



**INSIGHTSIAS**

SIMPLIFYING IAS EXAM PREPARATION

# INSTA 75 DAYS REVISION PLAN FOR UPSC CSE PRELIMS 2023

## **INSTA TEST: DAY - 7**

Subject: Geography



# GENERAL STUDIES QUIZ

## 1. Consider the following statements regarding Upwelling

1. Upwelling occurs in the open ocean and along coastlines.
2. Subsurface water that rises to the surface as a result of upwelling is typically warmer, rich in nutrients, and biologically productive.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

## 2. Which of the following are warm currents?

1. Kuroshio
2. Peru
3. Alaskan
4. Agulhas

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 3 and 4 only
- (c) 1, 3 and 4 only
- (d) 1, 2, 3 and 4

## 3. Consider the following statements regarding Tropical Wet climate (Köppen climate classification system)

1. Equatorial regions have the most unpredictable weather on Earth.
2. Tropical wet climates exist in a band extending about 10° of latitude on either side of the Equator.
3. The U.S. state of Hawaii; Kuala Lumpur, Malaysia; and Belém, Brazil, are examples of areas with tropical wet climates.

Which of the statements given above is/are correct?

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

## 4. Consider the following statements regarding air mass

1. Air masses form over large surfaces with uniform temperatures and humidity.
2. Warm tropical and subtropical oceans are one of the major source regions of the air masses.
3. When two different air masses meet, the boundary zone between them is called a front.

Which of the statements given above is/are correct?

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

## 5. Consider the following statements regarding atmosphere?

1. Solar heat penetrates the troposphere easily.
2. The ionosphere is named for ions created by energetic particles from sunlight and outer space.
3. The ozone layer reflects particles from solar wind.

Which of the statements given above are correct?

- (a) 1 only
- (b) 1 and 2 only
- (c) 3 only
- (d) 2 and 3 only

## 6. Consider the following statements regarding Coriolis effect

1. The Coriolis effect describes the pattern of deflection taken by objects not firmly connected to the ground as they travel long distances around Earth.
2. The key to the Coriolis effect lies in Earth's rotation.
3. In the Southern Hemisphere, air currents are deflected to the right.

Which of the statements given above are correct?

- (a) 1 only
- (b) 1 and 2 only
- (c) 3 only
- (d) 2 and 3 only

**7. Consider the following statements regarding El Niño**

1. El Niño is a climate pattern that describes the unusual warming of surface waters in the eastern tropical Pacific Ocean.
2. El Niño is a regular cycle.
3. El Niño is considered the ocean part of El Niño-Southern Oscillation (ENSO), while the Southern Oscillation is its atmospheric changes.

**Which of the statements given above are correct?**

- (a) 1 only
- (b) 1 and 2 only
- (c) 1 and 3 only
- (d) 2 and 3 only

**8. Which of the following factors influence insolation?**

1. Angle of inclination of the sun's rays
2. Length of the day
3. Transparency of the atmosphere
4. Configuration of land in terms of its aspect

**Select the correct answer using the code given below:**

- (a) 1, 2 and 3 only
- (b) 2, 3 and 4 only
- (c) 1, 2 and 4 only
- (d) 1, 2, 3 and 4

**9. Consider the following statements regarding local winds**

1. Foehn is cold and humid local wind which develops on the leeward side of the Alps Mountain ranges.
2. Chinook is the name of hot and dry local wind which moves down the eastern slopes of the Rockies.
3. Bora is a cold winter wind that occurs in eastern Europe.

**Which of the statements given above is/are correct?**

- (a) None of the statement are correct
- (b) Only one statement is correct
- (c) Only two statements are correct
- (d) All three statements are correct

**10. Consider the following statements regarding Inversion of temperature**

1. Inversion is usually of short duration but quite rare phenomenon.
2. A long winter night with clear skies and still air is ideal situation for inversion.

**Which of the statements given above is/are correct?**

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**11. Consider the following statements regarding wind circulation**

1. The westerlies from either side of the equator converge in the Inter Tropical Convergence Zone (ITCZ).
2. In the middle latitudes, the Hadley Cell is developed.
3. The transfer of heat energy from lower latitudes to higher latitudes maintains the general circulation.

**Which of the statements given above are correct?**

- (a) 1 only
- (b) 1 and 2 only
- (c) 3 only
- (d) 2 and 3 only

**12. which of the following are the favorable condition for the formation of Tropical Cyclones?**

1. Large Sea surface with temperature higher than 27° C
2. Presence of the Coriolis force
3. Pre-existing weak low- pressure area
4. Small variations in the vertical wind speed

**Select the correct answer using the code given below:**

- (a) 1 and 2 only
- (b) 3 and 4 only
- (c) 2, 3 and 4 only
- (d) 1, 2, 3 and 4

**13. Consider the following statements regarding Clouds**

1. Cumulus are thin and detached clouds having a feathery appearance.

2. Stratus clouds are generally formed either due to loss of heat or the mixing of air masses with different temperatures.
3. Nimbus clouds are extremely dense and opaque to the rays of the sun.

