

**Chapter: 1**

**Q.1 Choose the right option and rewrite the sentence**

**3**

- 1** To calculate the difference the local time of any two places on the earth .....  
 a. The noon time of both the places should be known  
 b. The difference in degree of their longitude should be known  
 c. The difference in standard times of both the places should be known  
 d. Changes need to be made according International Dateline

**Ans** To calculate the difference the local time of any two places on the earth **The difference in degree of their longitude should be known.**

- 2** The earth required 24 hours for one rotation. In one hour .....  
 a. 5 longitudes will face the sun      b. 10 longitudes will face the sun  
 c. 15 longitudes will face the sun      d. 20 longitudes will face the sun

**Ans** The earth required 24 hours for one rotation in one hour **15 longitudes will face the sun.**

- 3** The difference between the local time of any two consecutive longitudes is .....  
 a. 15 minutes      b. 04 minutes      c. 30 minutes      d. 60 minutes

**Ans** The difference between the local time of any two consecutive longitudes is **04 minutes.**

**Q.2 Give Geographical Reasons**

**8**

- 1** The local time of Greenwich is considered to be the International standard time?

**Ans** i. The International time is decided according to 0° longitude.  
 ii. 0° longitude passes through Greenwich, England.  
 iii. For International co-ordination it is necessary to bring synchronization between the standard time of various countries that's local time at Greenwich is considered to be the international standard time.

- 2** The local time is decided by the noon time.

**Ans** i. When sun is directly overhead at a particular longitude it is noon time there.  
 ii. When a particular longitude faces the sun it is noon time.  
 iii. It is assumed that almost half of the day is over. So noon time is used to decide the local time of a place.

- 3** The standard time of India has been decided by the local time at 82.5° E longitude.

**Ans** i. With respect to the longitude extent 82.5° E passes through the center of the country.  
 ii. The east-west time difference in India not more than one hour.  
 So Indian standard time is decided by 82.5° E longitude.

- 4** Canada has 6 different standard time.

**Ans** i. The longitude extent of Canada is very wide i.e. 52°W to 141°W.  
 ii. Therefore the time difference to east and west is too much i.e 5 hours.  
 iii. So to synchronize the daily activities in Canada there are 6 standard times.

**Q.3 Answer in detail/ brief**

**20**

- 1** If it is 10 p.m on 21<sup>st</sup> June at Prime Meridian, write the dates and time at A.B and C in the table.

	Place	Longitude	Date	Time
i.	A	120°E	.....	.....
ii.	B	160°W	.....	.....
iii.	C	60°E	.....	.....

Ans		Place	Longitude	Date	Time
	i.	A	120°E	22 <sup>nd</sup> June	6.00 am
	ii.	B	160°W	21 <sup>st</sup> June	11.20 am
	iii.	C	60°E	22 <sup>nd</sup> June	2.00 am

2 How is the standard time of a place determined.

- Ans**
- The local time at the longitude passing through the middle of a country or place is generally considered as a standard time of that country or place.
  - If the difference between the local time at the extreme east and west longitude passing through the country is less than 1 hour then one standard time is considered for a country.
  - But if the difference between the local time at the extreme east and west longitude passing through the country is more than 1 hour then more than one standard time zones are adopted. Canada, Australia.

3 A football match is being played at Sao Paulo Brazil started in India at 6 am IST Explain what would be the local time at Sao Paulo?

**Ans** The difference between the longitudes of Sao Paulo and India is 127°30'.

The difference is local time.

$$= 127.5 \times 4$$

$$= 510 \text{ minutes}$$

$$= 510 \text{ min} \div 60 \text{ min}$$

$$= 8 \text{ hours } 30 \text{ minutes}$$

∴ Time in Sao Paulo would be 9.30 pm of the previous day.

4 If it is 12 noon at 60°E longitude, then explain what would be the time at 30°W longitude?

**Ans** The difference between 90°E longitude and 30°W longitude is 60°E + 30°W = 90°.

$$= 1 \text{ degree longitude takes } 4 \text{ min}$$

$$= 90^\circ \text{ longitude will take}$$

$$= 90 \times 4 = 360 \text{ min}$$

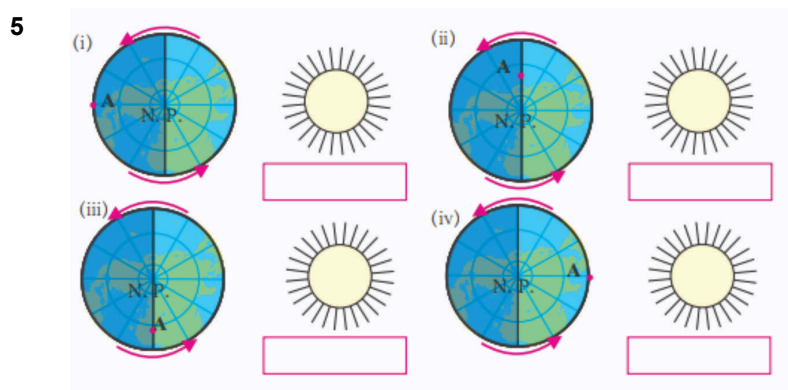
$$= 360 \div 60 \text{ min}$$

$$= 6 \text{ hours}$$

So the time difference is 6 hours.

Longitudes lying to the east are ahead of time while those lying the west are behind.

∴ If it is 12 noon at 60°E longitude then it would be 6 am at 30°W longitude.



Write the situation of place A shown in the diagram in the boxes below.

Sunrise, midnight, noon, sunset.

**Ans**

i.	<input type="text" value="Midnight"/>	ii.	<input type="text" value="Sunset"/>	iii.	<input type="text" value="Sunrise"/>	iv.	<input type="text" value="Noon"/>
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