

(IT616) CLUSTER AND GRID COMPUTING

(ELECTIVE - IV)

Objective of the course :

To provide an overview of the basic concepts of Grid Computing. To highlight the advantages of deploying Grid Computing. To illustrate the practical adoption of a Grid deployment through real life case studies.

UNIT - I

Introduction to Grid Computing : Chapter 1 (Page No 25 – 46) & Chapter 2 (Page No 49 – 67).
Introduction – The Grid – Past, Present and Future – Applications of grid computing organizations and their roles.

UNIT - II

Grid Computing Architecture : Chapter 3 (Page No 69 – 79) & Chapter 9 (Page No 155 – 200) & Chapter 5 (Page No 93-134). Grid Computing anatomy – Next generation of Grid computing initiatives– Merging the Grid services architecture with Web services architecture.

UNIT - III

Grid Computing Technologies : Chapter 10 (Page No 201 – 235) . OGSA – Sample use cases that drive the OGSA platform components – OGSI and WSRF– OGSA Basic Services – Security standards for grid computing.

UNIT - IV

Grid Computing Tool Kit : Chapter 11 (Page No 239 – 350) . Globus Toolkit –Versions – Architecture – GT Programming model –A sample grid service implementation.

UNIT - V

High Level Grid Services : Chapter 14 (Page No 351 – 374). High level grid services – OGSI .NET middleware Solution Mobile OGSI.NET for Grid computing on Mobile devices.

TEXT BOOK :

1. Joshy Joseph & Craig Fellenstein, “Grid Computing”, 3rd ed., Pearson/PHI PTR- 2003.

REFERENCE BOOKS:

1. Fran Berman, Geoffrey Fox, Anthony J.G. Hey, “Grid Computing: Making the Global Infrastructure a reality”, 2nd ed., John Wiley and sons, 2003.
2. Ahmar Abbas, “Grid Computing: A Practical Guide to Technology and Applications”, 1st ed., Charles River media, 2003.