



The logo of the Indian Institute of Technology Delhi is a circular emblem with a scalloped orange border. Inside, there are concentric circles. The outermost ring contains the text 'INDIAN INSTITUTE OF TECHNOLOGY DELHI' in a serif font. The inner ring contains the text 'भारतीय प्रौद्योगिकी संस्थान दिल्ली' in Devanagari script. In the center, there is a stylized orange symbol resembling a flame or a flower.

PRE-EXPERIMENT QUIZ

1. What is the relationship between the aperture-size and beamwidth of an antenna?
2. How do sidelobes cause an uncertainty in determining the angle of arrival of a signal?
3. Derive the expression given above for far-field distance, i.e.
$$R = 2 D^2 / \lambda$$
4. What is the relation, if any, between the nomenclatures (i) θ and ϕ polarization, and (ii) vertical and horizontal polarization?
5. What is the radiation pattern for a half-wave dipole antenna
 - (i) in the plane normal to the dipole?
 - (ii) In the plane containing the dipole?