

ET 332A  
Separately Excited Dc Motors

A 100 HP, 1800 rpm, 500 V separately excited dc motor is operating at rated output. The motor efficiency at rated output is 87%.  $R_a = 0.24$  ohms. At this level of output find:

- a.) the motor armature current
- b.) the motor counter emf
- c.) the motor emf constant
- d.) the developed torque
- e.) an estimate of the rotational losses for the motor