UNIQUE STUDY POINT

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Class: VI	**Subject:** Social Science	**Session:** 2025-26
Chapter: 01 - Locating Places on the Earth	**Time:** 1½ Hours	**Max. Marks:** 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. Which of the following best represents Earth's shape?

(a) Perfect sphere

(b) Sphere slightly flattened at the poles

(c) Cylinder

(d) Cone

Q2. A globe is better than a flat map for representing Earth because:

(a) It is easier to carry

(b) It has the same spherical shape as Earth

(c) It is cheaper to make

(d) It shows more details

Q3. If you measure a distance of 5 cm on a map with scale 1 cm = 100 m, the actual distance is:

(a) 50 meters

(b) 500 meters

(c) 5 kilometers

(d) 50 kilometers

Q4. The latitude of the North Pole is:

(a) 0°

(b) 45°N

(c) 90°N

(d) 180°N

Q5. All meridians of longitude have:

(a) Different lengths

(b) The same length

(c) Length increasing towards poles
(d) Length decreasing towards Equator

Q6. Earth rotates through 15° of longitude in:
(a) 15 minutes
(b) 30 minutes
(c) 1 hour
(d) 2 hours

Q7. Which intermediate direction lies between North and East?
(a) Northwest
(b) Northeast
(c) Southeast
(d) Southwest

Q8. The ancient Indian astronomer who worked in Ujjayinī was:
(a) Aryabhata
(b) Brahmagupta
(c) Varahamihira
(d) Bhaskaracharya

Q9. A thematic map shows:
(a) Only physical features
(b) Only political boundaries
(c) A specific kind of information
(d) All features of an area

Q10. When it is 12:00 noon at Greenwich, the time in India is:
(a) 5:30 AM
(b) 6:30 AM
(c) 5:30 PM
(d) 6:30 PM

SECTION B - Short Answer Questions (2 marks each)

Q11. Why is it not possible to accurately represent a sphere on a flat surface? Explain with an example.

Q12. Name and explain any two intermediate directions used in maps.

Q13. What happens when you cross the International Date Line while traveling eastward?

Q14. State two differences between parallels of latitude and meridians of longitude.

SECTION C - Short Answer Questions (3 marks each)

Q15. Explain how the Earth's rotation affects the time at different longitudes. Why do we see sunrise at different times in different parts of the world?

Q16. Describe the grid system used on a globe. How does it help in locating places? Give an example from daily life where we use a similar system.

Q17. Why do some countries like Russia and USA have multiple time zones while India has only one? Explain.

SECTION D - Long Answer Question (5 marks)

Q18. Explain the three main components of a map - distance, direction, and symbols. Why is each component important? Give examples of how each helps us use maps effectively.

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

Q19. Read the following case and answer the questions:

A group of students are participating in a treasure hunt in their school. They are given a map with a scale of 1 cm = 50 m. The map shows that from the school gate (starting point), they need to go 6 cm north to reach the library, then 4 cm east to reach the playground, and finally 3 cm southeast to find the treasure near the science lab.

(a) What is the actual distance from the school gate to the library? (1 mark)

(b) What is the actual distance from the library to the playground? (1 mark)

(c) List all the directions mentioned in the treasure hunt clues. (1 mark)

(d) Why is the map essential for completing this treasure hunt successfully? (1 mark)

Q20. Read the following case and answer the questions:

Mr. Sharma is planning a business trip. He needs to attend a meeting in London at 10:00 AM GMT (Greenwich Mean Time). He is currently in Delhi, India, where Indian Standard Time is followed. He wants to join the meeting through video conference from his office in Delhi.

(a) What will be the time in Delhi when the meeting starts in London at 10:00 AM GMT? (1 mark)

(b) If the meeting lasts for 2 hours, at what time (IST) will it end in Delhi? (1 mark)

(c) Explain why there is a time difference between London and Delhi. (1 mark)

(d) What is the relationship between longitude and time? (1 mark)

DETAILED ANSWER KEY - PAPER 02

SECTION A - Answers to MCQs

Ans 1. (b) Sphere slightly flattened at the poles

Earth is not a perfect sphere. It is slightly flattened at the North and South Poles. However, for practical purposes, we consider it to be spherical.

