



Daily Current Affairs Prelims Quiz - 22-05-2020 - (Online Prelims Test)

1) When a sound producing source moves with a speed higher than that of sound, it produces shock waves in air. The sharp and loud sound produced by these shock waves is called?

- Sonic Boom
- Doppler Waves
- Super Mach Quakes
- None of the above

Answer : a

Sonic boom

- Sound travels in the form of waves which are emitted outwards from its source.
- In air, the speed of these waves depends on a number of factors, such as the temperature of the air and altitude.
- From a stationary source, such as a television set, sound waves travel outwards in concentric spheres of growing radii.
- When the source of sound is moving - e.g, a truck- the successive waves in front of the truck get closer together, and the ones behind it spread out.
- This is also the cause of the **Doppler effect- in which bunched waves at the front appear at a higher frequency to a stationary observer, and spread out waves that are behind are observed at a lower frequency.**
- As long as the source of the sound keeps moving slower than the speed of sound itself, this source- say a truck or a plane - remains nested within the sound waves that are travelling in all directions.
- When an aircraft travels at supersonic speed - meaning faster than sound (>1225 kmph at sea level) - the field of sound waves moves to the rear of the craft.
- A stationary observer thus hears no sound when a supersonic flight approaches, since the sound waves are at the rear of the latter.
- At such speeds, both newly created as well as old waves, are forced into a region at the aircraft's rear called a 'Mach cone', which extends from the craft and intercepts the Earth in a hyperbola-shaped curve, and leaves a trail called the 'boom carpet'.
- The loud sound that is heard on the Earth when this happens is called a 'sonic boom'.
- When such aircraft fly at a low altitude, the sonic boom can become intense enough to cause glass to crack or cause health hazards.
- Overland supersonic flights have thus been banned in many countries.

2) Consider the following statements with respect to *Pangong Tso Lake*

1. It is a long, narrow, deep, exorheic Lake through which the Line of Actual Control (LAC), which divides India and China, passes through.
2. It is the world's highest saltwater lake situated at a height of more than 14,000 ft in the Ladakh Himalayas.

Which of the statement(s) given above is/are correct?

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

Answer : b

- *Most of the clashes between the Indian and Chinese armies occur in the disputed portion of the Pangong Tso lake.*

Pangong Tso Lake

- In the Ladakhi language, Pangong means extensive concavity, and Tso is lake in Tibetan.
- Pangong Tso is a long narrow, deep, **endorheic (landlocked) lake** situated at a height of more than 14,000 ft in the Ladakh Himalayas.
- The brackish water lake freezes over in winter, and becomes ideal for ice skating and polo.
- The legendary 19th century Dogra general Zorawar Singh is said to have trained his soldiers and horses on the frozen Pangong lake before invading Tibet.
- The Line of Actual Control (LAC) mostly passes on the land, but Pangong Tso is a unique case where it passes through the water as well.
- The points in the water at which the Indian claim ends and Chinese claim begins are not agreed upon mutually.

3) Consider the following statements with respect to *WHO Executive Board*

1. It is composed of 194 members, represented by one person from each member country, technically qualified in the field of health.
2. The members of the WHO Executive Board will be elected for a five-year term.
3. The Board's Chairman Post is held by rotation for one year by each of the WHO's six regional groups.

Which of the statement(s) given above is/are correct?

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

Answer : a

- *Union Health Minister Dr. Harsh Vardhan is set to take charge as Chairman of the WHO Executive Board at its 147th session.*
- Vardhan would succeed Dr Hiroki Nakatani of Japan, currently the Chairman of the 34-member WHO Executive Board.
- With this, India would now be playing a more prominent role at the World Health Organisation (WHO).

World Health Organisation (WHO)

- It is a specialised agency of the United Nations responsible for international public health.
- It is governed by two decision-making bodies — the **World Health Assembly** and the **Executive Board**.
- The agency's headquarters are located at Geneva in Switzerland.
- **India is a member state of the South East Asia Region at the WHO.**
- Last year, the bloc had unanimously decided that India's nominee would be elected to the executive board for a three-year term.

WHO Executive Board

- The Board is composed of **34 members** technically qualified in the field of health, with members being elected **for three-year terms**.
- The Health Assembly is the WHO's decision-making body, and consists of 194 Member States.
- The **Board chairman's post is held by rotation for one year** by each of the WHO's six regional groups.

1. African Region
2. Region of the Americas
3. South-East Asia Region
4. European Region
5. Eastern Mediterranean Region
6. Western Pacific Region

4) Which one of the following statements is *incorrect* with respect to *SpaceX Demo-2 Mission*, sometimes seen in the news recently?

- a. It is a part of NASA's Commercial Crew Program
- b. It is the first crewed flight to launch from the American soil since the conclusion of the space shuttle era in 2011
- c. The mission's main objective is to encourage private companies to provide crew transportation services to and from low-Earth orbit
- d. None of the above

Answer : c

- **NASA's SpaceX Demo-2** test flight Mission will lift off for International Space Station (ISS) on May 27, 2020, becoming the **first crewed flight to launch from American soil** since the conclusion of the space shuttle era in 2011.
- The Demo-2 mission is **part of NASA's Commercial Crew Program**.

Commercial Crew Program

Objectives

- The main objective of this program is to make access to space easier in terms of its cost, so that cargo and crew can be easily transported to and from the ISS, enabling greater scientific research.
- Secondly, by encouraging private companies such as Boeing and SpaceX to provide crew transportation services to and from low-Earth orbit, NASA can focus on building spacecraft and rockets meant for deep space exploration missions.

Background

- Boeing and SpaceX were selected by NASA in September 2014 to develop transportation systems meant to transfer crew from the US to the ISS.
- These integrated spacecraft, rockets and associated systems will carry up to four astronauts on NASA missions, maintaining a space station crew of seven to maximize time dedicated to scientific research on the orbiting laboratory.

5) Which one of the following statements is *incorrect* with respect to *Sound Waves*?

- a. Sound is a mechanical wave and needs a material medium like air, water, steel etc. for its propagation
- b. In sound propagation, it is the energy of the sound that travels and not the particles of the medium
- c. The speed of sound waves depends on number of factors such as temperature of the air and altitude, etc.

d. None of the above

Answer : d

