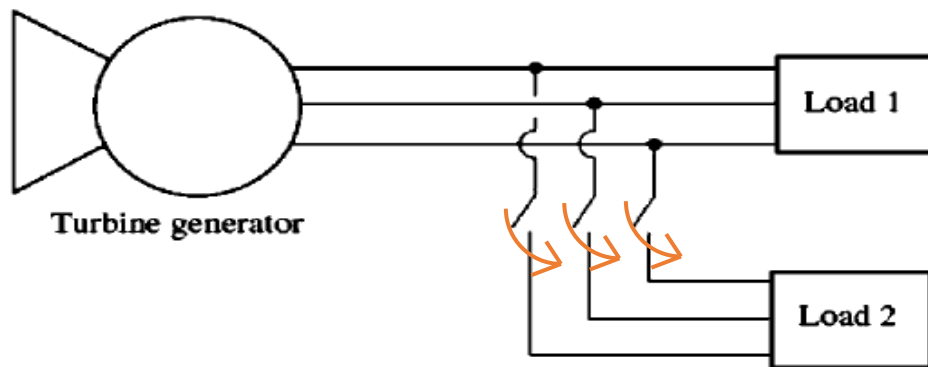


### EEE 363.1

Quiz # 3,  
10-01-2021

Answer all the questions

1. What are the conditions that need to be fulfilled for paralleling an alternator with a running one? [4]
2. How do you check the phase sequence? [3]
3. Fig. 1 shows a generator supplying a load. A second load is to be connected in parallel with the first one. The generator has a no-load frequency of 51 Hz and sp of 1MW/Hz. Load 1 consumes a real power of 1000 KW at 0.82 pf lagging, while load 2 consumes a real power of 800 KW at 0.85 pf lagging.



- (a) Before the switch is closed, what is the operating frequency? [3]
- (b) After load 2 is connected, what is the operating frequency of the system? [2]
- (c) After load 2 is connected, what action could an operator take to restore the system frequency to 50 Hz? [3]