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| 13CS32E3 | - | GRID COMPUTING |

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| Hours / Week | : | 4 |  | Sessional Marks | : | 40 |
| Credits | : | 4 |  | End Examination Marks | : | 60 |

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| **UNIT - I** |
| **An Introduction to the Grid**: Introduction, Characterization of the Grid, Grid-Related Standards Bodies , The Architecture of the Grid , OGSA and WSRF. |
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| **UNIT – II** |
| **Grid Monitoring**: Grid Monitoring Architecture (GMA), An Overview of Grid Monitoring Systems- Grid ICE – JAMM –MDS, Network Weather Service, R-GMA, Other Monitoring Systems- Ganglia and GridMon. |
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| **UNIT – III** |
| **Grid Security And Resource Management**: Grid Security-A Brief Security Primer, Grid Scheduling and Resource Management-Scheduling Paradigms- How Scheduling works -A Review of Condor, SGE, PBS and LSF-Grid Scheduling with QoS. |
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| **UNIT – IV** |
| **Data Management And Grid Portals**: Data Management-Categories and Origins of Structured Data-Data Management Challenges-Architectural Approaches-Collective Data Management Services-Federation Services-Grid Portals-First-Generation, Second-Generation Grid Portals.  |
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| **UNIT - V** |
| **Grid Middleware**: List of globally available Middle wares - Case Studies-Recent version of Globus Toolkit and gLite - Architecture, Components and Features.  |
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| TEXT BOOKS |
| 1. Maozhen Li, Mark Baker, The Grid Core Technologies, John Wiley & Sons, 2005.
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| REFERENCE BOOKS |
| 1. Ian Foster & Carl Kesselman, The Grid 2 – Blueprint for a New Computing Infrascture, Morgan Kaufman – 2004.
2. Joshy Joseph & Craig Fellenstein, Grid Computing, Pearson Education 2004.
3. Fran Berman,Geoffrey Fox, Anthony J.G.Hey, Grid Computing: Making the Global Infrastructure a reality, John Wiley and sons, 2003.
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