

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**
