

# **EARTH- Latitude and Longitude**

## **Practice Sheet/P1**

### **By Sudarshan Gurjar**

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**1. If the earth's direction of rotation is reversed, what should be the IST when it is noon at the International Date Line? [1997]**

- (a) 06.30 hrs      (b) 05.30 hrs  
(c) 18.30 hrs      (d) 17.30 hrs

**2. Along which one of the following meridians did India Experience the first light of the sunrise of the new millennium?[2000]**

- (a)  $2^{\circ}30'$  W      (b)  $82^{\circ}30'$  E  
(c)  $92^{\circ}30'$  W      (d)  $92^{\circ}30'$  E

**3. About 50% of the world population is concentrated between the latitudes of :1997**

- (a)  $5^{\circ}$ N and  $20^{\circ}$  N      (b)  $20^{\circ}$ N and  $40^{\circ}$ N  
(c)  $40^{\circ}$ N and  $60^{\circ}$ N      (d)  $20^{\circ}$ S and  $40^{\circ}$ S

**4. When there is noon at I.S.T. meridian people at another place of the earth are taking their 6 O' clock morning tea. The longitude of the place is :1998**

- (a)  $17^{\circ}30'$  E      (b)  $7^{\circ}30'$  W.  
(c)  $172^{\circ}30'$  E      (d)  $90^{\circ}$  W

**5. If it is 10.00 am. I.S.T., then what would be the local time at Shillong on  $92^{\circ}$  E longitude?**

- (a) 9.38 a.m.      (b) 10.38 a.m.      [1999  
(c) 10.22 a.m.      (d) 9.22 a.m.

**6. Consider the following statements:[2003]**

1. Longitude of Jabalpur's location is between those of Indore and Bhopal.
2. Latitude of Aurangabad's location is between those of Vadodara and Pune.
3. Bangalore is situated more southward than Chennai

**Which of these statements is/are correct?**

- (a) 1 and 3      (b) Only 2  
(c) 2 and 3      (d) 1, 2 and 3

**7. Zero degree latitude and zero degree longitude lies in the [Uttarakhand PCS (Pre) 2005]**

- (A) Atlantic Ocean      (B) Arctic Ocean  
(C) Indian Ocean      (D) Pacific Ocean

**8. Correct Latitudinal position of a place that could be possible is [Tripura PSC (Pre) 2017 RAS/RTS (Pre) 1999]**

- (A)  $91^{\circ}$  North      (B)  $45^{\circ}$  East  
(C)  $45^{\circ}$  South      (D)  $91^{\circ}$  West

**9. Which of the following is not a great circle on the globe? [Tamil Nadu PSC (Pre) 2019 Uttarakhand UDA/LDA (Pre) 2003]**

- (A) Equator (B) Prime meridian line  
(C) 60° East longitude (D) 60° North Latitude

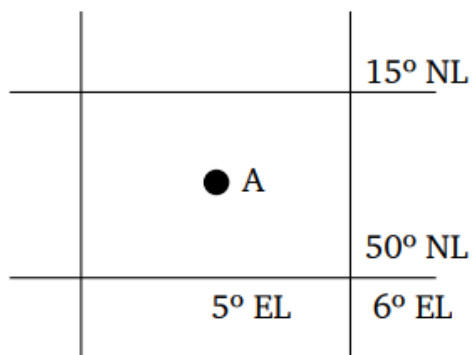
**10. A plane starts flying from 30° Northern latitude and 50° Eastern longitude and lands at opposite end of the Earth, where will it land? [IAS (Pre) 1994]**

- (A) 30° Northern latitude, 50° Western longitude  
(B) 30° Southern latitude, 50° Western longitude  
(C) 50° Northern latitude, 30° Western longitude  
(D) 30° Southern latitude, 130° Western longitude

**11. Among the following cities which one lies in the farthest North? [UPPCS (Mains) 2011]**

- (A) Beijing (B) New Delhi  
(C) New York (D) Rome

**12. Consider the geographical details**



The point marked by A in the above figure indicates the countries in [IAS (Pre) 1997]

- (A) North America (B) South America (C) Europe (D) Asia

**13. If the difference of longitudes for the two places is 90°, then time interval between these places will be [Gujarat PSC (Pre) 2019 MPPCS (Pre) 1992]**

- (A) 3 hrs (B) 6 hrs  
(C) 9 hrs (D) 12 hrs

**14. When there is mid-day in the Greenwich, local time of a place is 5 O' clock evening. At which of the following longitude (meridians) that place will be located? [UPPCS (Pre) 2008]**

- (A) 75° E (B) 75° W  
(C) 150° E (D) 150° W

**15. The time at Cairo is 2 hours ahead of Greenwich. Hence, it is located at [53rd to 55th BPSC (Pre) 2011]**

- (A) 30° W longitude (B) 30° E longitude

(C) 28° E longitude (D) 28° W longitude

**16. When it is noon along 82°30' E longitude along what degree of longitude it will be 6:30 a.m.? [IAS (Pre) 1994]**

- (A) At 165° East (B) At 67°30' West  
(C) At 0° East or West (D) At 82°30' West

