Radius of relative stiffness (l) is given by

$$l = \left[\frac{Eh^3}{12k(1-\mu^2)}\right]^{1/4} = 70.6\ cm$$

The equ. of resisting section is given by

$$a/h = 15/18 = 0.833 < 1.74$$

$$b = \sqrt{1.6a^2 + h^2} - 0.675h = 14.0\ cm$$

a) stress at the interior:

$$S_i = \frac{0.316P}{h^2}\left[4\log_{10}\left(\frac{l}{b}\right) + 1.069\right] = 19.3\ kg/cm^2$$

b) Stress at the edge:

$$S_e = \frac{0.572P}{h^2}\left[4\log_{10}\left(\frac{l}{b}\right) + 0.359\right] = 28.54\ kg/cm^2$$

c) Stress at the corner:

$$S_c = \frac{3P}{h^2}\left[1 - \left(\frac{a\sqrt{2}}{l}\right)^{0.6}\right] = 24.27\ kg/cm^2$$

d) Location where corner load crack develops due to corner loading, the distance from the corner of the slab

$$X = 2.58\sqrt{al} = 2.58\sqrt{(15 \times 70.6)} = 8.96$$

$$= 84\ cm$$