

SECTION-B

2. Starting from the Maxwell's equation discuss the propagation of plane electromagnetic wave in conducting medium.
3. Explain and derive the general solution of transmission line terminated with any load impedance.
4. Give the expression for directions of pattern maxima and minima for array of n isotropic sources of equal amplitude and spacing (take case of broadside)
5. Discuss in detail field equivalence principle.
6. Derive an expression for field strength for a space or tropospheric propagation at any distance.

SECTION-C

7. Derive the field components radiated by a short dipole; also discuss the near and far field regions.
8. Design a broadside Dolph-Tschebscheff array of 10 elements with spacing d between the elements and with a major-to minor lobe ratio of 26 dB. Find the excitation coefficients and form the array factor.
9. Derive field component when wave is propagating in a circular waveguide with TM mode of propagation.