

NCERT QUESTIONS WITH SOLUTIONS

1. Why is it 5:30 pm in India when it is 12 pm or noon. in London?

Ans. It is 5.30 pm in India when it is 12 pm or noon in London because:

- London is located at 0° longitude, (the Prime meridian).
- In India $82\frac{1}{2}^\circ\text{E}$ longitude is standard meridian and time on this meridian is standard time in India (IST).
- Time in India is ahead of London. Time difference is 4 minutes for every 1° of longitude towards east.
- Hence in India – $82\frac{1}{2}^\circ \div 4 \text{ minutes} = 330 \text{ minutes}$
i.e. $330 \div 60 = 5 \text{ hours } 30 \text{ minutes.}$

2. Why do we need symbols and colours in the map?

Ans. Symbols and colours are important component of maps and are needed in maps because:

- It is not possible to draw actual shape and size of different features say like buildings, roads, temples, rivers, mountains etc. due to lack of space, so we use various symbols and colours to show these features.
- In this way numerous details and more information can be shown in limited space.
- Symbols and colours enable easy understanding of maps by a variety of users.
- They help tide over language barriers as maps have a universal language. These are called conventional symbols.
- The Survey of India, a government body, has fixed a set of symbols and colours for maps of India.

3. What is the difference between local time and standard time? Discuss it in groups, with each group writing an answer in 100 to 150 words. Compare the answers.

Ans. Both local time and standard time are based on meridians:

- Local time is based on the local meridian passing through that place. The places lying North and South on the same meridian will have the same local time. On the other hand, the places lying East or West of that meridian will have different local times. It varies by 4 minutes for every 1° of Prime meridian East or West. While in the East it is plus 4 minutes going West from Prime Meridian it is 4° behind. (If it is 12 noon at Greenwich it would be 12.04 pm in the 1° East and 11.56 a.m. in the 1° west).
- Standard time is local time of a meridian of longitude which is considered valid for the whole country. This meridian is called Standard Meridian of the country. Example in Indian Standard Meridian is $82\frac{1}{2}^\circ\text{E}$ and time on it is Indian Standard Time (IST).

4. Delhi's and Bengaluru's latitudes are 29°N and 13°N ; their longitudes are almost the same, 77°E . How much will be the difference in local time between the two cities?

Ans. No difference in local time of the two cities Delhi and Bengaluru as both i.e. almost on the same meridian of longitude as longitudes mark time and define time zones not latitudes.