

University of Mumbai

Program: Information Technology Engineering

Curriculum Scheme: Rev2016

Examination: Third Year Semester V

Course Code:ITDO5012 and Course Name: ADMT

Time: 1 hour

Max. Marks: 80

For the students:- All the Questions are compulsory and carry equal marks .

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| Q1. | If a transaction has obtained a _____ lock, it can read but cannot write on the item |
| Option A: | Shared |
| Option B: | Exclusive |
| Option C: | Read |
| Option D: | Write |
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| Q2. | MySQL uses security based on ACL which stands for _____ |
| Option A: | Access Control Language |
| Option B: | Access Control List |
| Option C: | Automatic Control Language |
| Option D: | Automatic Control List |
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| Q3. | Consider the following transaction involving two bank accounts x and y. read(x); x := x - 50; write(x); read(y); y := y + 50; write(y) The constraint that the sum of the accounts x and y should remain constant is that of |
| Option A: | Atomicity |
| Option B: | Consistency |
| Option C: | Isolation |
| Option D: | Durability |
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| Q4. | What is the formula to calculate Worst case Query cost nested loop join? |
| Option A: | BR-BS |
| Option B: | BR-Nr/BS |

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| Option C: | BR+BS |
| Option D: | BR+Nr*BS |
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| Q5. | MAC is based on the following multilevel security. |
| Option A: | Top secret, Secret, Restricted, Unclassified |
| Option B: | Top secret only |
| Option C: | Secret, Restricted |
| Option D: | Restricted, Unclassified |
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| Q6. | Let us suppose that in a distributed database, during a transaction T1, one of the sites, say S1, is failed. When it recovers, the site S1 has to check its log file (log-based recovery) to decide the next move on the transaction T1. If the log contains a <commit T> record, what does the site S1 have to do? |
| Option A: | Need not do anything |
| Option B: | Perform Undo |
| Option C: | Perform Redo |
| Option D: | Abort the transaction |
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| Q7. | Which of the following is not a promise of a distributed database? |
| Option A: | Transparent management of distributed and replicated data, Reliable access to data through distributed transactions, Improved performance, and Easier system expansion. |
| Option B: | Network Transparency |
| Option C: | Replication Transparency |
| Option D: | Fragmentation Transparency |
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| Q8. | The data is stored, retrieved & updated in _____. |
| Option A: | OLAP |
| Option B: | OLTP |

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| Option C: | RLPP |
| Option D: | MOLAP |
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| Q9. | _____predicts future trends & behaviors, allowing business managers to make proactive, knowledge-driven decisions. |
| Option A: | Data warehouse. |
| Option B: | Datamining |
| Option C: | Metadta |
| Option D: | Data Marts |
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| Q10. | A rollup operation can not be achieved by_____ |
| Option A: | climbing up the concept hierarchy |
| Option B: | Dimension reduction |
| Option C: | Introducing new dimension |
| Option D: | all of the above |

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| Q.2. | |
| A | Solve any Two 5 marks each |
| i. | Explain ETL process? |
| ii. | Explain Mobile Database? |
| iii. | Explain with example Query optimization |
| B | Solve any One 10 marks each |
| i. | Explain No sql and Big Data with example |

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| ii. | Explain in detail steps in the Query Evaluation plan. |
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| Q.3. | |
| A | Solve any Two 5 marks each |
| i. | Explain the term distributed DB with suitable examples? |
| ii. | Explain Slice, Dice operations of OLAP? |
| iii. | Explain CAP theorem? |
| B | Solve any One 10 marks each |
| ii. | Explain no sql data architecture plan? |
| ii. | Define OLAP and its need along with its operations? |

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| Q.4. | |
| A | Solve any Two 5 marks each |
| iv. | Explain Challenges in ETL Functions? |
| v. | Explain Star schema with suitable example. |
| vi. | Write a short note on Goals of Query Optimization. |
| B | Solve any One 10 marks each |
| iii. | Explain in Mobile database, Temporal database with example? |

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| ii. | Define Data transformation and Loading in detail? |
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