1. Which of the following part of the Sun is visible to humans? A. Photosphere
B. Corona
C. Chromospheres
D. Core
Ans: A 2. Which of the following part of the Sun is visible at the time of the eclipse? A. Photosphere
B. Corona
C. Chromosphere
D. Core
Ans: B 3. Which is the deepest point from the sea level on the Earth? A. North Channel
B. Pacific Ocean
C. Mariana Trench
D. Red Sea
Ans: C 4. What is the time taken by the light of the Sun to reach the Earth? A. 8 Minute
B. 9 Minute
C. 7 Minute 20 Second
D. 8 Minute 18 Second
Ans: D 5. Which of the following is the largest planet of the Solar System according to size? A. Jupiter

B. Saturn
C. Neptune
D. Uranus
Ans: A 6. Select the correct chronology of the planet according to their size? I. Mercury
II. Mars
III. Venus
IV. Earth
Code:
A. IV, III, II, I
B. I, III, II, IV
C. I, II, III, IV
D. IV, I, III, II
Ans: A 7. Which of the following planets in the Solar System takes the shortest revolution? A. Neptune
B. Mars
C. Mercury
D. Venus
Ans: C 8. Find the Jovian Planets among the following. A. Mars
B. Earth
C. Venus
D. Uranus

#### Ans: D

# 9. Arrange the planets according to their revolution velocity

- I. Mars
- II. Jupiter
- III. Uranus
- IV. Earth

#### Code:

- A. I, II, IV, II
- B. IV, I, II, III
- C. I, III, II, IV
- D. IV, III, II, I

#### Ans: b

# 10. Which planet in the Solar System has the highest density?

- A. Earth
- B. Uranus
- C. Neptune
- D. Jupiter

#### Ans: A

# Q1. Consider the following statements regarding latitudes and longitudes?

- 1. Longitudes are angular distance of a place from the equator.
- 2. Latitudes are angular distance of a place from the prime meridian.

# Choose the incorrect statement(s)?

- a) Only 1
- b) Only 2
- c) Both 1 and 2
- d) None of the above

## Answer: c Explanation:

Latitude of a place is measured as the angular distance of the place from the equator. All latitudes also called as parallels are concentric circles. Equator is the largest latitude of earth dividing the earth in two equal halves. Longitude of a place is measured as the angular distance of the place from the prime meridian .Longitudes also known as meridians play a significant role in measuring the time zone of an area. 0 degree longitude is Greenwich in UK and 180 degree is the International Date Line.

# Q2. Daylight saving time (DST) is the practice of advancing clocks during summer months by one hour . Why is Daylight saving time practice prevalent in many temperate countries?

- 1. To increase the average working hours of the employees.
- 2. To conserve energy by utilizing the day light and reduce evening use of incandescent lighting.
- 3. To compensate is variation in day length experienced from season to season.

# Choose the correct statement(s)?

- a) Only 1
- b) 1 and 2
- c) 2 and 3
- d) All of the above

## Answer: c Explanation:

Daytime saving has nothing to do with increase working hours. The working hours remain the same but the shift becomes one hour ahead. Daylight saving time (DST) or summer time is the practice of advancing clocks during summer months by one hour so that evening daylight lasts an hour longer i.e fully utilizing the surplus sunlight in summers while compensating the short day length in winters. Typically, regions with summer time adjust clocks forward one hour close to the start of spring and adjust them backward in the autumn to standard time. People use the terms "spring forward" and "fall back" when referring to this.

# Q3. Consider the following statements regarding the Standard Time Zones?

- a) Every country calculates its Standard meridian as the angular distance from the Greenwich meridian.
- b) Every country has only one Standard Meridian Time.
- c) Indian Standard time is 5.5 hours ahead of Greenwich Meridian Time.
- d) Both (a) and(c)

# Answer: d Explanation:

The number of time zones a country practices mostly depends on the size of the country .For example, it's impossible for a country as huge as Russia with the area of 17.1 million km² to process on only one time zone –this might create a problem of day-night difference within the same

country .So Russia has 11 time zones and USA has 6 time zones. However there are certain exceptions like china which works on only one time zone despite its size. Indian Standard Time is calculated on the basis of 82.58° E longitude and its uniform all around the country.

