



### Sheet (5)

- 1) Consider a point source with hemispherical power pattern, construct the total power radiated from the source, and then calculate the directivity.
- 2) Re-calculate the requirements of problem(1) but for the following cases :
  - a. A point source with Unidirectional Cosine power pattern.
  - b. A point source with Bidirectional Cosine power pattern.
  - c. A point source with Sine (doughnut) power pattern.
  - d. A point source with Sine-squared (doughnut) power pattern.
  - e. A point source with Unidirectional Cosine-squared power pattern.
  - f. A point source with Unidirectional Cosine<sup>n</sup> power pattern.

*Dr. Moataz Elsherbini*  
*Eng. Shaimaa Ezzat*