

UPSC Prelims- 2019

Geography



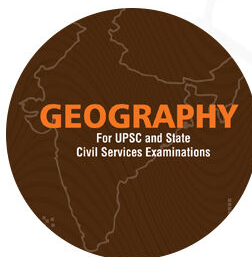
Questions Asked



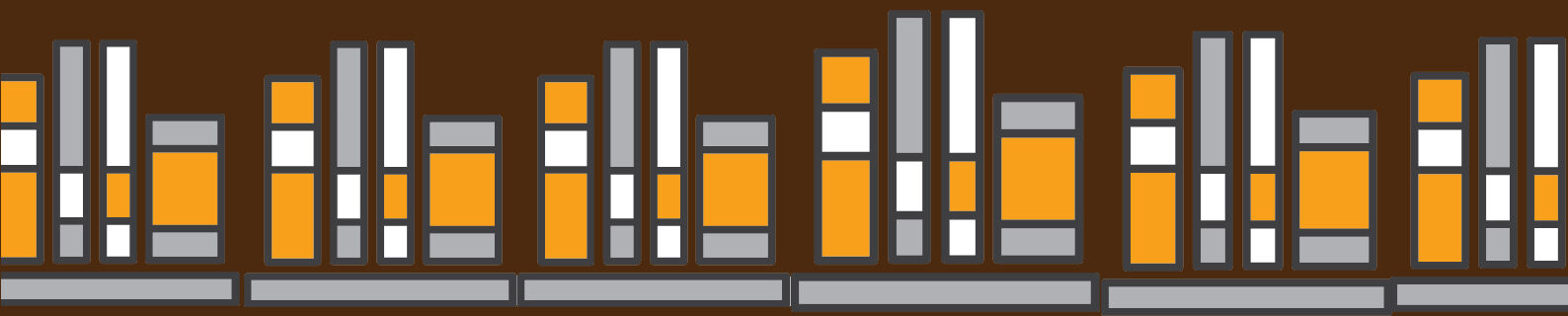
Detailed Solutions



Right Approach



PrepMate Geography
Book Performance



1. With reference to the cultivation of Kharif crops in India in the last five years, consider the following statements:

1. Area under rice cultivation is the highest.
2. Area under the cultivation of jowar is more than that of oilseeds.
3. Area of cotton cultivation is more than that of sugarcane.
4. Area under sugarcane cultivation has steadily decreased.

Which of the statements given above are correct?

