

16-05-2022

Twin Cyclone

Why in Newspapers?

Recently, a pair of tropical cyclones – 'Cyclone Asani' and 'Cyclone Karim' – have developed on either side of the equator, one in the Northern Hemisphere and one in the Southern Hemisphere.

Quick Issue?

- Both these cyclones originated in the same longitude, but later their path has diverged.
- 'Cyclone Asani' originated in the 'Bay of Bengal'.
- 'Cyclone Karim' is moving into the open sea west of Australia.

Historical Background?

- The interaction of the wind and monsoon system, together with the Earth system, gives rise to 'Twin Cyclones'.
- The origin of 'twin cyclones' is basically due to equatorial Rossby waves.
- 'Rossby waves' are named after the famous meteorologist 'Karl-Gustaf Rossby', who was the first to explain that these waves are produced by the rotation of the Earth.
- Rossby waves cause huge waves in the ocean whose wavelength is about 4,000-5,000 km.
- In this system, one vortex is formed each in the Northern Hemisphere and the Southern Hemisphere, and these two are 'mirror images' of each other i.e. 'similar' but 'opposite'.
- In the 'Vortex' formed in the Northern Hemisphere, the rotation speed is counter-clockwise and while 'Vortex' formed in the Southern Hemisphere rotates in the clockwise direction.
- The value of 'Vorticity' is positive in both the buildings. 'Confusion' is a measure of rotation.
- When the 'vorticity' is 'positive' in both the northern and southern hemispheres, as in the case of Rossby waves, the moist air in the outer layer of the vortex rises slightly. And this is enough to start the further process.

Other key Facts?

- The Madden-Julian Oscillation (MJO) is a large group of clouds and convection. And its size varies from about 5000-10,000 km.
- It consists of 'Rossby waves' and 'Kelvin waves', which are a type of 'wave configuration' often seen in the ocean.
- The eastern side of the MJO consists of 'Kelvin waves', while the western side ie the trailing edge of the MJO has Rossby waves, and also two 'vortexes' on either side of the equator.
- However, not all tropical cyclones originate from the Madden-Julian Oscillation. Sometimes these cyclones are also formed only by 'Rossby waves', which have two vortices on either side.



- When the air rises slightly, the water vapor condenses to form a cloud. And as it condenses, it gives out the latent heat of vaporization.
- The atmosphere warms up, this part of the air rises upwards, and this process produces a 'positive reaction'.
- Being lighter than the surrounding air, this hot part of the air rises further, and it forms dark clouds.
- Meanwhile, the air from both the sides becomes 'wet' and as a result 'cyclone' is formed when certain conditions are present.

LIKELY QUESTION ASKED IN PRELIMINARY EXAM

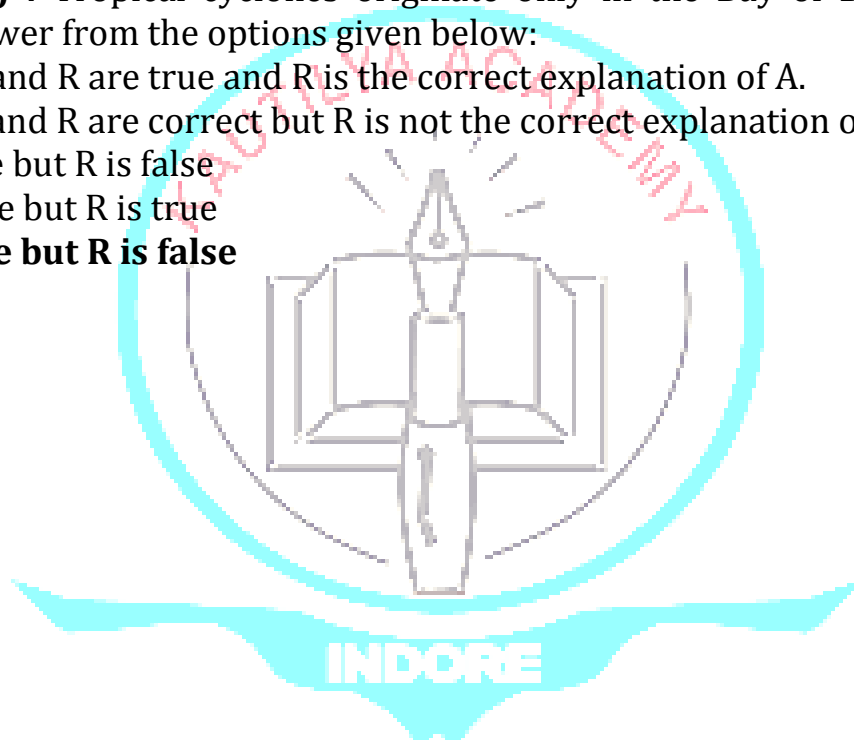
Que: Consider the following statements:

Assertion (A): The East Coast of India is more affected by tropical cyclones than the West Coast of India.

Reason (R) : Tropical cyclones originate only in the Bay of Bengal. Choose the correct answer from the options given below:

- (A) Both A and R are true and R is the correct explanation of A.
- (B) Both A and R are correct but R is not the correct explanation of A
- (C) A is true but R is false
- (D) A is false but R is true

Ans : (C) A is true but R is false



Police Reform

Why in Newspapers?

Recently, the Vice President of India has called for a renewed thrust to implement reforms in the police forces.

Quick Issue?

- A progressive, modern India must have a police force that fulfills the democratic aspirations of the people.
- There is a need to upgrade the skills of our policemen to effectively deal with crimes like cyber crime and economic crimes of the 21st century.

Historical Background?

- After serving as DGP of Uttar Pradesh Police and Assam Police apart from holding several other posts, 'Prakash Singh' after retirement filed a Public Interest Litigation in the Supreme Court seeking police reforms in the year 1996 .
- In September 2006, the Supreme Court, while delivering a landmark judgment on this petition, directed all states and union territories to implement police reforms.
- The tenure and selection process of the DGP should be fixed to avoid a situation like appointing the officers who retire in a few months to the post of 'Director General of Police' (DGP).
- To ensure that there is no political interference, a minimum tenure should be fixed for the 'Inspector General of Police', so that they cannot be transferred midway by politicians.
- Decisions relating to the appointments of officers should be made by the Police Establishment Boards (PEBs) consisting of police officers and senior bureaucrats, separating the posting and transfer powers of political leaders.
- State Police Complaints Authority (SPCA) should be established to hear the common people suffering from police action.
- To improve policing, work related to investigation and law and order should be separated.

Other key facts?

Various committees in this regard:

- The National Police Commission, the Ribeiro and Padmanabhaiah committees, and other commissions, point directly to police reforms.
- In addition, the Malimath Committee and the Second Administrative Reforms Commission have indirectly expressed the need for police reforms.
- The National Police Commission in India was constituted on 15 November 1977. The purpose of which was to make recommendations for police reforms. Dharamveer was the chairman of this commission. A total of eight reports were prepared and submitted to the government by the Police Commission between February 1979 and May 1981.



- State Security Commissions (SSC) should be constituted, and members of civil society should be included in them.
- A 'National Security Commission' should be set up.
- No state has fully complied with the directions of the apex court since its judgment in 2006.
- The 'Model Police Act, 2006' has been reviewed by the Central Government. Accordingly, the Model Police Bill, 2015 has been drafted and placed on the website of BPR&D.

LIKELY QUESTION ASKED IN PRELIMINARY EXAM

Que. Which of the following is correct?

- A. The selection and training of the members of the All India Services is done by the Central Government.
- B. Civil servants are employees of the Government of India and all government employees are public servants.

(A) Both A and B

(B) Only A

(C) only B

(D) not both A and B

Ans : (A) Both A and B

Que. Given below are the ranks of the Indian Police Force. Arrange them in ascending order.

1. SP

2. IGP

3. DGP

4. ASP

(A) 2, 1, 4, 3

(B) 1, 4, 2, 3

(C) 4, 1, 2, 3

(D) 3, 1, 2, 4

Ans : (C) 4, 1, 2, 3

