

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI (RAJASTHAN)
I SEMESTER 2018-2019

Mid Semester Test - PART B (OPEN BOOK)

Course No.: IS F462

Course Title: Network Prog.

Date: 13th October (2-2:30)

Maximum Marks: 15% (15M)

Note:

- Overwritten answers will not be accepted for rechecks
 - Write all parts of a question together.
-

Q1. Design and implement a solution known as Cluster Shell. This shell runs on a single machine but operates internally on a cluster of machines running Linux OS. Any command executed in the shell, shell will execute it on all machines and then return. Assume that all systems have the same directory hierarchy but files will not be same.

For example, if you run *ls* in the shell, it will display the concatenation of results from all machines in the cluster. If *grep* command is run, it will display the results from all machines.

Shell accepts ip addresses of all machines in the cluster as CLAs.

[10M]

Q2. Write a program that utilizes pipe for synchronization among processes. it exhibits the following behavior.

- (a) A parent *p* creates 2 child processes *c1, c2*.
- (b) They will execute in this order: *c1* will execute, then *c2* will execute, then *p* will execute and *c1* will execute ...
- (c) All three will execute in turns one after another.

[5M]

--&--