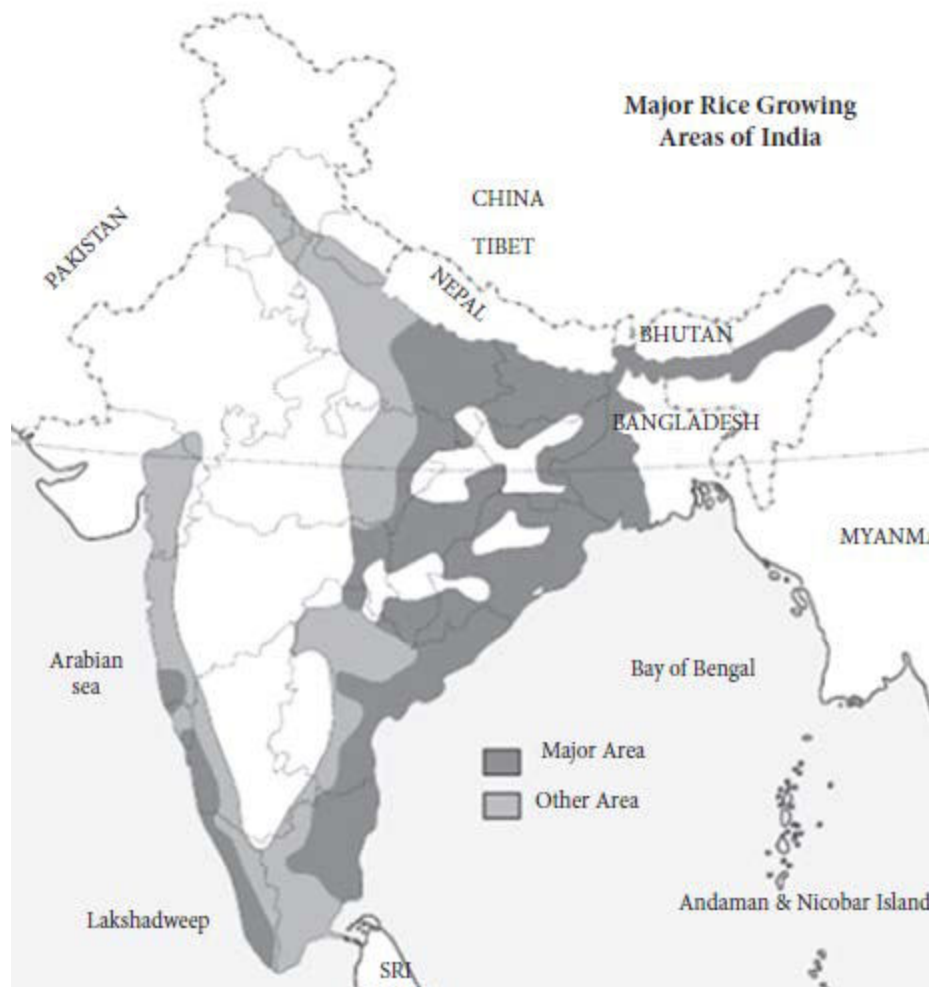
- (a) 1 and 3 only
- (b) 2, 3 and 4 only
- (c) 2 and 4 only
- (d) 1, 2, 3 and 4

Sol. 1 (a) 1 and 3 only

Source: Geography book, Chapter 27, Page 357

This question can be solved easily through combination of selection and elimination techniques. The question stem (With reference to the cultivation of Kharif crops in India in the last five years, consider the following statements) makes it even easier to solve this question. The question talks about only kharif crops.

Let us start from Statement 1. It is clear that amongst various kharif crops, the largest area is under rice cultivation.



Once we ascertain that Statement 1 is correct, we are left with answer options (a) 1 and 3 only and

(d) 1, 2, 3 and 4.

Now, we can safely rule out Statement 4. There is no information that area under sugarcane cultivation has steadily decreased. It would have been a big news that area under sugarcane cultivation is continuously decreasing.

Thus, we can safely eliminate option (d). Our answer is remaining option, which is option (a).

There is another interesting statement in this question, Statement 3- Area of cotton cultivation is more than that of sugarcane. Sugarcane is cultivated both as kharif and rabi crop. On the other hand, cotton is cultivated only as kharif crop. Certainly, when we consider this fact, then for sure area of cotton cultivation is more than that of sugarcane.

2. Consider the following statements about Particularly Vulnerable Tribal Groups (PVTGs) in India:

1. PVTGs reside in 18 States and one Union Territory.
2. A stagnant or declining population is one of the criteria for determining PVTG status.
3. There are 95 PVTGs officially notified in the country so far.
4. Irular and Konda Reddi tribes are included in the list of PVTGs.

Which of the statements given above are correct?

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

Sol. 2 (c) 1, 2 and 4

Source: PrepMate Geography Book, Chapter 30, Page 401

Statement 3 is incorrect. Once we rule out statement 3, answer is obvious.



Particularly Vulnerable Tribal Groups

Particularly vulnerable tribal groups (PVTGs) are most vulnerable among the tribal groups. In 1975, the Government of India identified the most vulnerable tribal groups as a separate category and declared 52 such groups. In 1993, additional 23 groups were added to the category, making it a total of 75 PVTGs out of the 705 scheduled tribes, spread over 17 states and one union territory (Andaman and Nicobar).

