

HW
20/07/21

Why is it at 5.30 p.m. in India and 12.00 noon in London?

Prime meridian or 0-degree longitude passes from London. India located east of London at 82 degrees 30° E. Since the earth takes 24 hours to rotate on its own axis or to cross 360-degree longitudes

$$360 \text{ degree} = 24 * 60 \text{ Minutes}$$

$$1 \text{ degree} = 24 * 60 / 360 = 4 \text{ Minutes}$$

Indian standard time passes through 82 degrees 30' E.

$$82 \text{ degrees} = 82 * 4 / 60 = 328 / 60 = 5 \text{ hours and } 48 \text{ } 28 \text{ minutes}$$

$$30' \text{ E} = 1/2 \text{ degree} = 2 \text{ minute}$$

hence: 82 degrees 30' = 5 hours and 30 min