**OVERALL REVISION: (TOPICS UNIT wise)**

**Unit 1**

**Practice:**

1. Block diagram reduction (BDR)
2. Transfer function of simple electrical network

**UNIT 2**

1. Time response analysis, obtain c(t) for Unit step, impulse inputs..

for I order system…

for II order system --find also the damping ratio, ωn…

2. Routh stability check…

refer CIA 1 question ( need to be done for the ch.eqn. i.e. 1+GH = 0)

3. ROOTLOCUS..

4. BODE PLOT..

**UNIT 3**

1. SS model of mechanical, electrical systems..
2. Controllability check
3. Observability check
4. State controller design
5. Observer design

**UNIT 4**

1. PLC program – ladder diagram – with the sums discussed in class..
2. DCS ..