

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
**FOURTH SEMESTER M.C.A.DEGREE EXAMINATION, DEC 2018**

**Course Code: RLMCA266**

**Course Name: ADVANCED DATABASE SYSTEMS**

Max. Marks: 60

Duration: 3 Hours

**PART A**

*Answer all questions, each carries 3 marks.*

		Marks
1	Define query processing.	(3)
2	How will you measure query cost in selection operation using indices.	(3)
3	Write a short note on Object Oriented Paradigm.	(3)
4	Briefly explain the structure of XML.	(3)
5	Mention the types of distributed database systems with example.	(3)
6	Point out the two approaches in distributed data storage.	(3)
7	Explain MongoDB.	(3)
8	List the components of Cassandra.	(3)

**PART B**

*Answer any one question from each module. Each question carries 6 marks.*

**Module I**

9 Discuss in detail about the physical storage media. (6)

**OR**

10 Describe the working of magnetic disk with the help of a neat diagram. (6)

**Module II**

11 List the queries on B<sup>+</sup>Tree. (6)

**OR**

12 “Indexing mechanisms are used to speed up access to desired data”. Justify your answer with the help of different kinds of indices. (6)

**Module III**

13 Specify the basic steps in query processing with diagram and example. (6)

**OR**

14 Explain the implementation of complex selections. (6)

***Module IV***

15 Write about object identifier, relationship and integrity in object oriented data models. (6)

***OR***

16 With the help of diagrams explain ER Diagrammatic Model for object oriented relationship. (6)

***Module V***

17 Discuss the architecture of distributed database (6)

***OR***

18 Explain 2PC protocols. Discuss its failure & recovery techniques (6)

***Module VI***

19 Write a short note on Hbase, ACID and BASE (6)

***OR***

20 Highlight Cap theorem and its importance (6)

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