

**EE 382 Applied Electromagnetics (Spring 2018)**

**Homework 11**

**Monday, April 27, 2018**

- 1) PE13.4
- 2) PE13.5
- 3) 13.19 Also, find the corresponding phasor electric field and power radiated.
- 4) 13.28a
- 5) Plot the directivity of the antenna of 13.28a **versus  $\phi$  for  $\theta = \pi/2$**  as two (unitless and in dBi) polar plots using MATLAB. What is the maximum directivity  $D_{\max}$  (unitless and in dBi)? At what angle or angles does  $D_{\max}$  occur? What is the half-power beamwidth HPBW?
- 6) 13.30
- 7) 13.41
- 8) 13.46

**Due Friday, April 27, 2018.**