**17. Which one of the following longitudes alongwith the prime Meridian forms a great circle on the globe? [UPPCS (Pre) 2000]**

- (A) 0° (B) 90° E  
(C) 90° W (D) 180°

**18. In the New Millennium first ray of the Sun was seen in which of the following Meridians of India? [UPPCS (Pre) 2001]**

- (A) 2°30' W (B) 82° 30' E  
(C) 92°30' W (D) 93° 30' E

**19. The basis of deciding standard time of any place is [43rd BPSC (Pre) 1999]**

- (A) Longitude (B) Latitude  
(C) International Date Line (D) Prime Meridian

**20. The Prime Meridian does not pass through [UP UDA/LDA (Mains) 2010]**

- (A) Algeria (B) France  
(C) Niger (D) Spain

**21. Which one of the following Cities does not have the same clock time as that of the other three Cities at any given instant? [IAS (Pre) 2007]**

- (A) London (UK) (B) Lisbon (Portugal)  
(C) Accra (Ghana) (D) Addis Ababa (Ethiopia)

**22. A telegram was sent from Greenwich at 12:00 Noon. The time for transmission was 12 minutes. It reached a town at 6:00 p.m. The longitude of the town will be [Uttarakhand PCS (Pre) 2012]**

- (A) 97° E (B) 87° E  
(C) 87° W (D) 97° W

**23. International Date line passes through [Haryana PSC (Pre) 2019 44th BPSC (Pre) 2000]**

- (A) Africa (B) Asia  
(C) Pacific ocean (D) Atlantic ocean

**24. The shortest distance between two places on the globe is along [Arunachal Pradesh PSC (Pre) 2019 UPPCS (Pre) 1997]**

- (A) 45° N Latitude (B) 45° S Latitude

- (C) Prime Meridian (D) International Date Line

**25. A ship is moving from the Eastern side of Aleutian Islands towards Dutch harbor. It crosses  $180^\circ$  meridian on 1st January, 1999 at 23:30 hr. After crossing the meridian captain of the ship will note what time and date in his diary? [IAS (Pre) 1999]**

- (A) January 1, 00:30 hr (B) January 2, 00:30 hr  
(C) January 3, 00:30 hr (D) January 4, 00:30 hr

**26. Captain of a ship moving Westward records the local time of 10:00 hrs Monday at  $90^\circ$  W. If the speed of the ship is the same as the speed of the rotation of the Earth, which of the following local time and day would be found by the captain at International date line? [Karnataka PSC (Pre) 2017 UPPCS (Pre) 2000]**

- (A) 04:00 hrs, Monday (B) 10:00 hrs, Monday  
(C) 10:00 hrs, Tuesday (D) 16:00 hrs, Tuesday

**27. The local time of a place is 6:00 A.M. when the Greenwich Mean Time (GMT) is 3:00 A.M., what is the longitude of the place? [Uttarakhand PCS (Pre) 2010 UPPCS (Pre) 2006]**

- (A)  $45^\circ$  West (B)  $45^\circ$  East  
(C)  $120^\circ$  East (D)  $120^\circ$  West

**28. The latitude at which 'Annual Range of Temperature' remains minimum is [RAS/RTS (Pre) 1999]**

- (A) Equator (B) Tropic of Cancer  
(C) Tropic of Capricorn (D) North Pole Circle

**29. The standard time of the following countries is ahead of or behind Greenwich Mean Time depending on whether they are East or West of the longitude passing through, Greenwich.**

1. Cuba 2. Greece 3. Iraq  
4. Costa Rica 5. Japan

**Which one of the following sequential orders gives the correct arrangement of the countries according to their standard time from ahead to behind GMT? [Kerala PSC (Pre) 2019 IAS (Pre) 1995]**

- (A) 5, 3, 2, 1, 4 (B) 2, 4, 1, 3, 5  
(C) 4, 1, 3, 2, 5 (D) 3, 5, 4, 1, 2

**30. Statement (A): Time interval at the dateline is 12 hours from the Greenwich.**

**Reason (R): Dateline is situated at  $180^\circ$  meridian.**

**Using following options choose the correct answer. [UPPCS (Pre) 1992]**

- (A) (A), (R) both are correct and (R) is the correct explanation of (A)  
(B) (A) and (R) both are correct, but (R) is not the correct explanation of (A)  
(C) (A) is correct, but (R) is false  
(D) (R) is correct, but (A) is false

**31. Which of the following cities is closest to IST (Indian Standard Time) meridian?**  
[MPPCS (Pre) 2008]

- (A) Rewa (B) Sagar  
(C) Ujjain (D) Hoshangabad

**32. When there is midnight at IST meridian, a place observes 6 A.M. The meridian on which the said place is located is** [UPPCS (Mains) 2002]

- (A)  $7^{\circ} 31' E$  (B)  $172^{\circ} 30' E$   
(C)  $7^{\circ} 30' E$  (D)  $127^{\circ} 30' W$

**33. How many hours of time difference will be there between the most Western village of Gujarat and the most Eastern village of Arunachal Pradesh, Walong?**[UPPCS (Pre) 1992]

- (A) 1 hour (B) 2 hours  
(C) 3 hours (D) 1/2 hour

**34. If the Sun rises at Tirap in Arunachal Pradesh at 5:00 a.m. (IST), then what time (IST), will the Sun rise in Kandla in Gujarat?** [UPPCS (Pre) 2010]

- (A) About 5:30 a.m. (B) About 6:00 a.m.  
(C) About 7:00 a.m. (D) About 7:30 a.m.