**Which of the statements given above are correct?**

- (a) 1 only
- (b) 1 and 2 only
- (c) 3 only
- (d) 2 and 3 only

**14. Consider the following statements regarding Mediterranean type Climate**

1. This climate is found along the east coasts of continents between 30° and 45° latitudes.
2. As there is a seasonal shift of pressure belts, these areas come under the influence of subtropical high-pressure conditions during summer, and cyclonic low-pressure conditions during winter.
3. Most of the rainfall occurs in the winter season.

**Which of the statements given above is/are correct?**

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

**15. Which of the following countries border Ukraine?**

1. Belarus
2. Poland
3. Bulgaria
4. Serbia

**Select the correct answer using the code given below:**

- (a) 1 and 2 only
- (b) 3 and 4 only
- (c) 1, 3 and 4 only
- (d) 1, 2, 3 and 4

**16. Which of the following is/are the sources for Radioactive pollution?**

1. Accidents in nuclear power plants
2. Uranium mining and mining of other radioactive material like Thorium

3. Radiation therapy and direct exposures to radiation for diagnostic purposes
4. Cosmic rays from space and terrestrial radiations from radio-nuclides present in earth's crust such as radium-224

**Which of the statements given above is/are correct?**

- (a) 1, 2 and 3 only
- (b) 2, 3 and 4 only
- (c) 1 and 3 only
- (d) 1, 2, 3 and 4

**17. Which of the following is/are the functions of World Health Assembly**

1. Sets out agenda for the Health Assembly and resolutions for forwarding to the Assembly are adopted.
2. Gives effect to the decisions and policies of the Health Assembly.
3. Advises it and facilitates its work.

**Which of the statements given above is/are correct?**

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

**18. Consider the following statements regarding Super-Earth Planets**

1. Super-Earth Planet is expected to have a mass less than earth but more than Mercury.
2. Super-Earth planet would orbit at a radius anywhere between that of Venus and Earth in our solar system.

**Which of the statements given above is/are correct?**

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**19. Consider the following statements**

1. Mana Pass is located in Uttarakhand
2. Nathu-La Pass is located in Himachal Pradesh

**Which of the statements given above is/are correct?**

- (a) 1 only
- (b) 2 only

- (c) Both 1 and 2
- (d) Neither 1 nor 2

**20. Unified Payments Interface (UPI), sometime seen in the news, is developed by**

- (a) National Informatics Centre
- (b) National Payments Corporation of India
- (c) Reserve Bank of India
- (d) None of the above

**21. Which of the following is/are the features of Parliamentary Form of government?**

- 1. Collective responsibility of the executive to the President.
- 2. Dissolution of the lower House
- 3. Leadership of the prime minister or the chief minister

**Select the correct answer using the code given below**

- (a) 3 only
- (b) 2 only
- (c) 1 and 3 only
- (d) 2 and 3 only

**22. Consider the following statements regarding certification marks in India**

- 1. Silk Mark is a mandatory certification mark managed by the Silk Mark Organization of India.
- 2. FPO mark got a mandatory status only after the Food Safety and Standards Act of 2006.
- 3. India organic is the certification Mark issued by Ministry of Agriculture and Farmers welfare.

**Which of the statements given above is/are correct?**

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

**23. Consider the following statements with reference to Minimum Support Price (MSP):**

- 1. MSP are announced by the Government of India for all crops grown during all the three seasons.
- 2. MSP for food grains is kept necessarily higher

than market price of the grains.

**Which of the statements given above is/are correct?**

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**24. Consider the following statements regarding National Green Tribunal (NGT)**

- 1. NGT was established under Environment Protection Act, 1986.
- 2. It has vested with powers to hear any matter relating to the Indian Forest Act, 1927
- 3. The NGT is not bound by the procedure laid down under the Code of Civil Procedure, 1908.

**Which of the statements given above is/are correct?**

- (a) 1 only
- (b) 2 and 3 only
- (c) 3 only
- (d) None

**25. Consider the following statements**

- 1. Decisions of SAARC at all levels are to be taken on the basis of unanimity.
- 2. BIMSTEC is a sub-regional organization came into being on 6 June 1997 through the Bangkok Declaration.

**Which of the statements given above is/are correct?**

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

# CSAT QUIZ

Passage 1

Agriculture in India needs to become more sustainable even as small and marginal farmers struggle to build resilience against many threats. First, they remain price-takers and economically vulnerable, beholden to traders who set prices, and with limited opportunities to sell at a time of their choice (due to poor storage). Further, decades of intensive agriculture have added to water stress and declining soil health. Farmers rely on groundwater for more than 60% of irrigation needs. Chemical fertilizers, once a boon to boost soil nutrients, have been applied so intensively (particularly urea) that the long-term health of soils is now of deep concern.

