Seat No.: _____   Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII (OLD) EXAMINATION – WINTER 2018

Subject Code: 170704   **Date: 29/11/2018**

Subject Name: Advance Computing Technology

Time: 10:30 AM TO 01:00 PM   **Total Marks: 70**

Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	State different application areas for cluster computing, grid computing and cloud computing. Discuss its evolution with respect to network technology.	**07**
	(b)	(1) What is cluster middleware? State its functions and responsibilities.	**03**
		(2) Explain the concept of single system image.	**04**
Q.2	**(a)**	Define scalability and explain how resource sharing is done in scalable services.	**07**
	(b)	Explain cluster computing and its architecture.	**07**
		OR	
	(b)	What is a Beowulf cluster? How can a Beowulf cluster be established in common lab environment?	**07**
Q.3	**(a)**	Explain representative cluster systems.	**07**
	(b)	Describe services provided by RMS environment.	**07**
		OR	
Q.3	**(a)**	Explain Flexible Load Sharing algorithm.	**07**
	(b)	List and explain policies adopted for cluster tuning.	**07**
Q.4	**(a)**	Describe evolution of grids according to classification in generations.	**07**
	(b)	Write a note on grid architecture giving its detailed anatomy.	**07**
		OR	
Q.4	**(a)**	Describe the need for application middleware for grid architecture.	**07**
	(b)	Write a note on practices and applications of grid computing.	**07**
Q.5	**(a)**	Give three examples of most popular cloud services currently used.	**07**
	(b)	Explain public, private and hybrid clouds with suitable examples and application areas.	**07**
		OR	
Q.5	**(a)**	Compare technical aspects and cost of managing traditional data centers with technical aspects and cost of cloud data centers.	**07**
	(b)	Explain IAAS, PAAS, SAAS	**07**

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