3. Consider the following pairs:

Famous place- River

1. Pandharpur- Chandrabhaga
2. Tiruchirappalli- Cauvery
3. Hampi- Malaprabha

Which of the pairs given above are correctly matched?

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

(d) 1, 2 and 3

Sol. 3 (a) 1 and 2 only

Source: PrepMate Geography, Chapter 19, Page 239

This is an interesting question. It can be solved by ascertaining validity of only Statement 3. Statement 3 is incorrect. Malaprabha rises in the Western Ghats and flows in North-West Karnataka, before joining river Krishna. On the other hand, Hampi is in eastern part of Karnataka.

East-flowing rivers		
River	Source	Information
Mahanadi	Foothills of Dandakaranya, Raipur district, Chhattisgarh	<ul style="list-style-type: none"> ■ Mahanadi drains into Bay of Bengal.
Subarnarekha, Brahmani, and Baitarani	West Bengal and Odisha	<ul style="list-style-type: none"> ■ Brahmani and Baitarani pass through Bhitarkanika
Godavari	Satmala range	<ul style="list-style-type: none"> ■ Largest river system of Peninsular India. ■ Left bank tributaries: Penganga, Wardha, Wainganga, Indravati, Sabari, and Sileru. ■ Right bank Tributary: Manjra.
Krishna	Western Ghats	<ul style="list-style-type: none"> ■ Tributaries: Bhima, Tungabhadra, Ghatprabha, Malaprabha, Musi, Hagari, Varada, and Koyna.
Cauvery (Kaveri)	Brahmgiri range of Western Ghats	<ul style="list-style-type: none"> ■ Waters are shared between Karnataka, Kerala, Tamil Nadu, and Puducherry.

4. Which one of the following National Parks lies completely in the temperate alpine zone?

- (a) Manas National Park
- (b) Namdapha National Park
- (c) Neora Valley National Park
- (d) Valley of Flowers National Park

Sol. 4 (d) Valley of Flowers National Park

Source: PrepMate Geography, Chapter 25, Page 314

The question stem asks about national park which lies completely in the temperate alpine zone. Thus, the national park should be completely based in higher Himalayas.



5. On 21st June, the Sun

- (a) does not set below the horizon at the Arctic Circle
- (b) does not set below the horizon at Antarctic Circle
- (c) shines vertically overhead at noon on the Equator
- (d) shines vertically overhead at the Tropic of Capricorn

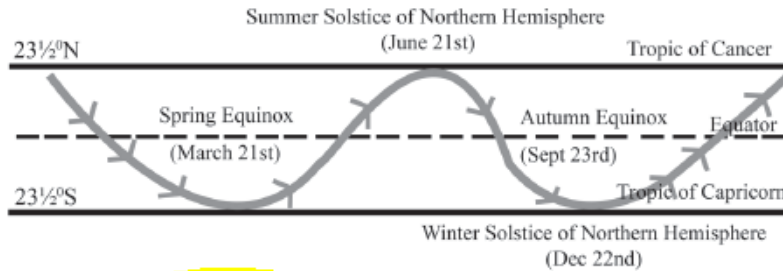
Sol. 5 (a) does not set below the horizon at the Arctic Circle

Source: PrepMate Geography, Chapter 3, Page 24

On 21st June, Sun is vertically overhead at the Tropic of Cancer and there is six months of daylight on north pole. Thus, On 21st June, the Sun does not set below the horizon at the Arctic Circle.

5 INCLINATION OF THE EARTH'S AXIS AND ITS EFFECTS

The axis is an imaginary line connecting the North Pole and the South Pole. The axis of the Earth is inclined by $23\frac{1}{2}^\circ$, thus subtending an angle of $66\frac{1}{2}^\circ$ over its plane. The revolution of the Earth around the Sun and the tilt of the Earth's axis give rise to different seasons.

