3. For the balanced three-phase loads shown in FIGURE 3,
    $Z_Y = (15 + j15)\ \Omega$ and $Z_\Delta = (45 + j45)\ \Omega$. Determine:

(a) the equivalent single Δ-connected load,

(b) the equivalent single Y-connected load obtained from the
    Δ-Y transformation of (a) above,

(c) the equivalent single Y-connected load obtained by transforming
    the Δ sub-load of FIGURE 3 to a Y and with the star-points of
    the two Y-sub-circuits connected together,

(d) the total power consumed in case (a) above if the line voltage of
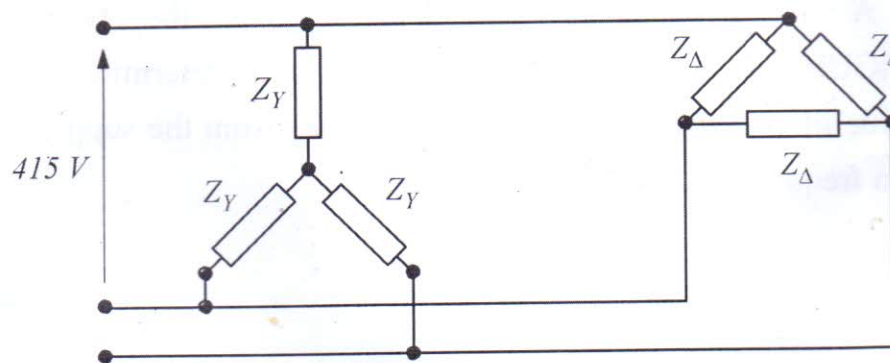   the three-phase supply is 415 V at 50 Hz.

FIG. 3