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B.E./B.Tech (Full Time) DEGREE ARREAR END SEMESTER EXAMINATIONS

Nov/Dec 2012.

INFORMATION SCIENCE AND TECHNOLOGY BRANCH

VI SEMESTER

**IT 9354: Grid Computing**

(REGULATIONS 2009)

Time: Three Hours

Max.Marks: 100

Answer All Questions

PART-A (10 \* 2 = 20 Marks)

1. Explain the basic differences between grid computing and cluster computing.
2. What is WS Inspection? How can a service discovery be done using UDDI and WS Inspection?
3. What are the various monitoring categories used in Grid environment?
4. What are the methods of searching data in R-MGA?
5. What are the security concerns in a typical Grid environment?
6. Discuss the basic goals of cryptography.
7. Mention some of the sources that cause concerns in scheduling in a grid environment.
8. Name four challenges in data management in Grid.
9. What do you mean by Grid middleware?
10. What are the high level services included in the latest version of Globus tool kit?

Part-B (5 \* 16 = 80 Marks)

11. (i) Describe the OGSA with appropriate diagram. Argue that OGSA extends Web Services. (10)  
(ii) Describe the GT3 structure with appropriate diagram. (6)
- 12(a). Describe the basic Grid Monitoring Architecture, explaining each component in detail. (16)  
OR
- 12(b). (i) What is JAMM used for? Provide the use of JAMM with emphasis on reliability, fault tolerance, monitoring and extensibility criteria. (10)  
(ii) How does MDS support client interaction? Explain. (6)
- 13(a). (i) Discuss the Grid Scheduling Infrastructure. (8)  
(ii) Describe the various authorization modes in GSI. (8)  
OR
- 13(b). (i) What are the various scheduling paradigms? Discuss with appropriate examples. (8)  
(ii) How is condor used as a job scheduling system? Discuss. (8)
- 14(a). Describe first generation Grid portals from the points of view of architecture, services, implementation techniques and integration tools. (16)

OR

- 14(a). (i) Describe the architecture of Jetspeed. (8)  
(ii) Compare the implementations of Jetspeed, Websphere and Gridsphere portals. (8)

- 15(a). Discuss the latest version of Globus toolkit with respect to its architecture, components and services. (16)

OR

- 15(b). (i) Name some of the globally available middlewares discussing their strengths and weaknesses. (8)  
(ii) Discuss the architecture and components of gLite. (8)

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