

$$\min c_{12}x_{12} + c_{13}x_{13} + c_{14}x_{14} + c_{15}x_{15} + c_{23}x_{23} + c_{24}x_{24} + c_{25}x_{25} + c_{34}x_{34} + c_{35}x_{35} + c_{45}x_{45}$$

Subject to:

$$x_{12} + x_{13} + x_{14} + x_{15} = 2$$

$$x_{22} + x_{23} + x_{24} + x_{25} = 2$$

$$x_{32} + x_{33} + x_{34} + x_{35} = 2$$

$$x_{42} + x_{43} + x_{44} + x_{45} = 2$$

$$x_{52} + x_{53} + x_4 + x_{55} = 2$$

$$x_{12} + s_{12} = 1$$

$$x_{13} + s_{13} = 1$$

$$x_{14} + s_{14} = 1$$

$$x_{15} + s_{15} = 1$$

$$x_{23} + s_{23} = 1$$

$$x_{24} + s_{24} = 1$$

$$x_{25} + s_{25} = 1$$

$$x_{34} + s_{34} = 1$$

$$x_{35} + s_{35} = 1$$

$$x_{45} + s_{45} = 1$$

$$x_{12}, x_{13}, x_{14}, x_{15}, x_{23}, x_{24}, x_{25}, x_{34}, x_{35}, x_{45} \geq 0$$

Cut:

$$x_{12} + x_{14} + x_{15} + x_{23} + x_{34} + x_{35} \geq 2$$