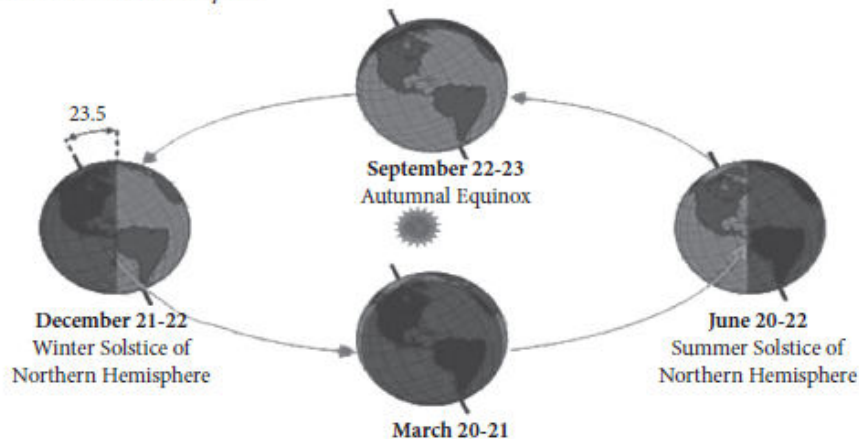


On 21 June, the Sun's rays are maximum over the Tropic of Cancer. Thus, in the northern hemisphere, it is the longest and hottest day. In the southern hemisphere, 21 June is the coldest and shortest day. The direct rays of the Sun start shifting towards the equator. Thereafter, on 23 September, the direct rays fall on the equator. Thus, all the regions on the Earth enjoy equal length of day and night in the world. September 23 is called the autumn equinox because of equal length of day and night.

The Sun's rays shift further south, towards the Tropic of Capricorn, and on 22 December, maximum direct rays fall over the Tropic of Capricorn. Thus, 22 December is the hottest and longest day in the southern hemisphere and the coldest and shortest day in the northern hemisphere.

During summers in the northern hemisphere, there are six months of daylight over the North Pole, whereas there is complete darkness during winters. The lengths of day and night vary with increase in latitude.

Thus, if the axis were perpendicular (i.e. no tilt) to the orbit, all parts of the Earth would have equal days and nights at all times of the year.



6. Why are dewdrops **not** formed on a cloudy night?

(a) Clouds absorb the radiation released from the Earth's surface.

(b) Clouds reflect back the Earth's radiation.

(c) The Earth's surface would have low temperature on cloudy nights.

(d) Clouds deflect the blowing wind to ground level.

Sol. 6 (b) Clouds reflect back the Earth's radiation.

Source: PrepMate Geography, Chapter 12, Page 113

This question requires precise application of theoretical concepts. We understand that dew are tiny droplets of water which develop on surfaces which radiate heat and experience condensation. The faster the ability to radiate heat, the higher will be the rate of condensation and dew formation.

Thus, any factor which increases the rate of heat radiation, will aid in formation of dew drops. On the other hand, any factor which reduces the rate of heat radiation, will prevent formation of dew drops.

Option (b) is the correct answer because when clouds reflect back the Earth's radiation, more heat accumulates at the surface of earth. Accumulation of more heat at surface of earth prevents condensation and thus, dew formation.

Condensation: As these water vapours rise upwards, their temperature reduces. Reduction in temperature transforms the water vapour into water. This process of transformation is called condensation. It is caused on account of loss of heat by the water vapour.

Sublimation: If the drop in temperature of air is so large that the water vapour is directly converted into ice, it is called sublimation. Both condensation and sublimation lead to precipitation.

Other outcomes of condensation or sublimation

- **Dew:** Dew refers to the droplets of water on the surface of cold objects. Dew occurs when warm and moist air comes in contact with a cold surface. On contacting colder surfaces, there is a sudden reduction in the temperature of warm air. This sudden reduction in temperature causes **condensation** of water vapour present in warm air.

