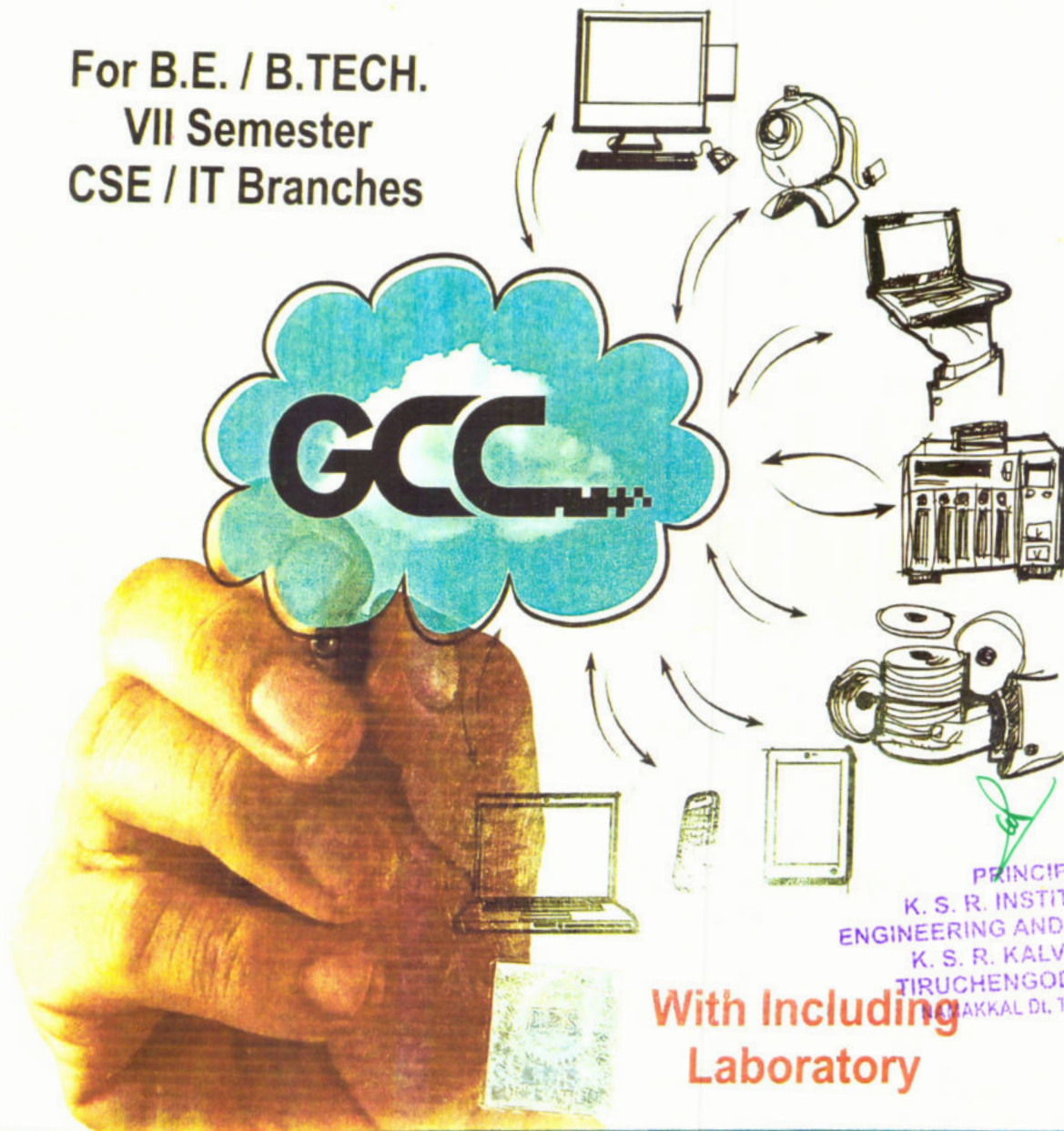


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# GRID AND CLOUD COMPUTING

For B.E. / B.TECH.  
VII Semester  
CSE / IT Branches



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# PREFACE

This book "Grid and Cloud Computing" is about an exploratory awareness to solve large scale scientific problems through Grid and Cloud Computing. It contributes an impression towards virtualization as fundamental concept towards cloud computing. It provides a preliminary study on Grid Computing and further briefs into a detailed study on Cloud Computing with various features like Security, Virtualization and environment setup. It provides procedural footsteps for setting up a Grid environment - Globus Toolkit, Cloud Environment – Open Nebula and Hadoop Environment in Ubuntu Linux for Grid and Cloud Computing Laboratory along with sample programs and guidelines.

**Unit I:** Introduction towards progression of distributed computing with Internet beside through basics of network based technologies, Grid computing and Cloud computing from side to side architectural standards.

**Unit II:** Outline to Grid services through an impression of Open Grid Services Architecture and Initiative's Standards, Requirements, Practical view, Detailed view and Data intensive grid services.

**Unit III:** Transitory awareness on various cloud deployment models, their advantages and disadvantages. Brief knowledge over virtualization and their structure along with CPU, Memory, I/O devices, clusters and resources management.

**Unit IV:** Provides a procedure for installing and configuration setup for Globus Toolkit and its usage. Contributes an knowledge on Hadoop Framework with introduction, installing, configuring and programming with java.

**Unit V:** Provides a comparative study over security models of Grid environment and Cloud Computing environment with individual, group and other type of user level policy.

**Unit VI:** Provides a step by step installing procedure for lab environment setup along with sample programs for Laboratory.

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# GRID AND CLOUD COMPUTING

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