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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR  
(AUTONOMOUS)

B.Tech II Year I Semester Supplementary Examinations November-2020

**DATABASE MANAGEMENT SYSTEMS**

(Common to CSE &amp; CSIT)

Time: 3 hours

Max. Marks: 60

**PART-A**

(Answer all the Questions 5 x 2 = 10 Marks)

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| <b>1</b> | <ul style="list-style-type: none"> <li><b>a</b> What is a weak and strong entity sets? Explain with example. <span style="float: right;">2M</span></li> <li><b>b</b> List and explain the types of keys <span style="float: right;">2M</span></li> <li><b>c</b> What is meant by attribute closure? Explain. <span style="float: right;">2M</span></li> <li><b>d</b> What are the storage types? <span style="float: right;">2M</span></li> <li><b>e</b> What is the use of RAID? <span style="float: right;">2M</span></li> </ul> |  |
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**PART-B**

(Answer all Five Units 5 x 10 = 50 Marks)

**UNIT-I**

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| <b>2</b> | Write about logical database design (ER to Relational) with suitable examples. <span style="float: right;">10M</span> |  |
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| <b>3</b> | <ul style="list-style-type: none"> <li><b>a</b> Draw the Architecture of Database. <span style="float: right;">5M</span></li> <li><b>b</b> Discuss about Database users and Administrators. <span style="float: right;">5M</span></li> </ul> |  |
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**UNIT-II**

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| <b>4</b> | <ul style="list-style-type: none"> <li><b>a</b> Discuss about outer joins with examples. <span style="float: right;">5M</span></li> <li><b>b</b> Write about triggers and active databases <span style="float: right;">5M</span></li> </ul> |  |
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| <b>5</b> | <ul style="list-style-type: none"> <li><b>a</b> Differentiate the relational algebra and calculus <span style="float: right;">5M</span></li> <li><b>b</b> Explain in detail about expressive power of algebra and calculus. <span style="float: right;">5M</span></li> </ul> |  |
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**UNIT-III**

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| <b>6</b> | <ul style="list-style-type: none"> <li><b>a</b> Compare and contrast between First normal form and second normal form. <span style="float: right;">5M</span></li> <li><b>b</b> Write about loss -less join decomposition with an example. <span style="float: right;">5M</span></li> </ul> |  |
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| <b>7</b> | <ul style="list-style-type: none"> <li><b>a</b> Define BCNF. How does BCNF differ from 3NF? Explain with example <span style="float: right;">6M</span></li> <li><b>b</b> Explain 3NF. Give one example. <span style="float: right;">4M</span></li> </ul> |  |
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**UNIT-IV**

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| <b>8</b> | Explain buffer management in concurrency control system <span style="float: right;">10M</span> |  |
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| <b>9</b> | <ul style="list-style-type: none"> <li><b>a</b> Explain lock based protocols <span style="float: right;">3M</span></li> <li><b>b</b> Briefly explain buffer management in concurrency control system <span style="float: right;">7M</span></li> </ul> |  |
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**UNIT-V**

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| <b>10</b> | <ul style="list-style-type: none"> <li><b>a</b> What is clustered index organization? Illustrate with example. <span style="float: right;">5M</span></li> <li><b>b</b> Explain about Composite Search Keys. Illustrate with example. <span style="float: right;">5M</span></li> </ul> |  |
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| <b>11</b> | Explain about Delete and Duplicated in Tree Structured Indexing? <span style="float: right;">10M</span> |  |
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