

# UNIQUE STUDY POINT

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<b>Class:</b> VI	<b>Subject:</b> Social Science	<b>Session:</b> 2025-26
<b>Chapter:</b> 01 - Locating Places on the Earth	<b>Time:</b> 1½ Hours	<b>Max. Marks:</b> 40

## General Instructions:

1. All questions are compulsory.
2. This question paper contains 20 questions divided into five sections A, B, C, D and E.
3. Section A contains 10 MCQs of 1 mark each.
4. Section B contains 4 questions of 2 marks each.
5. Section C contains 3 questions of 3 marks each.
6. Section D contains 1 question of 5 marks.
7. Section E contains 2 Case Study Based questions of 4 marks each.

## SECTION A - Multiple Choice Questions (1 mark each)

- Q1.** The largest parallel of latitude is:
- (a) Tropic of Cancer
  - (b) Arctic Circle
  - (c) Equator
  - (d) Antarctic Circle
- Q2.** Which symbol is used to represent a railway station on Indian maps?
- (a) PO
  - (b) RS
  - (c) PS
  - (d) RW
- Q3.** The 180° longitude is also known as:
- (a) Prime Meridian
  - (b) International Date Line
  - (c) Greenwich Meridian
  - (d) Ujjain Meridian
- Q4.** Which direction would you be facing if you started facing North and turned 90° clockwise?
- (a) South
  - (b) West
  - (c) East
  - (d) Northeast
- Q5.** The climate zone near the Equator is called:
- (a) Frigid Zone
  - (b) Temperate Zone

- (c) Torrid Zone
- (d) Polar Zone

**Q6.** India's latitudes extend approximately from:

- (a) 8°N to 37°N
- (b) 10°S to 40°S
- (c) 0° to 90°N
- (d) 20°N to 50°N

**Q7.** A map that shows mountains, rivers, and oceans is called:

- (a) Political map
- (b) Physical map
- (c) Thematic map
- (d) Weather map

**Q8.** The Survey of India is a government body that:

- (a) Conducts population census
- (b) Fixes standard symbols for maps
- (c) Controls weather forecasting
- (d) Manages railways

**Q9.** If two places have a longitude difference of 30°, their local time difference will be:

- (a) 30 minutes
- (b) 1 hour
- (c) 2 hours
- (d) 3 hours

**Q10.** Which of the following is NOT a component of a map?

- (a) Scale
- (b) Direction
- (c) Symbols
- (d) Temperature

### SECTION B - Short Answer Questions (2 marks each)

**Q11.** How does a globe differ from a flat map? State any two differences.

**Q12.** If you are at the Equator, in which direction would you need to travel to reach the South Pole?

**Q13.** What is Greenwich Mean Time (GMT)? Why is it important?

**Q14.** Explain the term 'grid lines' as used in maps and globes.

### SECTION C - Short Answer Questions (3 marks each)

**Q15.** Compare parallels of latitude with meridians of longitude based on: (i) their shape, (ii) their direction, and (iii) their reference line.

**Q16.** Explain why the International Date Line is not a straight line at 180° longitude. What would happen if it was perfectly straight?

**Q17.** Why is the concept of coordinates important in our daily life? Give at least two practical examples other than maps.

## SECTION D - Long Answer Question (5 marks)

**Q18.** Describe how ancient Indian astronomers contributed to our understanding of latitude and longitude. Explain the significance of the Ujjayinī meridian and compare it with the modern Greenwich Meridian.

## SECTION E - Case Study Based Questions (4 marks each)

**Q19.** Read the following case and answer the questions:

A pilot is flying from New Delhi ( $77^{\circ}\text{E}$ ) to Dubai ( $55^{\circ}\text{E}$ ). The flight takes off from Delhi at 8:00 AM IST. The journey takes 3 hours and 30 minutes. Dubai follows Gulf Standard Time (GST), which is 1 hour 30 minutes behind IST.

- What is the difference in longitude between Delhi and Dubai? (1 mark)
- What will be the arrival time in Delhi time (IST)? (1 mark)
- What will be the arrival time according to Dubai local time (GST)? (1 mark)
- Explain why places at different longitudes have different local times. (1 mark)

**Q20.** Read the following case and answer the questions:

A geography teacher drew a map on the board showing different features of a region. She used various symbols: wavy blue lines for a river, solid black lines for metalled roads, dashed lines for unmetalled roads, and special symbols for a temple and a mosque. She also marked cardinal directions and provided a scale of  $1\text{ cm} = 2\text{ km}$ .

