

B.TECH.

THEORY EXAMINATION (SEM-VIII) 2016-17

HIGH PERFORMANCE COMPUTING

Time : 3 Hours

Max. Marks : 100

Note : Be precise in your answer. In case of numerical problem assume data wherever not provided.

SECTION – A

1. Explain the following:

10 x 2 = 20

- (a) What are the derivatives of grid computing?
- (b) How can business grids be defined?
- (c) What is OGSA?
- (d) Mention the requirements of open grid services.
- (e) What is cluster computing?
- (f) List the alternate approaches to parallel computing.
- (g) What is HPC cluster used for?
- (h) Mention the benefits of Cloud.
- (i) Sketch the architecture of Cloud.
- (j) List the types of cloud service development.

SECTION – B

2. Attempt any five parts of the following questions:

5 x 10 = 50

- (a) Write about the high performance application development Environment.
- (b) What are the types of grids? Explain
- (c) Explain the architecture and functionality modules of GT4.
- (d) Define a cluster and explain its basic architecture.
- (e) Write short notes on parallel programming with MPL.
- (f) Give a detailed overview of Beowulf system architecture.
- (g) List and explain the implementations of Cloud Computing.
- (h) Sketch the architecture of cloud with neat diagram.

SECTION – C

Attempt any two parts of the following questions:

2 x 15 = 30

- 3** Explain some of the grid application and their usage patterns.
- 4** **Write short notes on:**
 - (i) PVM,
 - (ii) Beowulf Project,
 - (iii) Berkeley NOW Architecture,
- 5** Discuss about the components of cloud computing.