1. What is the speed of the prime mover for a 4-pole 60-Hz synchronous generator?
   (a) 1200 RPM
   (b) 1800 RPM (X)
   (c) 2400 RPM
   (d) 3600 RPM

2. Can we synchronize a 4-pole 1800-RPM synchronous generator to 60-Hz power system?
   (a) Yes (X)
   (b) No

3. What’s the maximum, minimum, and average speed of an 18-pole, 60-Hz synchronous machine at no load and full load?

   The synchronous machine runs at synchronous speed under all conditions.

   \[ n_m = n_{syn} = \frac{120f_e}{P} = \frac{120(60)}{18} = 400\text{RPM} \]