- Name any two map symbols mentioned in the case. (1 mark)
- Why did the teacher use symbols instead of drawing actual pictures? (1 mark)
- If the distance between the temple and mosque on the map is 3.5 cm, what is the actual distance? (1 mark)
- Why is it important to show directions on a map? (1 mark)

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SECTION A - Answers to MCQs

**Ans 1. (c) Equator**

The Equator is the largest parallel of latitude because it circles the Earth at its widest part. All other parallels of latitude form smaller circles as they approach the poles.

**Ans 2. (b) RS**

According to Survey of India standards, RS is the symbol used to represent a railway station on Indian maps.

**Ans 3. (b) International Date Line**

The 180° longitude, located opposite to the Prime Meridian, is called the International Date Line. Crossing it changes the date by one day.

**Ans 4. (c) East**

If you start facing North and turn 90° clockwise (right), you will be facing East. The clockwise order is: North → East → South → West.

**Ans 5. (c) Torrid Zone**

The climate zone near the Equator is called the Torrid Zone, characterized by hot weather throughout the year because the sun's rays fall almost directly.

**Ans 6. (a) 8°N to 37°N**

India's latitudes extend approximately from 8°N (southern tip) to 37°N (northern extremity in Jammu and Kashmir).

**Ans 7. (b) Physical map**

A physical map shows natural features of the Earth such as mountains, rivers, oceans, plateaus, and deserts.

**Ans 8. (b) Fixes standard symbols for maps**

The Survey of India is a government body that has fixed a standard set of symbols for maps of India to ensure uniformity and easy understanding.

**Ans 9. (c) 2 hours**

Earth rotates 15° per hour. Therefore, 30° longitude difference equals  $30 \div 15 = 2$  hours time difference.

**Ans 10. (d) Temperature**

The three main components of a map are distance (scale), direction, and symbols. Temperature is not a component of maps, though it may be shown on thematic weather maps.

SECTION B - Answers to Short Answer Questions

**Ans 11.**

Two differences between a globe and a flat map:

### 1. Shape:

- Globe: Spherical, three-dimensional
- Flat map: Flat, two-dimensional

### 2. Accuracy:

- Globe: More accurate representation of Earth's geography with no distortion
- Flat map: Some distortion occurs when converting the spherical surface to a flat surface

### Ans 12.

If you are standing at the Equator and want to reach the South Pole, you would need to travel directly **South**.

The South Pole is located at 90°S latitude, which is the maximum southern point from the Equator (0° latitude). The shortest route would be along a meridian of longitude going southward.

### Ans 13.

**Greenwich Mean Time (GMT)** is the local time at the Prime Meridian (0° longitude) which passes through Greenwich, England.

**Importance of GMT:** GMT serves as the international reference time. All other time zones in the world are calculated with reference to GMT by adding or subtracting hours based on their longitude. It provides a standard starting point for measuring time across the globe, making international communication, travel, and business coordination possible.

### Ans 14.

**Grid lines** are the network of imaginary lines formed by the intersection of parallels of latitude and meridians of longitude on maps and globes.

These lines create a coordinate system that covers the entire Earth, allowing us to precisely locate any place by specifying its latitude and longitude. The grid lines appear as horizontal and vertical lines that cross each other, forming a grid pattern.

## SECTION C - Answers to Short Answer Questions

### Ans 15.

Comparison of parallels of latitude with meridians of longitude:

#### (i) Shape:

- **Parallels of latitude:** Complete circles running around the Earth
- **Meridians of longitude:** Half-circles running from North Pole to South Pole

#### (ii) Direction:

- **Parallels of latitude:** Run from East to West (horizontal lines)
- **Meridians of longitude:** Run from North to South (vertical lines)

#### (iii) Reference line:

- **Parallels of latitude:** The Equator at 0° latitude is the reference line
- **Meridians of longitude:** The Prime Meridian at 0° longitude is the reference line

### Ans 16.

The International Date Line is not a perfectly straight line at 180° longitude because it deviates in several places to avoid dividing countries and island groups into two different calendar days.

**Reasons for deviation:**

- It zigzags around certain countries and island nations
- This ensures that all parts of a country follow the same date
- For example, it deviates to keep all of Russia's eastern islands on the same date

**What would happen if it was perfectly straight:**

If the International Date Line was perfectly straight at 180° longitude:

- Some countries would be split into two different dates
- One part of the country would be on Sunday while another part on Monday
- This would create confusion in administration, business, and daily life
- Communication and coordination within the country would become very difficult

**Ans 17.**

The concept of coordinates is important in daily life because it helps us locate and identify specific positions accurately. Coordinates provide a systematic way to pinpoint exact locations.