7. Among the following, which one is the largest exporter of rice in the world in the last five years?

(a) China

(b) India

(c) Myanmar

(d) Vietnam

Sol. 7 (b) India

Source: PrepMate Geography, Chapter 31, Page 417

Rice	<ul style="list-style-type: none"> ■ Area under cultivation: India ■ Producer: China, India ■ Largest exporter: India, Thailand
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8. Consider the following pairs:

Sea: Bordering country

1. Adriatic Sea: Albania

2. Black Sea: Croatia

3. Caspian Sea: Kazakhstan

4. Mediterranean Sea: Morocco

5. Red Sea: Syria

Which of the pair given above are correctly matched?

(a) 1, 2 and 4 only

(b) 1, 3 and 4 only

(c) 2 and 5 only

(d) 1, 2, 3, 4 and 5

Sol. 8 (b) 1, 3 and 4 only

Source: PrepMate Geography

Pair 1 (Adriatic Sea: Albania) is correctly matched. Source: PrepMate Geography, Chapter 16, Page 178 and 181

Balkan Peninsula	<ul style="list-style-type: none"> ■ Consists of Bulgaria, Macedonia, Albania, and Greece ■ Surrounded by Black Sea, Aegean Sea, and Adriatic Sea
Adriatic Sea	<ul style="list-style-type: none"> ■ North-east of Italy, Part of Mediterranean Sea

Pair 2 (Black Sea: Croatia) is not correctly matched. Source: PrepMate Geography, Chapter 16, Page 178

Black Sea	<ul style="list-style-type: none"> Separates Europe from Asia Bordered by Romania, Turkey, Bulgaria, Ukraine, Georgia, and Russia (Crimea acquired through referendum from Ukraine in 2014) 	<ul style="list-style-type: none"> Danube Dnieper Dniester
Sea of Azov	<ul style="list-style-type: none"> South-east of Ukraine, North of Black Sea 	
Sea of Marmara	<ul style="list-style-type: none"> South-west of Black Sea Connects Black Sea and Aegean Sea 	
Aegean Sea	<ul style="list-style-type: none"> Located between Greece and Turkey, part of Mediterranean Sea 	

Pair 3 (Caspian Sea: Kazakhstan) is correctly matched. Source: PrepMate Geography, Chapter 16, Page 187

Caspian Sea	<ul style="list-style-type: none"> Largest lake in the world, five times larger than Lake Superior (second largest) Separates Europe from Asia Bordered by Iran, Azerbaijan, Russia, Kazakhstan, Turkmenistan
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Pair 4 (Mediterranean Sea: Morocco) is correctly matched. Source: PrepMate Geography, Chapter 16, Page 178

Name	Location (ocean)	Rivers draining (imp.)
Mediterranean Sea	<ul style="list-style-type: none"> Separates Europe from Africa Strait of Gibraltar connects it to the Atlantic Ocean 	<ul style="list-style-type: none"> Tiber (Italy) Rhone (France)

Morocco is situated in North Africa.

Pair 5 (Red Sea: Syria) is incorrectly matched. Source: PrepMate Geography, Chapter 16, Page 183

Red Sea	Separates Asia from Africa (adjoining Saudi Arabia, Yemen, Sudan, Eritrea, Djibouti, Egypt, and Somalia)	Indian Ocean
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9. Consider the following pairs:

Glacier: River

- Bandarpunch: Yamuna
- Bara Shigri: Chenab
- Milam: Mandakini
- Siachen: Nubra

5. Zemu: Manas

Which of the pairs given above are correctly matched?

(a) 1, 2 and 4

(b) 1, 3 and 4

(c) 2 and 5

(d) 3 and 5

Sol. 9 (a) 1, 2 and 4

Topic: Geography

Origin Glacier: River

1. Bandarpunch: Yamuna

2. Bara Shigri: Chenab

3. Milam: Gori Ganga

4. Siachen: Nubra

5. Zemu: Teesta

Pairs 1, 2 and 4 are correctly matched.

