

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
SECOND SEMESTER MCA (Second Year Direct) 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

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

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

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| 11 | List the queries on B ⁺ Tree. | (6) |
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OR

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

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