



# AJEENKYA

## D Y PATIL UNIVERSITY

### End Term Examination (December 2019)

School: School of Engineering

Program: BTECH [CTIS/MACT]

Course: Storage Technology

Course Code: CSC319

Semester: V

Max Marks: 30

Duration (mins): 60 Min

- Note- 1. Figures to the right indicates full marks**  
**2. Attempt any three questions.**

- Q1) a)** What can be the possible reasons behind large organizations maintaining multiple data centres? (5)
- b)** An I/O request arrives in the system at a rate of 100 I/Os per second. Rs, or the service time, is 6 ms. Calculate: (5)
- Utilisation of I/O controller (U)
  - Average response time (R)
  - Average queue size (NQ)
  - Total time spent by a request in the queue (U X R)
- Q2) a)** Explain the difference between Structured, Semi-Structured and Un-Structured data. (2)
- b)** Elaborate the concept of Direct Attached, LAN based and SAN based backup, with suitable examples. (8)
- Q3) a)** What is the difference between SAN and NAS? (2)
- b)** What do you mean by Seek Time, Rotational Latency and Disk Transfer Rate? (2)
- c)** How host-based replication is different LVM-based replication? Justify your answer with suitable example. (6)
- Q4) c)** Discuss the CoFA mode in pointer-based full volume replication when the write operation is issues on both source and target for the first time. (5)
- d)** What do you understand by the term 'Gold Copy'? How much beneficial it is to create 'Gold Copy' of the data? (5)
- Q5) a)** What do you mean by Recovery Point Objective and Recovery Time Objective? (2)
- b)** Explain the difference between Full Backup, Incremental Backup and Differential Backup? Illustrate with proper diagram. (8)