**1) Which among the following is the most logical, rational and critical inference that can be made from the above passage?**

- (a) Agricultural policies in India have prioritized productivity in place of sustainability
- (b) Agricultural policies in India have favored small and marginal farmers over the bigger farmers
- (c) Agricultural policies in India have favored large farmers over small and medium farmers
- (d) Agricultural policies in India leave a lot to be desired

**2) Which is the most critical and rational inference that can be made from the above passage?**

- (a) Ayushman Bharat takes India closer to the goal of Universal health coverage
- (b) While the objective of Ayushman Bharat is laudable, there are glitches in the scheme that need correction
- (c) Health insurance for families is the way ahead if we want to achieve the aim of Universal Health coverage
- (d) None of the above

**3) Anand travels a distance of 50 km in 2 hrs and 30 min. How much faster than the current speed in km/hr should he travel to make such a trip in 5/6 hr less time?**

- (a) 10
- (b) 20

- (c) 30
- (d) 40

**4) If the upstream speed of a boat is 50% less than the downstream speed of the boat and if a object is thrown in the river it covers 100m in 50 sec, then how much distance boat can cover in still water in 5 hours?**

- A) 900 km
- B) 100 km
- C) 120 km
- D) 108 km

**5) Ashok and Bimal runs on a 450 m long circular track at a speed of 12 m/s and 18 m/s respectively. They start at same time but run in opposite direction. Find the number of times, they would have met when Bimal covers 3240 meters.**

- A) 12
- B) 10
- C) 14
- D) 16

## Answer Sheet

STUDENT / CANDIDATE'S NAME (IN BLOCK LETTERS ONLY)												BATCH NO.		ROCKET CODE		SUBJECT CODE	
[Name Entry Grid]												[Batch No. Grid]		[Rocket Code Grid]		[Subject Code Grid]	
												ROLL NUMBER					
[Roll Number Grid]												[Roll Number Grid]					

**INSTRUCTION FOR MARKING**

- Use Black/Blue Pen Only
- Mark Only one choice for each question as indicated below.

**CORRECT METHOD**

● ○ ○ ○ ○

**WRONG METHOD**

⊗ ⊘ ⊙ ⊚

Since, you cannot erase and change the answer, please make sure you are confident about the answer, before marking your choice.

Q.No	ANSWER	Q.No	ANSWER	Q.No	ANSWER	Q.No	ANSWER
1.	○ ○ ○ ○	41.	○ ○ ○ ○	81.	○ ○ ○ ○	121.	○ ○ ○ ○
2.	○ ○ ○ ○	42.	○ ○ ○ ○	82.	○ ○ ○ ○	122.	○ ○ ○ ○
3.	○ ○ ○ ○	43.	○ ○ ○ ○	83.	○ ○ ○ ○	123.	○ ○ ○ ○
4.	○ ○ ○ ○	44.	○ ○ ○ ○	84.	○ ○ ○ ○	124.	○ ○ ○ ○
5.	○ ○ ○ ○	45.	○ ○ ○ ○	85.	○ ○ ○ ○	125.	○ ○ ○ ○
6.	○ ○ ○ ○	46.	○ ○ ○ ○	86.	○ ○ ○ ○	126.	○ ○ ○ ○
7.	○ ○ ○ ○	47.	○ ○ ○ ○	87.	○ ○ ○ ○	127.	○ ○ ○ ○
8.	○ ○ ○ ○	48.	○ ○ ○ ○	88.	○ ○ ○ ○	128.	○ ○ ○ ○
9.	○ ○ ○ ○	49.	○ ○ ○ ○	89.	○ ○ ○ ○	129.	○ ○ ○ ○
10.	○ ○ ○ ○	50.	○ ○ ○ ○	90.	○ ○ ○ ○	130.	○ ○ ○ ○
11.	○ ○ ○ ○	51.	○ ○ ○ ○	91.	○ ○ ○ ○	131.	○ ○ ○ ○
12.	○ ○ ○ ○	52.	○ ○ ○ ○	92.	○ ○ ○ ○	132.	○ ○ ○ ○
13.	○ ○ ○ ○	53.	○ ○ ○ ○	93.	○ ○ ○ ○	133.	○ ○ ○ ○
14.	○ ○ ○ ○	54.	○ ○ ○ ○	94.	○ ○ ○ ○	134.	○ ○ ○ ○
15.	○ ○ ○ ○	55.	○ ○ ○ ○	95.	○ ○ ○ ○	135.	○ ○ ○ ○
16.	○ ○ ○ ○	56.	○ ○ ○ ○	96.	○ ○ ○ ○	136.	○ ○ ○ ○
17.	○ ○ ○ ○	57.	○ ○ ○ ○	97.	○ ○ ○ ○	137.	○ ○ ○ ○
18.	○ ○ ○ ○	58.	○ ○ ○ ○	98.	○ ○ ○ ○	138.	○ ○ ○ ○
19.	○ ○ ○ ○	59.	○ ○ ○ ○	99.	○ ○ ○ ○	139.	○ ○ ○ ○
20.	○ ○ ○ ○	60.	○ ○ ○ ○	100.	○ ○ ○ ○	140.	○ ○ ○ ○
21.	○ ○ ○ ○	61.	○ ○ ○ ○	101.	○ ○ ○ ○	141.	○ ○ ○ ○
22.	○ ○ ○ ○	62.	○ ○ ○ ○	102.	○ ○ ○ ○	142.	○ ○ ○ ○
23.	○ ○ ○ ○	63.	○ ○ ○ ○	103.	○ ○ ○ ○	143.	○ ○ ○ ○
24.	○ ○ ○ ○	64.	○ ○ ○ ○	104.	○ ○ ○ ○	144.	○ ○ ○ ○
25.	○ ○ ○ ○	65.	○ ○ ○ ○	105.	○ ○ ○ ○	145.	○ ○ ○ ○
26.	○ ○ ○ ○	66.	○ ○ ○ ○	106.	○ ○ ○ ○	146.	○ ○ ○ ○
27.	○ ○ ○ ○	67.	○ ○ ○ ○	107.	○ ○ ○ ○	147.	○ ○ ○ ○
28.	○ ○ ○ ○	68.	○ ○ ○ ○	108.	○ ○ ○ ○	148.	○ ○ ○ ○
29.	○ ○ ○ ○	69.	○ ○ ○ ○	109.	○ ○ ○ ○	149.	○ ○ ○ ○
30.	○ ○ ○ ○	70.	○ ○ ○ ○	110.	○ ○ ○ ○	150.	○ ○ ○ ○
31.	○ ○ ○ ○	71.	○ ○ ○ ○	111.	○ ○ ○ ○	151.	○ ○ ○ ○
32.	○ ○ ○ ○	72.	○ ○ ○ ○	112.	○ ○ ○ ○	152.	○ ○ ○ ○
33.	○ ○ ○ ○	73.	○ ○ ○ ○	113.	○ ○ ○ ○	153.	○ ○ ○ ○
34.	○ ○ ○ ○	74.	○ ○ ○ ○	114.	○ ○ ○ ○	154.	○ ○ ○ ○
35.	○ ○ ○ ○	75.	○ ○ ○ ○	115.	○ ○ ○ ○	155.	○ ○ ○ ○
36.	○ ○ ○ ○	76.	○ ○ ○ ○	116.	○ ○ ○ ○	156.	○ ○ ○ ○
37.	○ ○ ○ ○	77.	○ ○ ○ ○	117.	○ ○ ○ ○	157.	○ ○ ○ ○
38.	○ ○ ○ ○	78.	○ ○ ○ ○	118.	○ ○ ○ ○	158.	○ ○ ○ ○
39.	○ ○ ○ ○	79.	○ ○ ○ ○	119.	○ ○ ○ ○	159.	○ ○ ○ ○
40.	○ ○ ○ ○	80.	○ ○ ○ ○	120.	○ ○ ○ ○	160.	○ ○ ○ ○

