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| Hall Ticket No.: |  |  |  |  |  |  |  |  |  |  |

**SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY**

**MODEL QUESTION PAPER**

**SRIT R19**

**(AUTONOMOUS)**

II B. Tech I Sem – Semester End Examinations – Regular – Mar 2021

**DATA BASE MANAGEMENT SYSTEMS**

**[194GA05301]**

**(Computer Science and Engineering)**

**Time: 3 hours** **Max. Marks: 70**

**PART-A**

(Compulsory Question)

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| --- | --- | --- | --- |
| 1 |  | Answer the following: (10 X 02 = 20 Marks) | |
|  | a) | Define Data Dictionary. | |
|  | b) | What are the applications of Database Systems? | |
|  | c) | Define Primary key and Candidate key. | |
|  | d) | Define Schema and Instance. | |
|  | e) | Mention the main differences between trivial and non-trivial dependencies. | |
|  | f) | What is redundancy? | |
|  | g) | What is checkpoint? | |
|  | h) | What are the uses of database buffering. | |
|  | i) | What is RAID? | |
|  | j) | What are the problems with static Hashing? | |
| **PART-B**  (Answer all five units, 5 X 10 = 50 Marks) | | | |
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| **UNIT-1** | | | |
| 2 | Explain overall structure of Database Management Systems. | | **[10M]** |
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| OR | | | |
| 3 | Illustrate Database Languages in detail. | | **[10M]** |
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| **UNIT-2** | | | |
| 4 | Explain data definition commands in SQL with syntax and examples. | | **[10M]** |
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| OR | | | |
| 5 | Explain tuple relational calculus and domain relational calculus with an example for each | | **[10M]** |
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| **UNIT-3** | | | |
| 6 | Explain about Multi-valued dependencies and Fourth Normal Form. | | **[10M]** |
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| OR | | | |
| 7 | Draw an E-R diagram for a core banking enterprise system and identify the derived and composite attributes, the strong and weak entity sets, and relationships. | | **[10M]** |
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| **UNIT-4** | | | |
| 8 | Illustrate multiple granularity locking algorithm with a suitable example | | **[10M]** |
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| OR | | | |
| 9 | Explain in detail about log-based recovery. | | **[10M]** |
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| **UNIT-5** | | | |
| 10 | Explain difference between Hash indexes and B+-tree indexes. In particular, Demonstrate equality and range searches work, using an example. | | **[10M]** |
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| OR | | | |
| 11 | Distinguish between Extendible and Linear Hashing with example. | | **[10M]** |
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