

According to Norton's theorem:-

$$I_N = I_N \times \frac{R_N}{R_N + R_L}$$

to find Norton's resistance:-

w.k.t  $R_1 \parallel R_2$

$$\Rightarrow R_p = \frac{470 \cdot 470}{2(470)} = \frac{470}{2} = 235 \Omega$$

$$R_N = R_p + R_{560} = 560 + 235$$

$$R_N = 795 \Omega$$

colouring the A and B nodes by short  
circuiting.

$$\therefore R_{470} \parallel R_{560}$$

$$R_p = \frac{470 \cdot 560}{560 + 470} = \frac{263200}{1030} = 255.5 \Omega$$

$$R_{eq} = 470 + 225.5 = 725.5 \Omega$$

by ohm law:-

$$I = \frac{V}{R_{eq}} = \frac{10}{725.5} = 13.7 \text{ mA}$$

by current division rule:-

$$I_{560} = I \cdot \frac{R_{470}}{R_{560} + R_{470}}$$

$$I_N = 2.75 \text{ mA}$$