**Two practical examples:**

**1. Cinema Halls/Theaters:**

- Seats are identified using row letters (A, B, C, etc.) and seat numbers (1, 2, 3, etc.)
- Your ticket might say "Seat D-15" - D is one coordinate (row) and 15 is another coordinate (seat number)
- This system helps you find your exact seat among hundreds of seats quickly

**2. Parking Lots:**

- Large parking areas use zones (A, B, C) and row numbers (1, 2, 3) to identify parking spots
- Your car might be parked at "B-27" meaning Zone B, Row 27
- This coordinate system helps you remember and find your vehicle easily in a huge parking area

Other examples include: chess board positions, spreadsheet cells (Excel uses column letters and row numbers), GPS coordinates for navigation, and apartment/flat numbers in large buildings.

**SECTION D - Answer to Long Answer Question**

**Ans 18.**

**Ancient Indian Contributions to Latitude and Longitude:**

Indian astronomers made significant contributions to understanding latitude and longitude many centuries before Europe:

**1. Understanding of Concepts:**

- Ancient Indian astronomers were well aware of the concepts of latitude and longitude
- They understood the need for a reference meridian (prime meridian)
- They could calculate positions of celestial bodies and locations on Earth using these concepts

**2. Development of Prime Meridian:**

- Indian astronomers established their own prime meridian called **madhya rekhā** (middle line)

- This was used as a reference point for all astronomical calculations
- It demonstrated advanced mathematical and astronomical knowledge

### The Ujjayinī Meridian:

- **Location:** Passed through the ancient city of Ujjayinī (modern Ujjain) at approximately 75.8°E longitude
- **Significance:**
  - Ujjayinī was a renowned center for astronomy for many centuries
  - This meridian became the reference for calculations in all Indian astronomical texts
  - Ancient texts mention several cities located on this meridian: Kurukshetra, Rohitaka (Rohtak), Ujjayinī, Mahishmati (Maheshwar), and Kumārī (Kanyakumari)
- **Famous Astronomer:**
  - Varāhamihira, a renowned astronomer, lived and worked in Ujjayinī about 1,500 years ago (around 500 CE)
  - He made important contributions to astronomy, mathematics, and astrology

### Comparison with Greenwich Meridian:

Aspect	Ujjayinī Meridian	Greenwich Meridian
Time Period	Established many centuries ago (before 500 CE)	Established as international standard in 1884
Location	Ujjain, India (75.8°E)	Greenwich, London (0°)
Scope	Used primarily in India	International standard used worldwide
Purpose	Reference for astronomical calculations	Reference for time zones and navigation

### Conclusion:

The Ujjayinī meridian demonstrates that Indian astronomers had advanced knowledge of geographical coordinates long before the Greenwich Meridian became the international standard. This shows India's rich scientific heritage and contributions to astronomy and geography.

## SECTION E - Answers to Case Study Based Questions

### Ans 19.

#### (a) Difference in longitude:

Delhi longitude = 77°E

Dubai longitude = 55°E

Difference = 77° - 55° = 22°

#### (b) Arrival time in IST:

Departure time = 8:00 AM IST

Flight duration = 3 hours 30 minutes

Arrival time = 8:00 AM + 3 hours 30 minutes = 11:30 AM IST

#### (c) Arrival time in Dubai (GST):

Arrival time in IST = 11:30 AM

Dubai time (GST) is 1 hour 30 minutes behind IST

Therefore, Dubai time = 11:30 AM - 1 hour 30 minutes = 10:00 AM GST

**(d) Why different longitudes have different local times:**

Places at different longitudes have different local times because:

- Earth rotates on its axis from west to east
- As it rotates, different parts of Earth face the Sun at different times
- Places in the east see sunrise earlier than places in the west
- For every 15° difference in longitude, there is 1 hour difference in local time
- This is why when it is noon in one part of the world, it might be evening or night in another part

**Ans 20.**

**(a) Two map symbols mentioned:**

1. Wavy blue lines - representing a river
2. Solid black lines - representing metalled roads

(Also acceptable: Dashed lines for unmetalled roads, symbols for temple and mosque)

**(b) Why symbols are used instead of pictures:**

The teacher used symbols instead of drawing actual pictures because:

- There is not enough space on a map to draw detailed pictures of all features
- Symbols are simple, clear, and easy to understand quickly
- Standard symbols can be recognized by everyone
- Symbols allow numerous details to be shown clearly in limited space
- They make the map neat and professional-looking

**(c) Actual distance between temple and mosque:**

Scale: 1 cm = 2 km

Map distance = 3.5 cm

Actual distance =  $3.5 \times 2 = 7$  km

**(d) Importance of showing directions:**

Showing directions on a map is important because:

- It helps us understand orientation and navigate properly
- Without directions, we would not know which way to travel
- Directions help us describe the relative position of places (e.g., "the market is north of the school")
- They are essential for planning routes and journeys
- Direction indicators help users orient the map correctly with respect to the real world

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