**STUDENT SIGNATURE**

[Signature Line]

**INVIGILATOR SIGNATURE**

[Signature Line]

**Total Attempts:**

**Time Taken:**

**Marks Scored:**

**Correct Answers:**

**Wrong Answers:**

**Accuracy Rate:**

**Mistakes I Committed in this INSTA Test:**

**Lessons Learnt from this INSTA Test:**

# GENERAL STUDIES QUIZ SOLUTIONS

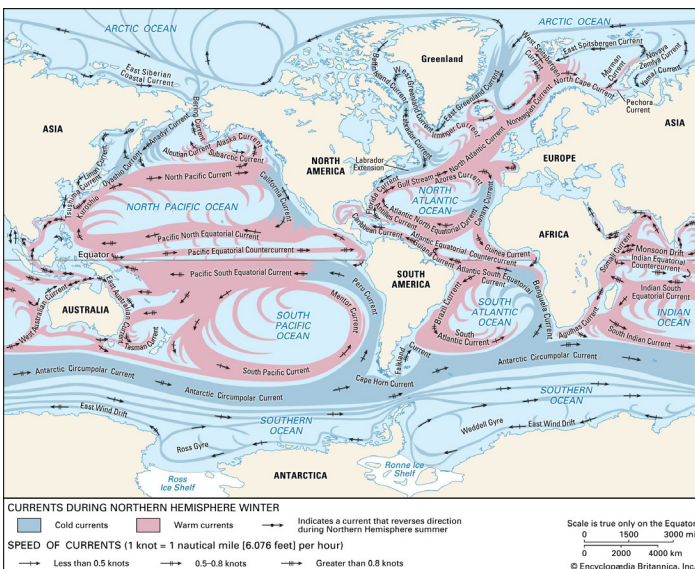
## 1. Solution: A

Winds blowing across the ocean surface often push water away from an area. When this occurs, water rises up from beneath the surface to replace the diverging surface water. This process is known as upwelling.

**Upwelling occurs in the open ocean and along coastlines.** The reverse process, called downwelling, also occurs when wind causes surface water to build up along a coastline. The surface water eventually sinks toward the bottom.

**Subsurface water that rises to the surface as a result of upwelling is typically colder, rich in nutrients, and biologically productive.** Therefore, good fishing grounds typically are found where upwelling is common. For example, the rich fishing grounds along the west coasts of Africa and South America are supported by year-round coastal upwelling.

## 2. Solution: C



Peru is a cold current.

## 3. Solution: B

According to the Köppen climate classification system, there are five climate groups: tropical, dry, mild, continental, and polar. These climate groups are further divided into climate types.

## Tropical

- Wet (rainforest)
- Monsoon
- Wet and dry (savanna)

### *Tropical Wet: Rainforests*

Places with a tropical wet climate are also known as rainforests. These **equatorial regions have the most predictable weather on Earth, with warm temperatures and regular rainfall.** Annual rainfall exceeds 150 centimeters (59 inches), and the temperature varies more during a day than it does over a year. The coolest temperatures, about 20° to 23° Celsius (68°-73° Fahrenheit), occurs just before dawn. Afternoon temperatures usually reach 30° to 33° Celsius (86°-91° Fahrenheit). Rainforests experience very little seasonal change, meaning average monthly temperatures remain fairly constant throughout the year.