# Q4. If the International Date Line was a straight line, which of the following islands would have experienced a two-date problem within the same time zone?

- a) Wrangel Island
- b) Aleutian Islands
- c) Kiribati islands
- d) All of the above

# Answer: d Explanation:

The International Date Line is an imaginary line of longitude on the Earth's surface located at about 180 degrees east (or west) of the Greenwich Meridian and marks the divide where the date changes by one day. It makes some deviations from the 180-degree meridian to avoid dividing countries in two, especially in the Polynesia region. The time difference between either sides of the International Date Line is not always exactly 24 hours because of local time zone variations. If you travel around the world, changing standard time by one hour each time you enter a new time zone, then a complete circuit would mean that you adjusted your clock or watch time by 24 hours. This would lead to a difference of one day between the date on your clock and the real calendar date. To avoid this, countries are on either side of the International Date Line which runs down the middle of the Pacific Ocean. If you cross the date line moving east, you subtract a day, whereas if you are moving west you add a day.

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# Q5. A significant variation is seen in the length of day night time from season to season .what among the below statements is the most appropriate reason of this variation?

- a) Earth's rotation on its axis
- b) Earth's revolution around the sun in an elliptical manner
- c) Both (a) and (b)
- d) Revolution of earth on a tilted axis

# Answer: b Explanations

The earth's revolution in the inclined position in the elliptical orbit leads to variation in the length of day and nights all over the globe. As the earth axis makes an angle of 66 1/2 degrees with the plane of elliptic, during the month of June when it is summer over the northern hemisphere, the sun rays directly fall on the tropic of cancer. So this leads to longer days and shorter nights in the northern hemisphere area

leading to increase in the day light as well. Length of day and night does vary according to the season and latitudinal position. At the equator the day and night are mostly of same lengths all round the year.

# Q6. Every country calculates its Standard meridian as the angular distance from the Greenwich meridian. If it is 12 noon at GMT what is the time on Indian Standard Time?

a) 5:30 P.M

b) 5:00 P.M

c) 5:20 P.M

d 5:30 A.M

# Answer: a Explanation:

As we know Earth rotates 360 ° in 24 hours, Per hour earth will cover (360/24 ) 15°degrees. Therefore, 15 degree= 1 hour and

1 degree = 4 minutes

Now according to the given problem , we know while moving east from Greenwich the time increases .

So difference between GMT and IST(82.5 degree)= 82.5-0 is 82.5 degrees

And 1 degree =1/15 hours So 82.5 degree= 1/15 X 82.5=5.5 That is 5 and a half hour ahead So, 5:30 P.M

# Q7. Consider the statements regarding equator of the Earth:

- 1. Equator is the largest latitude of earth dividing the earth in two equal halves.
- 2. The equator is the only line of latitude which is also a great circle.
- 3. Sites near the Equator are good locations for spaceports as they have a faster revolution speed than other latitudes.

## Choose the correct statements?

- a) Only 1
- b) 2 and 3
- c) 1 and 2
- d) None of the above

## Answer: c Explanation:

Latitude of a place is measured as the angular distance of the place from

the equator. All latitudes also called as parallels are concentric circles. So, Equator is the largest latitude of earth. The equator is the only line of latitude which is also a great circle — that is, one whose plane passes through the center of the globe. The plane of Earth's equator when projected outwards to the celestial sphere defines the celestial equator. Sites near the Equator, such as the Guiana Space Centre in Kourou, French Guiana, are good locations for spaceports as they have a faster rotational speed than other latitudes; the added velocity reduces the fuel needed to launch spacecraft. Because the Earth spins to the east, spacecraft must also launch to the east (or to the southeast or northeast) to take advantage of this Earth-boost of speed.

# Q8. Through which one of the following groups of Asian countries does Tropic of cancer pass?

- a) India, Saudi Arabia and Sri Lanka
- b) India, Bangladesh and Indonesia
- c) Saudi Arabia, United Arab Emirates and Oman
- d) Venezuela, Ethiopia and Indonesia

# Answer: c Explanation:

The Tropic of Cancer position is not fixed, but varies in a complicated manner over time. It drifts south almost half an arc second of latitude per year .North of the tropic are the subtropics and the North Temperate Zone. The equivalent line of latitude south of the Equator is called the Tropic of Capricorn, and the region between the two, centered on the Equator, is the tropics.

