



Daily Current Affairs Prelims Quiz 13-01-2022 - (Online Prelims Test)

1) Consider the following statements regarding the Darvaza gas crater:

1. It is located in the country of Tajikistan in the Karakum desert.
2. It emits methane gas which is the primary contributor to the formation of ground-level ozone.
3. Microbial life forms are found only inside the crater and not outside the crater.

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

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

Answer : c

Turkmenistan President Gurbanguly Berdymukhamedov has ordered experts to find a way to extinguish a fire in a huge natural gas crater, the Darvaza gas crater also known as the 'Gateway to Hell'.

Gateway of Hell

- Located in the Karakum desert, 260 kilometres away from Turkmenistan's capital, Ashgabat, the crater has been burning for the last 50 years.
- The crater is 69 metres wide and 30 metres deep.
- In 1971, Soviet geologists were drilling for oil in the Karakum desert when they hit a pocket of natural gas by mistake, which caused the earth to collapse and ended up forming three huge sinkholes.
- This pocket of natural gas contained methane, hence to stop that methane from leaking into the atmosphere, the scientists lit it with fire, assuming the gas present in the pit would burn out within a few weeks.
- Turkmenistan is one of the five Caspian Sea littoral countries, an area with large volumes of oil and natural gas reserves.
- In 2018, the country's president Gurbanguly Berdymukhamedov officially renamed it as the "Shining of Karakum".

Findings from the crater

- In 2013, George Kourounis, a Canadian adventurer, was the first person to go inside the crater in an expedition funded by National Geographic.
- He collected soil samples from the crater.
- The samples showed the presence of microbial life-forms that are thriving in the hot, methane-rich environment and they were not found in any of the surrounding soil outside the crater.

How harmful are methane leaks?

- According to the United Nations Environment Programme, “Methane is the primary contributor to the formation of ground-level ozone, a hazardous air pollutant and greenhouse gas, exposure to which causes 1 million premature deaths every year.
- Methane is also a powerful greenhouse gas. Over a 20-year period, it is 80 times more potent at warming than carbon dioxide.”
- Turkmenistan has been at the centre of methane leakages.

2) Consider the following statements regarding Collective Security Treaty Organisation (CSTO)

1. It is an intergovernmental alliance consist of six countries from six different continents.
2. The objective of the CSTO is to safeguard the Allies freedom and security by both political and military means.

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

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

Answer : d

The new year saw protests in yet another unexpected place: Kazakhstan in Central Asia. Although ruled by autocratic regimes since the USSR’s disintegration, it is unexpected because Kazakhstan is the richest Central Asian Republic and is thought to be one of the more stable of these republics.

Collective Security Treaty Organization (CSTO)

- It is an intergovernmental military alliance (six countries) that came into effect in 2002.
- Its’ origin can be traced to the Collective Security Treaty, 1992 (Tashkent Treaty).
- The headquarter is located in the Russian capital of Moscow.
- The objectives of the CSTO is to strengthen peace, international and regional security including cybersecurity and stability, the protection on a collective basis of the independence, territorial integrity and sovereignty of the member states.
- Members include Armenia, Belarus, Kazakhstan, Kyrgyzstan, Russia and Tajikistan.
- Tajikistan is the only country out of the six-member bloc led by Russia that shares a border with Afghanistan.

3) Consider the following statements regarding Cryogenic Engine:

1. Cryogenic Engines are designed to work in extreme higher temperatures above 300 degrees Celsius.
2. They use liquid oxygen as the fuel and liquid hydrogen as the coolant.

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

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

Answer : d

Qualification test of cryogenic engine for Gaganyaan successful.

Cryogenic Technology

- Cryogenic means low temperature.
- The word itself refers to the technology of sub-zero temperatures.
- Cryogenic engines use liquid oxygen as the oxidizer and liquid hydrogen as the fuel.
- As it is known Oxygen can be kept in the liquid state below - 183 degrees Celsius, while hydrogen requires temperature below - 253 degrees Celsius to be in liquid form.
- Since liquid oxygen is extremely reactive and combustible it can be used as a propellant to carry heavy loads.
- It is useful for lifting things in space, storing medicines and drugs at low temperatures etc.
- It is used in the last stage of speed launch vehicles, SPVs.

4) Consider the following statements about Swami Vivekananda:

1. He suggested the three ways to attain moksha as Jnana, Bhakti, and Karma.
2. He was called the 'maker of modern India' by Subhas Chandra Bose.
3. He established the Belur Math in 1899 and was the disciple of Ramakrishna Paramhansa.

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

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

Answer : b

PM pays tributes to Swami Vivekananda on his Jayanti.

Swami Vivekananda

- He was born as Narendranath Datta on 12th January, 1863.
- In 1893, upon the request of Maharaja Ajit Singh of the Khetri State, he took the name 'Vivekananda.'
- He preached 'neo-Vedanta', an interpretation of Hinduism through a Western lens, and believed in combining spirituality with material progress.
- Best known for his speech at the World Parliament of Religion in Chicago in 1893.
- Spelt out the four pathways of attaining moksha from the worldly pleasure and attachment in his books - Raja-yoga, Karma-yoga, Jnana-yoga and Bhakti-yoga.
- Netaji Subhas Chandra Bose had called Vivekananda the "maker of modern India."
- He was the chief disciple of the 19th-century mystic Ramakrishna Paramhansa and established the Ramakrishna Mission in 1897.
- In 1899, he established the Belur Math, which became his permanent abode.
- He died at Belur Math in 1902.
- National Youth Day is held every year to observe the birth anniversary of Swami Vivekananda.

5) Identify the countries bordering Aral Sea:

1. Uzbekistan
2. Kazakhstan
3. Turkmenistan
4. Russia

Choose the correct option.

- a. 2 and 4 only

- b. 2, 3 and 4 only
- c. 1 and 2 only
- d. 1, 2, 3 and 4

Answer : c

Aral Sea

- It was once-large saltwater lake of Central Asia and was the world's fourth largest body of inland water but has shrunk remarkably.
- It straddles the boundary between Kazakhstan to the north and Uzbekistan to the south.
- The name roughly translates as "Sea of Islands", referring to over 1,100 islands that once dotted its waters; in the Turkic languages aral means "island, archipelago".



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