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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 Abstraction. | |
|  | b) | | What are Database languages? | |
|  | c) | | Define Natural Join. | |
|  | d) | | What is Relational Algebra? | |
|  | e) | | What is normalization? | |
|  | f) | | Compare and contrast between third normal form and BCNF. | |
|  | g) | | What are the properties of a transaction? | |
|  | h) | | When two schedules are conflict equivalent? | |
|  | i) | | What are the causes of bucket overflow in a hash file organization | |
|  | j) | | What is the basic difference between static hashing and dynamic hashing? | |
| **PART-B**  (Answer all five units, 5 X 10 = 50 Marks) | | | | |
|  | | | | |
| **UNIT-1** | | | | |
| 2 | a) | Demonstrate views of Data in databases. | | **[5M]** |
|  | b) | Describe the role of Database users. | | **[5M]** |
| OR | | | | |
| 3 | Explain the advantages of using a DBMS over File Processing System. | | | **[10M]** |
|  |
| **UNIT-2** | | | | |
| 4 | What is a view in SQL? How it is defined? Explain with an example. | | | **[10M]** |
|  |
| OR | | | | |
| 5 | What are aggregate functions? List the aggregate functions supported by SQL. | | | **[10M]** |
|  |
| **UNIT-3** | | | | |
| 6 | A set of FD’s for the relation R {A, B, C, D, E, F} is AB→C, C→A, BC→D, ACD→B, BE→C, EC→FA, FC→BD, and D→E. Find a minimum cover for this set of FD’s? | | | **[10M]** |
|  |
| OR | | | | |
| 7 | Explain different types of relationships using crow’s foot notation. | | | **[10M]** |
|  |
| **UNIT-4** | | | | |
| 8 | Explain different locking mechanisms used in lock based concurrency control. | | | **[10M]** |
| OR | | | | |
| 9 | Illustrate validation based Protocols with a suitable example. | | | **[10M]** |
|  |
| **UNIT-5** | | | | |
| 10 | What is an index? What are the different types of indexes? Discuss important properties of an index that affect the efficiency of search. | | | **[10M]** |
|  |
| OR | | | | |
| 11 | Explain static and dynamic hashing techniques. | | | **[10M]** |
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