

ECE471 INDUSTRIAL POWER SYSTEMS

Assignment # 4 Hints & Answers

8.1 65 s and 24 s.

8.3 95 s and 20 s.

8.5 2000 A.

8.7 360 A.

1. Branch MCB is: 100 Std with 100 A trip.
Feeder MCB is: 400 Std with 350 A trip.

2. #3 on each branch, 350 MCM on the main feeder.

3. From table 11.5, #3 Cu gives 0.231 V/kAft (80% pf). So branch VR is 2.11%.
Likewise, 350 MCM Cu gives 0.058 V/kAft (80% pf). So feeder VR is 3.2%.
The feeder VR is not OK by 0.2%.
The overall VR is not OK by 0.31%.