
Earth – Shape, Size, and Movements: MCQs for NDA

1. The Earth is not a perfect sphere; it is slightly flattened at the poles and bulging at the equator.

This shape is best described as:

- (a) A Geoid
- (b) An Ellipsoid
- (c) A Spheroid
- (d) Both (a) and (b)

2. The equatorial diameter of the Earth is approximately:

- (a) 12,756 km
- (b) 40,075 km
- (c) 14,756 km
- (d) 10,000 km

3. The movement of the Earth on its axis is called:

- (a) Revolution
- (b) Precession
- (c) Rotation
- (d) Nutation

4. What is the primary reason for the occurrence of seasons on Earth?

- (a) The elliptical orbit of the Earth around the Sun.
- (b) The rotation of the Earth on its tilted axis.
- (c) The revolution of the Earth and the tilt of its axis.
- (d) The varying distance of the Earth from the Sun.

5. When it is summer in the Northern Hemisphere, which of the following statements is correct?

- (a) The Earth is closest to the Sun.
- (b) The North Pole is tilted towards the Sun.
- (c) The Southern Hemisphere experiences longer days.
- (d) The Sun is directly overhead at the Tropic of Capricorn.

6. The standard time of a country differs from its local time. The main reason for adopting a standard time is to:

- (a) Synchronize activities across the country.
- (b) Have longer daylight hours.
- (c) Confuse the enemies during war.
- (d) Follow the timings of the capital city.

7. The line of 0° longitude that passes through Greenwich, England is known as:

- (a) The Equator
- (b) The Prime Meridian
- (c) The International Date Line
- (d) The Tropic of Cancer

8. If it is 12:00 noon at Greenwich Mean Time (GMT), what will be the time at a location 90° East longitude?

- (a) 6:00 AM
- (b) 6:00 PM
- (c) 12:00 Midnight
- (d) 5:30 PM

9. The International Date Line is roughly based on which meridian?

- (a) 0°
- (b) 90° E
- (c) 90° W
- (d) 180°

10. What happens when one crosses the International Date Line from east to west?

- (a) They gain a day.
- (b) They lose a day.
- (c) The time remains the same.
- (d) They gain an hour.

11. The circle of illumination divides the Earth into:

- (a) Northern and Southern Hemispheres
- (b) Day and Night
- (c) Land and Water
- (d) Torrid and Temperate Zones

12. The latitude which is known as "The Great Circle" is:

- (a) The Equator
- (b) The Tropic of Cancer
- (c) The Prime Meridian
- (d) The Arctic Circle

13. The phenomenon where the Sun does not set at the Arctic Circle on 21st June is called:

- (a) Equinox
- (b) Midnight Sun
- (c) Solar Eclipse
- (d) Summer Solstice

14. On 21st March and 23rd September, the Sun is directly overhead at the equator. These days are known as:

- (a) Solstices
- (b) Aphelion and Perihelion
- (c) Equinoxes
- (d) Eclipses

15. The Earth is at its farthest point from the Sun (Aphelion) in which month?

- (a) January
- (b) June
- (c) July
- (d) December

16. A solar eclipse occurs when:

- (a) The Earth comes between the Sun and the Moon.
- (b) The Moon comes between the Sun and the Earth.
- (c) The Sun comes between the Earth and the Moon.
- (d) The Earth's shadow falls on the Moon.

17. During a total solar eclipse, which part of the Sun is visible?

- (a) Photosphere
- (b) Chromosphere
- (c) Corona
- (d) Sunspots

18. A lunar eclipse can only occur during which phase of the moon?

- (a) New Moon
- (b) Full Moon
- (c) First Quarter
- (d) Crescent Moon

19. Why is a solar eclipse not seen from every part of the Earth at the same time?

- (a) Because the Moon is too small.
- (b) Because the Earth is rotating.
- (c) Because the Moon's shadow is small and moves across the Earth's surface.
- (d) Both (b) and (c).

20. The term "Penumbra" is related to which natural phenomenon?

- (a) Seasons
- (b) Tides
- (c) Eclipses
- (d) Earthquakes

21. The Tropic of Cancer is located at:

- (a) 23.5° North latitude
- (b) 23.5° South latitude
- (c) 66.5° North latitude
- (d) 0° latitude

22. The angular distance of a place north or south of the equator is known as:

- (a) Longitude
- (b) Altitude
- (c) Latitude
- (d) Meridian

23. The Indian Standard Time (IST) is ahead of GMT by:

- (a) 4 hours 30 minutes
- (b) 5 hours
- (c) 5 hours 30 minutes
- (d) 6 hours

24. The duration of a sidereal day is:

- (a) 24 hours
- (b) 23 hours 56 minutes 4 seconds
- (c) 12 hours
- (d) 365 $\frac{1}{4}$ days

25. The Coriolis Effect, which deflects winds, is a result of:

- (a) Earth's revolution
- (b) Earth's rotation
- (c) Earth's magnetic field
- (d) Gravitational pull of the Moon

26. Which of the following pairs of latitudes mark the limits of the "Torrid Zone"?

- (a) Equator and Tropic of Cancer
- (b) Tropic of Cancer and Tropic of Capricorn
- (c) Equator and Arctic Circle
- (d) Tropic of Cancer and Arctic Circle

27. The point on the Earth's surface that is diametrically opposite to a given point is called its:

- (a) Meridian
- (b) Antipode
- (c) Pole
- (d) Axis

28. The term "Solstice" means:

- (a) Sun is stationary
- (b) Equal day and night
- (c) Longest day in the Southern Hemisphere
- (d) Moon is closest to Earth

29. The path followed by the Earth around the Sun is called:

- (a) Orbit
- (b) Axis
- (c) Plane of the Ecliptic
- (d) Celestial Sphere

30. If a ship crosses the International Date Line at 12:00 noon on Tuesday, what will be the day and time immediately after crossing?

- (a) 12:00 noon, Wednesday
- (b) 12:00 noon, Monday
- (c) 11:00 AM, Tuesday
- (d) 1:00 PM, Wednesday

Answer Key

1. (d) Both (a) and (b)
2. (a) 12,756 km
3. (c) Rotation
4. (c) The revolution of the Earth and the tilt of its axis.
5. (b) The North Pole is tilted towards the Sun.
6. (a) Synchronize activities across the country.
7. (b) The Prime Meridian
8. (b) 6:00 PM ($90^\circ / 15^\circ$ per hour = 6 hours ahead of GMT)
9. (d) 180°
10. (a) They gain a day.
11. (b) Day and Night
12. (a) The Equator
13. (b) Midnight Sun
14. (c) Equinoxes
15. (c) July
16. (b) The Moon comes between the Sun and the Earth.
17. (c) Corona
18. (b) Full Moon
19. (d) Both (b) and (c).
20. (c) Eclipses
21. (a) 23.5° North latitude
22. (c) Latitude
23. (c) 5 hours 30 minutes
24. (b) 23 hours 56 minutes 4 seconds
25. (b) Earth's rotation
26. (b) Tropic of Cancer and Tropic of Capricorn
27. (b) Antipode
28. (a) Sun is stationary
29. (c) Plane of the Ecliptic
30. (a) 12:00 noon, Wednesday (When crossing from East to West, you add a day).