

REVIEW QUESTIONS

(1) PER CENTAGE OF ULTIMATE STRENGTH OF VARIOUS PARTS OF OVER HEAD LINE

STEEL 50% % WOOD 25 % STAY WIRE / INSULATOR 40 %

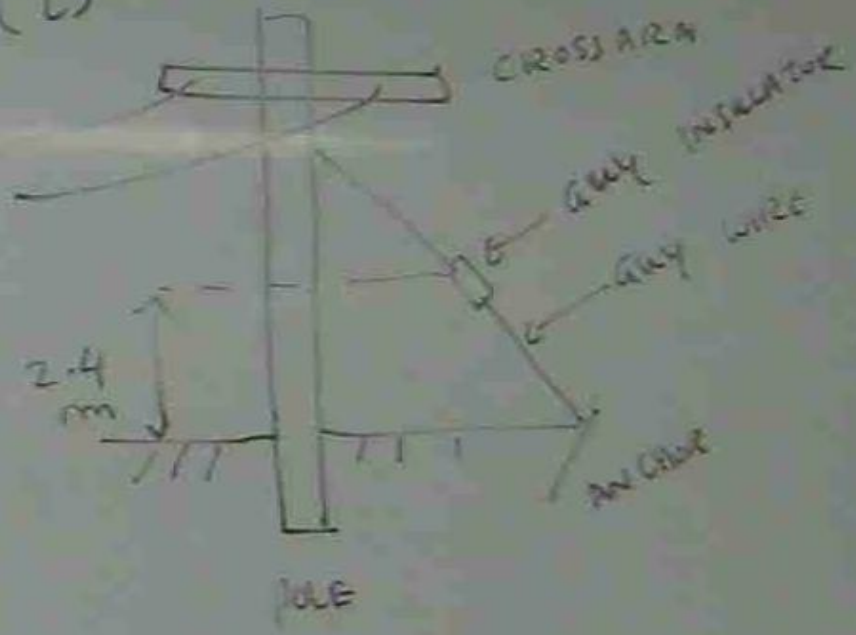
(2) ILLUSTRATE BY MEAN OF A SKETCH, THE METHOD OF TERMINATING THE LINE GIVING DIMENSIONS WHERE POSSIBLE.

(3) THE CONDUCTOR TO BE ERECTED OVER A 160 m SPAN HAS EQUIVALENT WEIGHT 4 N/m DIAMETER 12 mm AND ULTIMATE TENSILE STRENGTH 32 kN. DETERMINE THE SAG IF WIND LOADING IS 500 Pa AND SAFETY FACTOR 3.5

|| — NEXT WEEK

PRactical AFTER
TEST

(2)



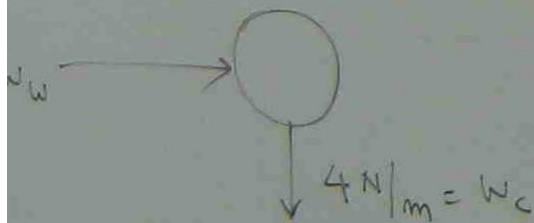
$$(3) \quad SAG = \frac{Wl^2}{8T}$$

$$l = \text{SPAN} = 160 \text{ m}$$

$$T = \frac{\text{ULTIMATE STRENGTH}}{\text{SAFETY FACTOR}}$$

$$= \frac{33000}{3.5}$$

$$= 9428.57 \text{ N}$$



$$W_w = \text{DIAMETER} \times 1 \text{ cm LENGTH} \times \text{W.D. PRESSURE}$$

$$= \frac{12}{1000} \times 1 \times 500$$

$$= 6 \text{ N/m}$$

$$W = \sqrt{W_c^2 + W_w^2}$$

$$= \sqrt{4^2 + 6^2}$$

$$= 7.2 \text{ N/m}$$

$$SAG = \frac{Wl^2}{8T}$$

$$= \frac{7.2 \times 160^2}{8 \times 9428.57}$$

$$= 2.44 \text{ m}$$