Starting at the Prime Meridian and heading eastward, the Tropic of Cancer passes through 16 countries:

<u>Algeria</u>	<u>Myanmar</u>	<u>Bahamas</u>	Saudi Arabia
Niger	<u>China</u>	<u>India</u>	Bangladesh
<u>Libya</u>	<u>Taiwan</u>	<u>Mauritania</u>	United Arab Emirates
Egypt	Mexico	<u>Oman</u>	Mali

# Q9. Consider the following statements regarding the Chaibagaan Time:

- 1. Chaibagaan time is 1 hour ahead of Indian standard time.
- 2. Administration of the Indian state of West Bengal now wants to change it's time zone back to Chaibagaan time to conserve energy and improve productivity by optimizing the usage of daytime.

### Choose the incorrect statement(s)?

- a) Only 1
- b) Only 2
- c) Both 1 and 2
- d) None of the above

## Answer: a Explanation:

Chaibagaan Time was a daylight schedule introduced by the British tea planters more than 150 years ago which was one hour ahead of IST. This was done to improve productivity by optimizing the usage of daytime. Since Independence, Assam has been following IST for the past 66 years.

Recently, the administration of the Indian state of Assam now wants to change it's time zone back to Chaibagaan time to conserve energy and improve productivity. Indian government didn't accept to such a proposal.

### Q10. Consider the following statements?

- 1. A person travelling from India to USA across International Date Line will gain a day.
- 2. A person travelling from Mexico to New Zealand will lose a day.
- 3. On a 12 hour clock, the time is 05:30 in Delhi. Then the time in London on a 24 hour clock will be 00:00.

#### Which of the above statements are incorrect?

- a) All the statements are correct
- b) Only 2
- c) 1 and 2
- d) 2 and 3

# Answer: a Explanation:

The International Date Line is an imaginary line of longitude on the Earth's surface which marks the divide where the date changes by one day. It makes some deviations from the 180-degree meridian to avoid dividing countries in two zones. If you cross the date line moving east, you subtract a day, whereas if you are moving west you add a day. So, statement 1 and 2 are correct.

As we know Earth rotates 360 ° in 24 hours, Per hour earth will cover (360/24) 15°degrees.

Therefore,

15 degree= 1 hour and

1 degree = 4 minutes

Now according to the given problem, we know while moving east from Greenwich the time increases.

So difference between GMT and IST (82.5 degree)= 82.5-0 is 82.5 degrees

And 1 degree =1/15 hours So 82.5 degree= 1/15 X 82.5=5.5 That is 5 and a half hour ahead So, 5:30 P.M

#### Question 1.

The Tropic of Cancer does not pass through

- (a) Rajasthan
- (b) Orissa (Now Odisha)
- (c) Chhattisgarh
- (d) Tripura

#### **Answer**

Answer: (b) Orissa (Now Odisha)

#### Question 2.

The eastern most longitude of India is

- (a) 97°25'E
- (b) 68°7' E
- (c) 77°6'E
- (d) 82°32'E

#### Answer

#### Question 3.

Uttarakhand, Uttar Pradesh, Bihar, West Bengal and Sikkim have common frontiers with

- (a) China
- (b) Bhutan
- (c) Nepal
- (d) Myanmar

#### **Answer**

#### Question 4.

If you intend to visit Kavarati during your summer vacations, which one of the following Union Territories of India you will be going to?

- (a) Puducherry
- (b) Lakshadweep

- (c) Andaman & Nicobar
- (d) Diu and Daman

#### Question 5.

My friend hails from a country which does not share land boundary with India. Identify the country.

- (a) Bhutan
- (b) Tajikistan
- (c) Bangladesh
- (d) Nepal

#### **Answer**

#### Question 6.

How many states and Union Territories does India have?

- (a) India has 26 States and 7 Union Territories
- (b) India has 25 States and 7 Union Territories
- (c) India has 28 States and 7 Union Territories
- (d) India has 28 States and 6 Union Territories

#### **Answer**

#### Question 7.

Which line divides India into approximately two equal parts?