### **Tropical wet climates exist in a band extending about 10° of latitude on either side of the Equator.**

This part of the globe is always under the influence of the intertropical convergence zone. The ITCZ follows a pendulum-like path during the course of a year, moving back and forth across the Equator with the seasons. It moves north during summer in the Northern Hemisphere, and south during the northern winter.

Some tropical wet climates are wet throughout the year. Others experience more rainfall during the summer or winter, but they never have especially dry seasons. **The U.S. state of Hawaii; Kuala Lumpur, Malaysia; and Belém, Brazil, are examples of areas with tropical wet climates.**

## 4. Solution: D

An air mass is a large volume of air in the atmosphere that is mostly uniform in temperature and moisture.

**Air masses form over large surfaces with uniform temperatures and humidity,** called source regions. Low wind speeds let air remain stationary long enough to take on the features of the source region, such as heat or cold. When winds move air masses, they carry

their weather conditions (heat or cold, dry or moist) from the source region to a new region.

The air masses are classified according to the source regions. There are five major source regions. These are: (i) Warm tropical and subtropical oceans; (ii) The subtropical hot deserts; (iii) The relatively cold high latitude oceans; (iv) The very cold snow-covered continents in high latitudes; (v) Permanently ice-covered continents in the Arctic and Antarctica.

#### Fronts

**When two different air masses meet, the boundary zone between them is called a *front*.** The process of formation of the fronts is known as *frontogenesis*.

## 5. Solution: B

### Troposphere

- Almost all weather develops in the troposphere because it contains almost all of the atmosphere's water vapor.
- **Air in the troposphere thins as altitude increases.**
- **Solar heat penetrates the troposphere easily.** This layer also absorbs heat that is reflected back from the ground in a process called the greenhouse effect. The greenhouse effect is necessary for life on Earth. The atmosphere's most abundant greenhouse gases are carbon dioxide, water vapor, and methane.
- **Ionosphere**  
The ionosphere extends from the top half of the mesosphere all the way to the exosphere. This atmospheric layer conducts electricity.

**The ionosphere is named for ions created by energetic particles from sunlight and outer space.**

Ions are atoms in which the number of electrons does not equal the number of protons, giving the atom a positive (fewer electrons than protons) or negative (more electrons than protons) charge. Ions are created as powerful x-rays and UV rays knock electrons off atoms.

- **The ionosphere also reflects particles from solar wind, the stream of highly charged particles ejected by the sun.** These electrical displays create auroras (light displays) called the Northern and Southern Lights.

## 6. Solution: B

**The Coriolis effect describes the pattern of deflection taken by objects not firmly connected to the ground as they travel long distances around Earth.** The Coriolis effect is responsible for many large-scale weather patterns.

**The key to the Coriolis effect lies in Earth's rotation.**

Fluids traveling across large areas, such as air currents, are like the path of the ball. They appear to bend to the right in the Northern Hemisphere. The Coriolis effect behaves the opposite way in the Southern Hemisphere, where currents appear to bend to the left.

The impact of the Coriolis effect is dependent on velocity—the velocity of Earth and the velocity of the object or fluid being deflected by the Coriolis effect. The impact of the Coriolis effect is most significant with high speeds or long distances.

**In the Southern Hemisphere, currents are deflected to the left.**

## 7. Solution: C

**El Niño is a climate pattern that describes the unusual warming of surface waters in the eastern tropical Pacific Ocean.** El Niño is the “warm phase” of a larger phenomenon called the El Niño-Southern Oscillation (ENSO). La Niña, the “cool phase” of ENSO, is a pattern that describes the unusual cooling of the region's surface waters. **El Niño and La Niña are considered the ocean part of ENSO, while the Southern Oscillation is its atmospheric changes.**

El Niño has an impact on ocean temperatures, the speed and strength of ocean currents, the health of coastal fisheries, and local weather from Australia to South America and beyond. El Niño events occur irregularly at two- to seven-year intervals. However, **El Niño is not a regular cycle**, or predictable in the sense that ocean tides are.

## 8. Solution: D

Variability of Insolation at the Surface of the Earth  
The amount and the intensity of insolation vary during a day, in a season and in a year. The factors that cause these variations in insolation are:

- (i) the rotation of earth on its axis;
- (ii) the angle of inclination of the sun's rays;**
- (iii) the length of the day;**
- (iv) the transparency of the atmosphere;**
- (v) the configuration of land in terms of its aspect.**

The last two however, have less influence.

## 9. Solution: C

### Foehn

- Foehn is strong, dusty, dry and warm local wind which develops on the leeward side of the Alps Mountain ranges.
- Regional pressure gradient forces the air to ascend and cross the barrier.

### Chinook

- **Chinook is the name of hot and dry local wind which moves down the eastern slopes of the Rockies** in U.S.A. and Canada.
- The literal meaning of chinook is 'snow eater' as they help in melting the snow earlier.
- They keep the grasslands clear of snow. Hence, they are very helpful to ranchers.

