

B.Tech IV Year I Semester (R15) Regular & Supplementary Examinations November/December 2019

GRID & CLOUD COMPUTING
(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Write the differences between High performance computing and High throughput computing.
 - (b) List the disadvantages of centralized computing architectures.
 - (c) Write the functional requirements of grid infrastructure.
 - (d) Define OSGA.
 - (e) List the advantages and disadvantages of cloud computing.
 - (f) Define virtualization.
 - (g) List the components of GT4.
 - (h) Define HDFS.
 - (i) List the security requirements of a grid.
 - (j) Define authentication and authorization.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 (a) Compare and contrast Distributed Computing and Grid Computing.
(b) "Processors are loosely coupled with distributed memory in parallel computing architectures"- Justify the statement.

OR

- 3 (a) Briefly explain the technologies used for network based systems.
(b) Explain layered architecture of grid infrastructure in detail.

UNIT – II

- 4 (a) Explain in detail about OSGA services with an example.
(b) Explain in detail about the practical view of OSGA?

OR

- 5 (a) Explain in detail about OSGA framework.
(b) "Grid computing is data intensive"- Justify the statement.

UNIT – III

- 6 (a) Compare and contrast PaaS and SaaS.
(b) Briefly explain about the implementation of virtualization at application level.

OR

- 7 (a) Compare and contrast Hypervisor and Xen architecture.
(b) Explain in detail about virtual clusters.

UNIT – IV

- 8 (a) Explain the architecture of GT4 and its services.
(b) Explain with example importance of map reduce paradigm in Hadoop Framework.

OR

- 9 (a) Explain in detail about architecture of HDFS.
(b) List different commands with an example for copying file from local file system to HDFS.

UNIT – V

- 10 (a) Briefly explain trust models used for grid security infrastructure.
(b) Explain in detail about grid security infrastructure.

OR

- 11 (a) Briefly explain why infrastructure and data security is highly challenging at network, host and application levels.
(b) Briefly list the various security threats in public SaaS and IaaS.
