FIGURE P3-4

Problems 3-15 to 3-18

3-15 Figure P3-4 shows a non-Grashof fourbar linkage that is driven from link O_2A. All
dimensions are in centimeters (cm).

   (a)   Find the transmission angle at the position shown.
   (b)   Find the toggle positions in terms of angle AO_2O_4.
   (c)   Find the maximum and minimum transmission angles over its range of motion by
         graphical techniques.
   (d)   Draw the coupler curve of point P over its range of motion.

3-16 Draw the Roberts diagram for the linkage in Figure P3-4 and find its two cognates. Are
they Grashof or non-Grashof?

3-17 Design a Watt-I sixbar to give parallel motion that follows the coupler path of point P of
the linkage in Figure P3-4.

3-18 Add a driver dyad to the solution of Problem 3-17 to drive it over its possible range of
motion with no quick return. (The result will be an 8-bar linkage.)