## **GUJARAT TECHNOLOGICAL UNIVERSITY**

ME - SEMESTER- II(New course) • EXAMINATION (Remedial) - WINTER- 2015

Subject Name: Cluster and Grid Computing			Date: 08/12/2015		
			Total Marks: 70		
	1. 2.	Attempt all questions.			
Q.1	(a) (b)	Explain Open System Interconnection model in detail? What is procedure to add compute node into cluster?		07 07	
Q.2	(a) (b)	Define SLURM and its features & architecture? Explain how DHCP protocol works?		07 07	
	(b)	OR What is the Linpackøs õHighly Parallel Computingö benchmark' ground rules for the first, second and third benchmark?	? Explain	07	
Q.3	(a)	What is Grid Middleware and how it hides the underlying comcomputing?	plexities of Grid	07	
	(b)	What is Server Load Balancing? Explain its need & stateless a balancing?	and stateful load	07	
		OR			
Q.3	(a) (b)	1 1		07 07	
Q.4	(a) (b)	Briefly explain cluster planning and OSCAR cluster Tools?  Describe the various layers of a Grid Stack (bottom to top).  OR		07 07	
Q.4	(a)	What is OGSA and define its primary goal? Write a Globus cor a simple job (/bin/hostname) to a remote resource called ggb (to PBS resource manager).		07	
	(b)	Explain the difference between d FTP and GridFTP? What is scheduler?	GridWay Meta	07	
Q.5	(a) (b)	What are Grid Certificate, Certificate Authority, Revoked Certificate and CRL? What is Public Key Cryptography? Explain in details PKI and its components?  OR		07 07	
Q.5	(a) (b)	What are the main pillars of Globus Toolkit? Explain each of the Explain with diagram how GridProxy can be used to check aut GRAM service running on XYZ cluster (assume the hostname as -xyz1ø)	thentication with	07 07	

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