### Bora

- A cold winter wind that occurs in eastern Europe is called the "bora."
- The bora blows from the Dinaric Alps down to the Adriatic Coast.
- This blustery wind travels from the north or north-east, like the mistral, and can also reach speeds greater than 100 mph (160 kph).

## 10. Solution: B

### Inversion of temperature

Normally, temperature decreases with increase in elevation. It is called normal lapse rate. At times, the situation is reversed and the normal lapse rate is inverted. It is called Inversion of temperature. **Inversion is usually of short duration but quite common nonetheless. A long winter night with clear skies and still air is ideal situation for inversion.** The heat of the day is radiated off during the night, and by early morning hours, the earth is cooler than the air above. Over polar areas, temperature inversion is normal throughout the year.

## 11. Solution: C-+

The air at the Inter Tropical Convergence Zone (ITCZ) rises because of convection caused by high insolation and a low pressure is created. The winds from the tropics converge at this low-pressure zone. The converged air rises along with the convective cell. It reaches the top of the troposphere up to an altitude of 14 km. and moves towards the poles. Down below near the land surface the air flows towards the equator as the easterlies.

### The easterlies from either side of the equator converge in the Inter Tropical Convergence Zone (ITCZ).

Such circulations from the surface upwards and *vice-versa* are called cells. Such a cell in the tropics is called *Hadley Cell*.

**In the middle latitudes the circulation is that of sinking cold air that comes from the poles and the rising warm air that blows from the subtropical high.**

**At the surface these winds are called westerlies and the cell is known as the *Ferrel cell*.** At polar latitudes the cold dense air subsides near the poles and blows towards middle latitudes as the polar easterlies. This cell is called the polar cell. These three cells set the pattern for the general circulation of the atmosphere.

**The transfer of heat energy from lower latitudes to higher latitudes maintains the general circulation.**

## 12. Solution: D

### Tropical Cyclones

Tropical cyclones are violent storms that originate over oceans in tropical areas and move over to the coastal areas bringing about large-scale destruction caused by violent winds, very heavy rainfall and storm surges. This is one of the most devastating natural calamities. Tropical cyclones originate and intensify over warm tropical oceans.

The conditions favorable for the formation and intensification of tropical storms are:

- (i) Large sea surface with temperature higher than 27° C**
- (ii) Presence of the Coriolis force;**
- (iii) Small variations in the vertical wind speed;**
- (iv) A pre-existing weak low- pressure area or low-level-cyclonic circulation;**
- (v) Upper divergence above the sea level system.**

## 13. Solution: D

### Cirrus

Cirrus clouds are formed at high altitudes (8,000 - 12,000m). They **are thin and detached clouds having a feathery appearance**. They are always white in colour.

### Cumulus

Cumulus clouds look like cotton wool. They are generally formed at a height of 4,000- 7,000 m. They exist in patches and can be seen scattered here and there. They have a flat base.

### Stratus

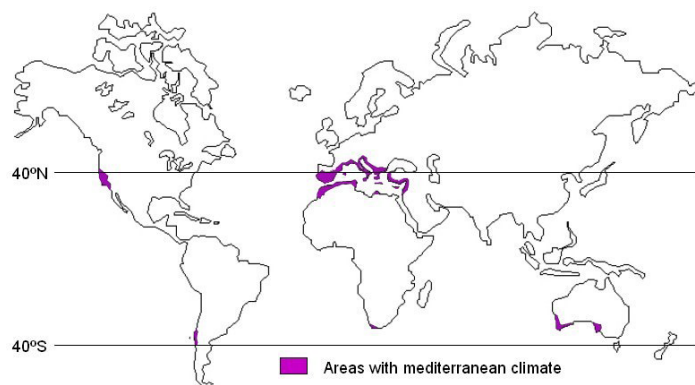
As their name implies, these are layered clouds covering large portions of the sky. **These clouds are generally formed either due to loss of heat or the mixing of air masses with different temperatures.**

### Nimbus

Nimbus clouds are black or dark gray. They form at middle levels or very near to the surface of the earth. These **are extremely dense and opaque to the rays of the sun**. Sometimes, the clouds are so low that they seem to touch the ground. Nimbus clouds are shapeless masses of thick vapour.

## 14. Solution: B

Mediterranean type Climate



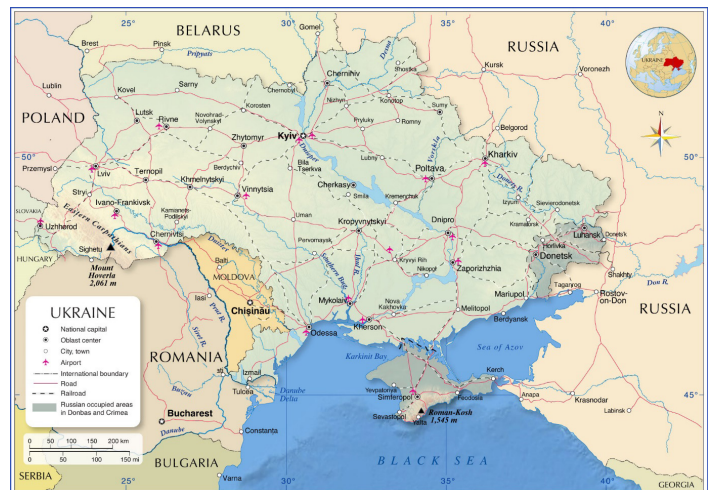
- This climate is found along the west coasts of continents between 30° and 45° latitudes.
- It is bounded by the arid Steppe on the equatorward side and the marine west European climate on the poleward side.
- Areas around the Mediterranean Sea, central California, central Chile, southern part of South Africa and south-eastern and southern-western parts of Australia experience this climate.
- **As there is seasonal shift of pressure belts with the**

