

End Semester Examination

May-June 2023

COS5011B - Next Generation Databases

Schedule ID: 13186

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| Faculty/School | Faculty of Science | Term | Semester II |
| Program | FYM.Sc- CS | Duration | 1 Hours 30 Minutes |
| Specialization | -- | Max. Marks | 40 |

Read the instructions provided for every question properly before attempting the answer.

Section 1 - [7 Questions, 8 Marks] (5 X 8 Marks) Answer any 5 questions

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| 1 ✓ | a. Describe NoSQL with its key features. b. Differentiate between 2-Tier and 3-Tier Internet Architecture with suitable diagrams | 8 marks | CO1,CO2Remembering |
| 2 ✓ | a. Evaluate NoSQL query to insert 5 students data and display student having maximum final year percentage. b. Explain Aggregation pipeline in MongoDB with an example | 8 marks | CO2,CO3Applying |
| 3 | a. Sketch and explain NoSQL Storage Architecture b. Apply and explain the following MongoDB Operation 1. AND operation 2. NOR condition 3. NOT condition | 8 marks | CO1,CO2Remembering |
| 4 ✓ | a. Distinguish between MySQL and NOSQL. b. Display the customer, those are from same city and whose age is greater than 45 years. | 8 marks | CO2,CO4Evaluating |
| 5 ✓ | Write and Create a blog application using Python and MongoDB. | 8 marks | CO3,CO4Creating |
| 6 ✓ | What is an Indexing? How it is beneficial in retrieving a data from collection? Explain with a example. | 8 marks | CO1,CO2Understanding |
| 7 ✓ | a. Distinguish between MongoDB and Cassandra b. Explain Indexing and ordering with suitable examples. | 8 marks | CO2,CO3Remembering |