Ans 2. (b) It has the same spherical shape as Earth

Since both the globe and Earth have the same spherical shape, a globe represents the geography of Earth more accurately than a flat map.

Ans 3. (b) 500 meters

Using the scale: 1 cm = 100 m
Therefore, 5 cm = 5 × 100 = 500 meters

Ans 4. (c) 90°N

The North Pole is located at the maximum northern latitude of 90°N. Similarly, the South Pole is at 90°S.

Ans 5. (b) The same length

All meridians of longitude are half-circles running from North Pole to South Pole, so they all have the same length.

Ans 6. (c) 1 hour

Earth completes one full rotation of 360° in 24 hours. Therefore, it rotates through 15° in 1 hour (360° ÷ 24 = 15°).

Ans 7. (b) Northeast

Northeast (NE) is the intermediate direction that lies between the cardinal directions North and East.

Ans 8. (c) Varahamihira

Varahamihira was a famous astronomer who lived and worked in Ujjayinī (modern Ujjain) about 1,500 years ago.

Ans 9. (c) A specific kind of information

Thematic maps show specific types of information such as population density, rainfall distribution, crop patterns, etc.

Ans 10. (c) 5:30 PM

Indian Standard Time is 5 hours 30 minutes ahead of GMT. So when it is 12:00 noon in Greenwich, it is 5:30 PM in India.

SECTION B - Answers to Short Answer Questions

Ans 11.

It is not possible to accurately represent a sphere on a flat surface because a sphere is three-dimensional while a flat surface is two-dimensional.

Example: If we peel an orange and try to flatten its skin on a table, we cannot do it without tearing or stretching the edges. Similarly, when we flatten the spherical Earth onto a flat map, some distortion occurs. This is why representing Earth's sphere accurately on paper is impossible without some changes to the actual shapes or sizes.

Ans 12.

Two intermediate directions are:

1. Northeast (NE): This direction lies between North and East. When you face North and turn halfway towards East, you face Northeast.

2. Southwest (SW): This direction lies between South and West. When you face South and turn halfway towards West, you face Southwest.

Ans 13.

When you cross the International Date Line while traveling eastward, you need to subtract one day from your calendar.

For example: If you are traveling on Monday and cross the International Date Line going eastward, the day becomes Sunday. This happens because you are moving against the direction of Earth's rotation into an earlier time zone.

Ans 14.

Two differences between parallels of latitude and meridians of longitude:

1. Shape:
- Parallels of latitude are complete circles
- Meridians of longitude are half-circles

2. Length:
- Parallels of latitude have different lengths (largest at Equator, smallest at poles)
- All meridians of longitude have the same length

SECTION C - Answers to Short Answer Questions

Ans 15.

Earth rotates on its axis from west to east, completing one full rotation of 360° in 24 hours. This rotation affects time at different longitudes because:

- As Earth rotates, different parts face the Sun at different times
- Places towards the east see sunrise earlier than places in the west
- For every 15° of longitude, there is a time difference of 1 hour

Sunrise at different times:
When the Sun rises in Japan (which is far east), it is still nighttime in India. When the Sun rises in India, it is still dark in Europe. This happens because Earth is constantly rotating, and the Sun can only illuminate the half of Earth facing it at any given moment. As Earth rotates eastward, different parts gradually come into sunlight, experiencing sunrise at different times.

Ans 16.

The grid system on a globe consists of intersecting lines of latitude and longitude. These imaginary lines create a network (grid) that covers the entire globe.

How it helps in locating places:

- Latitude tells us how far north or south a place is from the Equator
- Longitude tells us how far east or west a place is from the Prime Meridian
- Together, these two coordinates can precisely locate any place on Earth

Example from daily life:
We use a similar grid system when playing chess. The chessboard has letters (a to h) and numbers (1 to 8) that help identify each square precisely. For instance, "e4" identifies a specific square, just like latitude and longitude identify a specific location on Earth. Similarly, cinema halls use row letters and seat numbers to help you find your exact seat.

Ans 17.

Countries like Russia and USA have multiple time zones because they are very large in size and extend across many degrees of longitude.

