

**BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI (RAJASTHAN)**  
**I SEMESTER 2019-2020**  
**ASSIGNMENT-3**

**Course No.: IS F462**  
**Deadline: 25-Nov-2019**

**Course Title: Network Prog.**  
**Maximum Marks: 24M (6%)**

---

**Note:**

- Maximum of two students per group.
  - Upload code in <http://nalanda.bits-pilani.ac.in> Name your file idno1\_idno2\_assignment2.tar .
- 

**P1.** You are required to build a multicast chat application in a LAN environment with the following characteristics.

- Many courses have surprise tests. Students registered want to be notified when the test is about to be conducted. A student who attends the class may send a message to all who want to be notified.
- There are multiple students who request notification from a class goer and there are multiple courses.
- No central server should be used in implementation.

Deliverables:

- Design Document (.pdf)
- multicast\_chat\_client.c

[14 M]

**P2.** In this problem, implement a program that reads every message received by your system and prints the following information to a file for each message.

- Source mac, destination mac
- Source ip, destination ip
- Source port, destination port (if applicable)
- IP TTL, IP Protocol no (corresponding protocol name)
- TCP WINDOW field, SYN, FIN, RST, ACK bits (if TCP)

Deliverables:

- read\_messages.c

[10M]