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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,

Discuss about the components of cloud computing.

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