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**Question Paper Code : 50401**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2017

Seventh Semester

Computer Science and Engineering

CS 6703-GRID AND CLOUD COMPUTING

(Common to : Information Technology)

(Regulations 2013)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A (10×2=20 Marks)

1. "Grid inherits features of P2P and cluster computing systems". Is the statement true? Validate your answer.
2. Differentiate between grid and cloud computing.
3. Compare GSH with GSR.
4. What is the purpose of grid service description?
5. List the requirements of VMM.
6. Distinguish between physical and virtual clusters.
7. "HDFS is fault tolerant. Is it true? Justify your answer.
8. What is the purpose of heart beat in hadoop?
9. List any four host security threats in public IaaS.
10. Identify the trust model based on a site's trust worthiness.

PART – B (5×16=80 Marks)

11. a) i) Describe the infrastructure requirements for grid computing.  
ii) What are the issues in cluster design? How can they be resolved?

(OR)

- b) i) Describe layered grid architecture. How does it map onto internet protocol architecture?  
ii) Describe the architecture of a cluster with suitable illustrations.

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12. a) "Data produced by a large Hadron Collider may exceed several petabyts". What type of grid service model(s) will you suggest for such an application? Illustrate with diagrams.

(OR)

b) What is OGSA? Explain open grid services architecture in detail with the functionalities of the components.

13. a) Describe service and deployment models of a cloud computing environment with illustrations. How do they fit in NIST cloud architecture?

(OR)

b) What is virtualisation? Describe para and full virtualisation architectures. Compare and contrast them.

14. a) Illustrate dataflow in HDFS during file read/write operation with suitable diagrams.

(OR)

b) What is GT4? Describe in detail the components of GT4 with a suitable diagram.

15. a) What is the purpose of GSI? Describe the functionality of various layers in GSI.

(OR)

b) What is the purpose of IAM? Describe its functional architecture with an illustration.

(5x16=80 Marks)

PART - B

11. a) Describe the infrastructure requirements for grid computing.  
b) What are the issues in network design? How can they be resolved?

(OR)

b) Describe the architecture of a network with suitable illustrations.  
c) Describe the architecture of a network with suitable illustrations.