**POORNIMA UNIVERSITY, JAIPUR**

**END SEMESTER EXAMINATION, April 2023**

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|  | **4BC2123** | Roll No. | Total Printed Pages: 2 |
| **4BC2123** |  |
| BCA II Year IV Semester (Back) End Semester Examination, April 2023  **(DS)** | |
| **BCD04103: NoSQL Database** | | | |

# Max. Time: **3** Hours. Max. Marks: **60**

Min. Passing Marks: **21**

Attempt **five** questions selecting one question from each Unit. There is internal choice from Unit I to Unit V. Marks of each question or its parts are indicated against each question / parts. Draw neat sketches wherever necessary to illustrate the answer. Assume missing data suitably (if any) and clearly indicate the same in the answer.

Use of following supporting material is permitted during examination for this subject.

# **1.----------------------------------------------** **2.-----------------------------------------**

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|  |  | **UNIT-I (CO1)** | **Marks** | **Bloom Level** |
| **Q.1** | **(a)** | Explain features of NoSql? How it is different from RDBMS> | **(8)** | **Knowing And**  **remembering** |
|  |  |  |  |  |
|  | **(b)** | What Problems were in CAP Theorem? How these problem were resolved later on? Justify your answer with proper example. | **(4)** | **Knowing And**  **remembering** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
|  |  |  |  |  |
| **Q.2** | **(a)** | Prepare a documentation which show shortcoming of SQL. How there shortcoming were solved by evolution on NoSql? | **(8)** | **Analyzing** |
|  |  |  |  |  |
|  | **(b)** | What you understand by term “Hybrid NoSql”? Explain this with proper example. | **(4)** | **Knowing And**  **remembering** |
|  |  |  |  |  |
|  |  | **UNIT-II (CO2)** |  |  |
| **Q.3** | **(a)** | There a many types of NoSql are available in market. Which factors you should keep in mind when you select a NoSql for your project. Justify your answer with suitable case study. | **(6)** | **Analyzing** |
|  |  |  |  |  |
|  | **(b)** | Suppose you are database administrator in TCS. Suggest how to keep data safe while using NoSql. | **(6)** | **Applying** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
|  |  |  |  |  |
| **Q.4** |  | Describe the following :-   1. Visualizing Nosql 2. Deploying NoSql 3. Open Source v/s Commercial Software 4. A*CID* | **(4x3)** | **Understanding** |
|  |  |  |  |  |
|  |  | **UNIT-III (CO3)** |  |  |
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| **Q.5** | **(a)** | Assume if you are working on a distributed computer system where many user are interacting on a NoSql database. How you can get information which data is latest. Describe step involve with it. | **(6)** | **Applying** |
|  |  |  |  |  |
|  | **(b)** | Differentiate replication and sharding in context of key value database, | **(6)** | **Applying** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
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| **Q.6** |  | Discuss following with example:-   1. Transaction 2. Availability 3. Scaling 4. Hashing | **(4x3)** | **applying** |
|  |  |  |  |  |
|  |  | **UNIT-IV (CO4)** |  |  |
|  |  |  |  |  |
| **Q.7** | **(a)** | How columnar NoSql is different from Document base? Suggest use case where to apply columnar database over to another nosql database. | **(6)** | **Applying** |
|  |  |  |  |  |
|  | **(b)** | Assume you a working as Data Scientist in a telecom Company. Your company is planning pre-paid cards with X an Y plan.. X plan is coming with many other facilities. Suggest which Nosql technology you will prefer with justified answer. | **(6)** | **Applying** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
|  |  |  |  |  |
| **Q.8** | **(a)** | Mention pros and cons of each nosql database. Suggest use case of each type. | **(6)** | **Creating** |
|  |  |  |  |  |
|  | **(b)** | Vodaphone is a telecommunication company which is take over the Idea network limited. Now problem is that how to map assets of Vodaphone with Idea network. As a being database engineer suggest proper solution and justify your answer. | **(6)** | **applying** |
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|  |  | **UNIT V (CO5)** |  |  |
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| **Q.9** | **(a)** | Differentiate Searching and reverse Query with suitable examples. | **(6)** | **Evaluating** |
|  |  |  |  |  |
|  | **(b)** | What is intent to use Robots.txt file in web application? Mention its role in web scrapping. | **(6)** | **Evaluating** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
|  |  |  |  |  |
| **Q.10** |  | Write short notes on :-   1. Crawler 2. Directories 3. Hybrid 4. Meta | **(12)** | **Knowing And**  **remembering** |