**6**
c	Write short notes on (i) XPath (ii)XQuery	**6**

Q.no.	Module 5	Marks
5.a	Write the features of NoSQL database.	**4**

Answer b or c

b	Write notes on (i) Key-value data store (ii) Column Store	**8**
c	Explain graph database with an example.	**8**

Q.no.	Module 6	Marks
6.a	What do you mean by Handoff? List its types.	**4**

Answer b or c

b	Explain various types of Handoff issues and their detection strategies in mobile databases.	**8**
c	How concurrent executions of transactions are managed in Mobile databases? Explain in detail.	**8**