**annual movements of the sun, these areas come under the influence of subtropical high-pressure conditions during summer, and cyclonic low-pressure conditions during winter.**

- Summers are, therefore, warm and dry, temperature remains in between 20°C and 27°C.
- Winters are mild with temperature ranging between 4°C and 10°C.
- The annual range of temperature is about 10° to 17°C.
- Rainfall is moderate and varies between 40 and 60 centimeters.
- **Most of the rainfall occurs in the winter season.**

## 15. Solution: A

**Ukraine borders Belarus, Hungary, Moldova, Poland, Romania, Russia, and Slovakia.**



## 16. Solution: D

**Artificial Sources of Radioactive pollution**

- Accidents in nuclear power plants and nuclear waste.
- Nuclear weapon testing and explosion (Nuclear fallout). The fall Out contains radioactive substances such as strontium-90, caesium-137, iodine-131, etc.
- Uranium mining and mining of other radioactive material like thorium (monazite is the ores of thorium).
- Radiation therapy and direct exposures to radiation for diagnostic purposes (e.g., X-rays), chemotherapy etc.
- The slow nuclear radiations can emanate from a va-

riety of sources viz. nuclear reactors, laboratories, etc.

### Natural Sources

They include cosmic rays from space and terrestrial radiations from radio-nuclides present in earth's crust such as radium-224, uranium-238, thorium-232, potassium-40, carbon-14, etc.

## 17. Solution: D

### What is the WHO Executive Board?

It is one of the WHO's two decision making bodies. The other one is the **World Health Assembly**. The agency's **headquarters are located at Geneva in Switzerland**.

### Composition:

The executive Board is composed of 34 members technically qualified in the field of health.

The Board chairman's post is held by rotation for one year by each of the WHO's six regional groups: African Region, Region of the Americas, South-East Asia Region, European Region, Eastern Mediterranean Region, and Western Pacific Region.

### Term:

Members are elected for three-year terms.

### Functions:

- Sets out agenda for the Health Assembly and resolutions for forwarding to the Assembly are adopted.
- Gives effect to the decisions and policies of the Health Assembly.
- Advises it and facilitates its work.
- The Board and the Assembly create a forum for debate on health issues and for addressing concerns raised by Member States.

## 18. Solution: B

Recently, scientists have discovered a rare new Super-Earth planet. **It is among only a handful of extra-solar planets that have been detected with both sizes and orbits close to that of Earth**

**Super-Earth Planet is expected to have a mass between the Earth's mass and that of Neptune.**

**With reference to the Solar system, the Super-Earth**

**planet would orbit at a radius anywhere between that of Venus and Earth in our solar system.**

<https://www.space.com/super-earth-discovery-near-galaxy-center.html>

## 19. Solution: A

**Mana Pass** was an ancient trade route between Uttarakhand and Tibet. Mana Pass led from Badrinath to the kingdom, Mana is a small pilgrim village that is located in the state of Uttarakhand. The village is present near the religious site of Badrinath. The village has the distinction of being the last settlement on the road to the country of Tibet. It is situated at a height of around 3219 meters.

**Nathu La** is a mountain pass in the Himalayas in East Sikkim district. It connects the Indian state of Sikkim with China's Tibet Autonomous Region

## 20. Solution: B

**Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood.** It also caters to the "Peer to Peer" collect request which can be scheduled and paid as per requirement and convenience. It is developed by NPCI.

## 21. Solution: D

The Constitution establishes the parliamentary system not only at the Centre but also in the states. The features of parliamentary government in India are:

- (a) Presence of nominal and real executives;
- (b) Majority party rule,
- (c) Collective responsibility of the **executive to the legislature**
- (d) Membership of the ministers in the legislature,
- (e) Leadership of the prime minister or the chief minister,
- (f) Dissolution of the lower House (Lok Sabha or Assembly).

## 22. Solution: C

**Silk Mark** is a certification mark in India for silk textiles. The mark certifies that the piece of textile which bears the mark is made of pure natural silk. The **certification is managed by the 'Silk Mark Organisation of India'**, a society set up by the state-controlled Central Silk Board of India. **The mark is only advisory** in nature and is **not legally endorsed**.

The **FPO mark** is a certification mark **mandatory on all processed fruit products** sold in India such as packaged fruit beverages, fruit-jams, crushes and squashes, pickles, dehydrated fruit products, and fruit extracts, following the *Food Safety and Standards Act* of 2006. The standards **have been in force since 1955** by the law of *Fruit Products Order*, after which the mark is named, but the **mark itself got a mandatory status** only after the *Food Safety and Standards Act* of 2006.

**India Organic certification is issued** by testing centers accredited by **the Agricultural and Processed Food Products Export Development Authority (APEDA)** under the *National Program for Organic Production* of the Government of India.