**35. When it is noon at IST meridian, what would be the local time at  $120^{\circ}$  East longitude?**  
[UPPCS (Pre) 2001]

- (A) 09:30 (B) 14:30  
(C) 17:30 (D) 20:00

**36. The Indian Standard Time Meridian does not pass through** [UPPCS (Mains) 2010]

- (A) Andhra Pradesh (B) Chhattisgarh  
(C) Maharashtra (D) Uttar Pradesh

**37. Standard Indian Time (Meridian Longitude  $82^{\circ} 30'$ ) passes through which of the following towns?** [MPPCS (Pre) 1996]

- (A) Nagpur (B) Delhi  
(C) Patna (D) Allahabad

**38. Which of the following longitudes is known as 'Standard Meridian' in India?** [UPPCS (Pre) 2013 UP Lower Sub. (Pre) 2013]

- (A)  $87^{\circ} 30' E$  (B)  $85^{\circ} 30' E$   
(C)  $84^{\circ} 30' E$  (D)  $82^{\circ} 30' E$

**39. The Indian Standard Time is taken from which of the following city?** [UPPCS (Pre) 1993]

- (A) Allahabad (Naini) (B) Lucknow  
(C) Meerut (D) Muzaffarnagar

**40. How much is the difference between Indian Standard Time (I.S.T.) and Greenwich Mean Time (G.M.T.)? [Jharkhand PCS (Pre) 2010 45th BPSC (Pre) 2001 Jharkhand PCS (Pre) 2003]**

- (A) +4½ hours      (B) +5½ hours  
(C) – 5½ hours      (D) – 4½ hours

**Answers....**

**Answer 1: A**

The earth rotates on its axis from west to east direction and in this condition the international standard time at  $82\frac{1}{2}^{\circ}$  longitude the Indian standard time is ahead 5:30 hours. Because  $1^{\circ} = 4$  minutes. According to question, if the direction of rotation of earth is reversed i.e. The earth starts to rotate from east to west direction, at that time if it is 12 o'clock at noon at International Date Time ( $180^{\circ}$ ) then exactly at that time Indian standard Time which is at the distance of  $97\frac{1}{2}^{\circ}$  from international Date time ( $180^{\circ}$  longitude), will be 18.30 hour. Since  $1^{\circ}$  longitude = 4 minutes So,  $97\frac{1}{2}^{\circ} \times 4 = 390$  minutes = 6.30 hours (difference)

**Answer 2 : D**

The first light of the sunrise of new millenium in India experienced at Kathal island of Andaman and Nicobar, which is located at  $92^{\circ}30'$  E meridian.

**Answer 3: B**

About 50% of the world population is concentrated between latitude of  $20^{\circ}\text{N}$  and  $40^{\circ}\text{N}$ , because most populous countries and areas like Asia, U.S.A, Europe and India lies with in this latitude.

**Answer 4: D**

15 degree for 1 hour. So  $90^{\circ}$  for 6 hours.

**Answer 5: B**

Indian Government has accepted  $82.5^{\circ}$  E for the standard time which is ( $82.5^{\circ} \times 4$  minutes = 5 hrs 30 minutes ahead of GMT). Shillong is situated on  $92^{\circ}$  E longitude. So the deference is  $92^{\circ} - 82.5^{\circ} = 9.5^{\circ}$ . Since the earth makes one complete revolution of  $360^{\circ}$  in one day or 24 hours, it passes through  $15^{\circ}$  in one hour or  $1^{\circ}$  in 4 minutes. So the difference will between IST and Shillong  $9.5^{\circ} \times 4 = 32$  minute. Hence local time at Shillong on  $92^{\circ}$  E longitude is 10:38 am.

**Answer 6: C**

The longitude of Jabalpur's location is to the east of Bhopal, Bangalore is north of Chennai.

Answer 7: A	Answer 14: A	Answer 21: D	Answer 28: A	Answer 35: B
Answer 8: C	Answer 15: B	Answer 22: B	Answer 29: A	Answer 36: C
Answer 9: D	Answer 16: C	Answer 23: C	Answer 30: A	Answer 37: D
Answer 10: A	Answer 17: D	Answer 24: D	Answer 31: A	Answer 38: D
Answer 11: D	Answer 18: D	Answer 25: B	Answer 32: B	Answer 39: A
Answer 12: C	Answer 19: D	Answer 26: B	Answer 33: B	Answer 40: B
Answer 13: B	Answer 20: C	Answer 27: B	Answer 34: C	