Reasons for multiple time zones:

- Russia extends across 11 time zones from its western border to eastern border
- USA has 6 time zones because it spans from the Atlantic to Pacific Ocean
- If such large countries used only one standard time, it would be very inconvenient - when it's noon in one part, it might be midnight in another part

Why India has only one time zone:
India's longitudinal extent (from 68°E to 97°E) is about 29°, which creates only about 2 hours of time difference between the eastern and western extremes. This difference is manageable with a single standard time. Having one time zone makes administration, communication, and daily activities easier across the country. The 82.5°E meridian passing through Mirzapur (near Allahabad) is used as India's standard meridian.

SECTION D - Answer to Long Answer Question

Ans 18.

The three main components of a map are:

1. DISTANCE (Scale):

- Scale shows the relationship between distance on the map and actual distance on the ground
- Example: If scale is 1 cm = 1 km, then 5 cm on map = 5 km in reality

Importance: Without scale, we cannot determine actual distances. Scale allows us to fit a huge area on a small piece of paper while maintaining accurate proportions. It helps in planning journeys, calculating travel time, and understanding the actual size of features.

Example: A tourist uses the map scale to calculate that a museum is 3 km away and decides to walk instead of taking a taxi.

2. DIRECTION:

- Direction tells us which way to go - North, South, East, West and intermediate directions
- Most maps show north with an arrow marked 'N'

Importance: Direction helps us navigate and find our way. Without knowing directions, we would not know which way to travel to reach our destination. It is essential for orientation and planning routes.

Example: If someone tells you "the hospital is 2 km northeast of the school," you know both the distance and which direction to travel.

3. SYMBOLS:

- Symbols are small pictures or signs that represent actual features
- Examples: railway lines, roads, religious places, post offices, etc.

Importance: Symbols allow numerous details to be shown clearly in limited space. Without symbols, there would not be enough room to draw actual pictures of all buildings and features. They make maps easier to read and understand quickly.

Example: Instead of drawing a detailed picture of a temple, a simple symbol can represent it, saving space and making the map clearer. A traveler can quickly identify all temples on a map by looking for the temple symbol.

Conclusion: All three components work together to make maps useful tools for navigation, planning, and understanding geography.

SECTION E - Answers to Case Study Based Questions

Ans 19.

(a) Distance from school gate to library:

Scale: 1 cm = 50 m

Map distance = 6 cm

Actual distance = 6 × 50 = 300 meters

(b) Distance from library to playground:

Scale: 1 cm = 50 m

Map distance = 4 cm

Actual distance = 4 × 50 = 200 meters

(c) All directions mentioned:

Three directions are mentioned in the treasure hunt:

1. North (from school gate to library)
2. East (from library to playground)
3. Southeast (from playground to science lab where treasure is located)

(d) Why the map is essential:

The map is essential for completing the treasure hunt successfully because:

- It shows the exact distances using scale (how far to travel)
- It provides clear directions (which way to go)
- It helps locate different places in the school accurately
- Without the map, students would not know where to go or how far to travel, making it impossible to find the treasure

Ans 20.

(a) Time in Delhi when meeting starts:

Indian Standard Time (IST) is 5 hours 30 minutes ahead of GMT

Meeting starts at: 10:00 AM GMT

Time in Delhi: 10:00 AM + 5 hours 30 minutes = 3:30 PM IST

(b) Time when meeting ends in Delhi:

Meeting starts at: 3:30 PM IST

Meeting duration: 2 hours

Meeting ends at: 3:30 PM + 2 hours = 5:30 PM IST

(c) Why there is time difference:

There is a time difference between London and Delhi because:

- Both cities are at different longitudes
- London is near the Prime Meridian (0° longitude)
- Delhi is at approximately 77°E longitude
- Earth rotates from west to east, so eastern places (like Delhi) experience sunrise and other times earlier than western places (like London)
- This difference in longitude creates different local times, which is why countries adopt standard times for convenience

(d) Relationship between longitude and time:

Longitude and time are directly related because:

- Earth rotates 360° in 24 hours
- This means Earth rotates 15° per hour (360° ÷ 24 = 15°)
- For every 15° difference in longitude, there is 1 hour difference in local time
- Places to the east have earlier times (ahead), while places to the west have later times (behind)
- This is why measuring longitude also helps us determine the local time of a place

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