### 23. Solution: D

MSP is announced **for only selected** crops like wheat, rice etc. and MSP price is kept **relatively lower** than market price.

### 24. Solution: C

The National Green Tribunal has been established on 18.10.2010 under the ***National Green Tribunal Act 2010*** for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto.

The NGT has the power to hear all civil cases relating to environmental issues and questions that are linked to the implementation of laws listed in Schedule I of the NGT Act. These include the following:

The Water (Prevention and Control of Pollution) Act, 1974;

The Water (Prevention and Control of Pollution) Cess Act, 1977;

The Forest (Conservation) Act, 1980;

The Air (Prevention and Control of Pollution) Act, 1981;

The Environment (Protection) Act, 1986;

The Public Liability Insurance Act, 1991;

The Biological Diversity Act, 2002.

This means that any violations pertaining only to these laws, or any order / decision taken by the Government under these laws can be challenged before the NGT. ***Importantly, the NGT has not been vested with powers to hear any matter relating to the Wildlife (Protection) Act, 1972, the Indian Forest Act, 1927 and various laws enacted by States relating to forests, tree preservation etc.*** Therefore, specific and substantial issues related to these laws cannot be raised before the NGT.

The National Green Tribunal (NGT) has imposed a penalty of ₹25 lakh each on the States of Bihar, Jharkhand and West Bengal for not taking adequate steps to curb pollution in the river Ganga.

<http://www.conservationindia.org/resources/ngt>

### 25. Solution: C

The South Asian Association for Regional Cooperation (SAARC) was established with the signing of the SAARC Charter in Dhaka on 8 December 1985. SAARC comprises of eight Member States: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. The Secretariat of the Association was set up in Kathmandu on 17 January 1987.

***Decisions at all levels are to be taken on the basis of unanimity; and bilateral and contentious issues are excluded from the deliberations of the Association.***

The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a regional organization comprising seven Member States lying in the littoral and adjacent areas of the Bay of Bengal constituting a contiguous regional unity.

***This sub-regional organization came into being on 6 June 1997 through the Bangkok Declaration.*** It constitutes seven Member States: five deriving from South Asia, including Bangladesh, Bhutan, India, Nepal, Sri Lanka, and two from Southeast Asia, including Myanmar and Thailand.

[https://bimstec.org/?page\\_id=189](https://bimstec.org/?page_id=189)

# CSAT QUIZ SOLUTIONS

## 1. Answer: A)

Agricultural policies in India have prioritized productivity in place of sustainability

The passage focuses on bringing out the lack of sustainable practices in Indian agriculture which are creating several issues. All the examples given above are examples of measures undertaken to boost productivity at the expense of sustainability. Hence A is the correct answer.

Passage 2

Health accessibility and affordability remain a crucial healthcare problem even in the 21st century. Therefore World Health Organisation chose "Universal Health Coverage" as the theme for World Health Day 2019. India started working towards the universal problem of affordability and accessibility with the introduction of Ayushman Bharat. The scheme gave a family cover of Rs. 5 lac to socio-economically weaker section and roped in many private sector hospitals to deliver the services. Sadly, most of the roped in hospitals are situated in the urban localities and last mile accessibility remains a point of concern in the country with diverse cultures and topography.

## 2) Answer: B)

While the objective of Ayushman Bharat is laudable, there are glitches in the scheme that need correction

The passage talks about the goal of universal health coverage and goes ahead and talks about the Ayushman Bharat Scheme which aims to take India closer to universal health coverage. The passage however goes on to mention the issues with Ayushman Bharat which highlight that for the objective of universal health coverage to be attained, we need to iron out the glitches in Ayushman Bharat and hence B is the most accurate option.

## 3) Answer: A) 10

Explanation:

$\frac{5}{6}$  hr = 50 minutes.

Time required = 2hrs 30 min – 50 min = 1 hr 40 min =

$1 \frac{2}{3}$  hrs =  $\frac{5}{3}$  hrs

Required speed =  $50 * \frac{3}{5} = 30$  km/hr

Original speed =  $50 * \frac{2}{5} = 20$  km/hr

Difference =  $30 - 20 = 10$  km/hr

## 4) Correct Option: D) 108KM

Let the speed of boat in still water be  $s$  m/sec

As the object covers 100m in 50 sec, so the distance travelled by the object will be with the help of the speed of the stream only.

Speed of stream =  $100/50 = 2$  m/s

Given that,

$$(s - 2) = (s + 2) - 50 (s + 2)/100$$

$$(s - 2) = (s + 2)(1 - 1/2)$$

$$s = 6 \text{ m/sec}$$

$$s = (6 \times 18)/5 = 108/5 \text{ km/hr}$$

Distance covered by the boat in still water in 5 hours

$$= 108 \times \frac{5}{5} = 108 \text{ km}$$

Hence, option D is correct.

## 5) Correct Option: A) 12

When Ashok and Bimal together cover 450 m distance, they meet and out of this Ashok covers :

$$= \frac{12}{(12 + 18)} \times 450 = 180$$

Bimal covers  $450 - 180 = 270$  m.

So they meet, Bimal covers 270 m.

When Bimal covers 3240 meters, they would have met

$$3240/270 = 12 \text{ times}$$

Hence, option A is correct.