**AKGEC/IAP/FM/02**

**Ajay Kumar Garg Engineering College, Ghaziabad**

**Department of CSE**

**Sessional Test-2**

Course: B.Tech Semester: VII

Session: 2017-18 Section: CS-1,2,3, IT-1,2

Subject: Distributed System Sub. Code: NCS 701

Max Marks: 50 Time: 2 hour

***Note*** : Answer **all** the Sections.

**Section-A**

**A.**  Attempt **all** the parts. **(5 X 2 = 10)**

(1) List out some issues in DFS (Distributed File System).

(2) State Byzantine agreement problem.

(3) What are the deadlock handling strategies in distributed system?

(4) What do you mean by the memory coherence?

(5) Write down the performance metrics for distributed mutual exclusion algorithms.

**Section-B**

**B.** Attempt **all** the parts. **(5 X 5 = 25)**

(6) Show that Byzantine agreement cannot always be reached among four processors if two processors are faulty.

(7) Discuss the architecture of distributed shared memory and its advantages.

(8) Discuss Obermarck’s path pushing algorithm.

(9) Differentiate between the followings:

(i) Token and Non token based mutual exclusion algorithms

(ii) Centralized, distributed and hierarchal deadlock detection

(10) Write and explain a token based mutual exclusion algorithm. Describe its performance on important metrics.

**Section-C**

**C.** Attempt **all** the parts. (2 **X 7.5 = 15)**

(11) Describe the various algorithms for implementing DSM (Distributed Shared Memory).

(12) Explain various issues that must be addressed in design and implementation of distributed file system.