- (a) Equator
- (b) Tropic of Cancer
- (c) Tropic of Capricorn
- (d) None of these

#### **Answer**

#### Question 8.

What is the position of India in the world in respect of area?

- (a) 8th position
- (b) 7th position
- (c) 6th position
- (d) 2nd position

#### Question 9.

Which meridian is fixed as a Standard Meridian of India?

- (a) 82½° E
- (b) 84½° E
- (c) 86° E
- (d) 81° E

#### **Answer**

#### Question 10.

The latitudinal extent of India lies between

- (a) 7° 5′ N and 26° 5′ N
- (b) 8° 4′ N and 37° 6′ N
- (c) 12° 5′ N and 27° 5′ N
- (d) 12° 5' N and 37° 6' N

### **Answer**

#### Question 11.

Tropic of Cancer passes through which of these states

- (a) Orissa
- (b) Tripura
- (c) Bihar
- (d) Punjab

#### Answer

### Question 12.

Which of the following longitudes is selected as the Standard Meridian for India?

- (a) 68°7′E
- (b) 82°30'E
- (c) 97°25′E
- (d) 23°30'N

#### **Answer**

#### Question 13.

Which of the following is the oldest route of contact between India and other countries of the world?

- (a) Ocean routes
- (b) Maritime contact
- (c) Land routes
- (d) Air routes

#### **Answer**

#### Question 14.

How many states and Union Territories are there in India?

- (a) 28 states and 7 Union Territories including Delhi
- (b) 23 States and 12 Union Territories
- (c) 26 states and 9 Union Territories
- (d) 30 States and 5 Union Territories

#### **Answer**

#### Question 15.

India achieved multi-faceted socio-economic progress during which of the following periods?

- (a) Since ancient times
- (b) During medieval period
- (c) In the 21st century
- (d) During the last five decades

#### **Answer**

#### Question 16.

Which of the following is the longitudinal extent of India?

- (a) 8°4′N and 37°6′N
- (b) 68°7'E and 97°25'E
- (c) 68°7′E and 97°25′W
- (d) 8°4′E and 37°6′E

#### **Answer**

#### Question 17.

The eastern-most longitude of India is

- (a) 97°25′E
- (b) 68°7'E
- (c) 77°6′E
- (d) 82°32′E

Question 18.

Which latitude passes through the southern-most point of India's mainland?

- (a) 8°4′N
- (b) 37°6′N
- (c) 8°4'S
- (d) 82°30'E

#### Answer

Question 19.

Which of the following groups of islands belonging to the Indian territory lies in the Arabian Sea?

- (a) Andaman and Nicobar Islands
- (b) Sri Lanka
- (c) Lakshdweep
- (d) Maldives

#### **Answer**

Question 20.

What is India's size with respect to other countries of the world?

- (a) First
- (b) Third
- (c) Fourth
- (d) Seventh

#### Answer

Question 21.

Which geographical feature bounds India's mainland south of 22°N latitude?

- (a) Young Fold Mountains
- (b) Sandy Desert

- (c) Lava Plateaus
- (d) Seas and Ocean

#### Question 22.

Both the latitudinal and longitudinal extent of India's mainland is about 30°. But on looking at the map of India which of the following alternatives do you observe about India's size?

- (a) East-west extent appears to be smaller than north-south extent
- (b) East-west extent appears to be larger than north-south extent
- (c) East-west and north-south extent appears equal
- (d) North-south extent appears to be smaller than east-west extent

#### Answer

#### Question 23.

If the local time at Dwarka (69°01′E) in Gujarat to the west of India is 6 am, what will be the local time at Dibrugarh (94°58′E approximately 95°), in Assam, in the east?

- (a) 4.16 am
- (b) 6 am
- (c) 7.44 am
- (d) 7.44 pm

#### Answer

#### Question 24.

The Standard Meridian of India, 82°30′E passes through which of the following places?

- (a) Kanniyakumari in Tamil Nadu
- (b) Walong in Arunachal Pradesh
- (c) Kachchh in Gujarat
- (d) Mirzapur in Uttar Pradesh

#### **Answer**

#### Question 25.

Which of the following has reduced India's distance from Europe by 7000 km?

- (a) Suez Canal
- (b) Panama Canal

- (c) Indira Gandhi Canal (d) Buckingham Canal