

Q: Recently Yamuna River will now be the focus of a cultural push to renew India's civilisational and socio-religious connect with its waterbodies. Consider the following statement regarding Yamuna:

1. It originates from the Banderpoonch peak.
2. It is the largest tributary of the Ganga in the northern plains.
3. Hindon River is the longest tributary of Yamuna River.

Choose the correct option from the codes given below:

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

Ans: a

Explanation:

- Yamuna River originates from the Yamunotri Glacier on the southwestern slopes or Banderpoonch peak in the Mussoorie range of the lower Himalayas.
- Flows along states of Uttarakhand, Himachal Pradesh, Haryana enters Delhi and merges with the Ganga near Triveni Sangam, Allahabad(Prayagraj).
- The largest tributary of the Ganga in the northern plains.
- Its main affluent in the upper reaches is the Tons which also rises from the Bandarpunch glacier.
- The Tons is the longest tributary of the Yamuna River and its flows through Garhwal, the western part of the Himalayan state of Uttaranchal.

Q: Recently Pushkaralu festival celebrated in Varanasi. Consider the following statement:

1. It is an Indian festival dedicated to worshipping of Murugan.
2. It is celebrated at shrines along the banks of 12 major sacred rivers in India.
3. Each river is associated with a zodiac sign.

Choose the correct option from the codes given below:

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

Ans: b

Explanation:

- Pushkaram is an Indian festival dedicated to worshipping of rivers.
- It is also known as Pushkaralu (in Telugu), Pushkara (in Kannada) or Pushkar.
- It is celebrated at shrines along the banks of 12 major sacred rivers in India, in the form of ancestor worship, spiritual discourses, devotional music and cultural programmes.
- The celebration happens annually, once in 12 years along each river.
- Each river is associated with a zodiac sign, and the river for each year's festival is based on which sign Jupiter is in at the time.

Q: South Col Glacier is related to which of the following mountain peak?

- a) Kangchenjunga
- b) Lhotse
- c) Mount Everest
- d) Manaslu

Ans: c

Explanation:

- The South Col is a sharp-edged col between Mount Everest and Lhotse, the highest and fourth-highest mountains in the world, respectively.
- At a mean elevation of 7,985 mean sea level, this glacier is the highest glacier in the world.

- With estimated thinning rates of nearly 2 m per year even glaciers such as South Col Glacier, which is located at the highest point in the world, may vanish by mid-century.

Q: Consider the following statement regarding “Heat Dome”:

1. It is a type of high-pressure system that forms over a large area in the atmosphere.
2. The system traps hot air and prevents it from flowing to rise and cool.
3. Heat domes are just one of the atmospheric conditions that can contribute to the formation of a heat wave.

Choose the correct option from the codes given below:

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

Ans: d

Explanation:

- A heat dome is a type of high-pressure system that forms over a large area in the atmosphere, and causes extremely hot and dry weather conditions. The system traps hot air and prevents it from flowing to rise and cool. This air then becomes compressed and heats up, leading to a dome-shaped area of hot air that can persist for several days or even weeks.
- While many people use ‘heat domes’ and ‘heat waves’ interchangeably, heat domes are just one of the atmospheric conditions that can contribute to the formation of a heat wave.

Q: Consider the following statement regarding Genetic engineering in healthcare:

1. CRISPR technology has been used increasingly in insects for their economic benefits in silk production.
2. Mosquitoes, specifically, are genetically enhanced for their ability to target insect-borne diseases.
3. It is not used for pest control in agriculture.

Choose the correct option from the codes given below:

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

Ans: a

Explanation:

- CRISPR technology has implications beyond possible warfare in multiple fields of research, ranging from agriculture, food production, biotechnology, food enhancement, and medicine.
- Recently, CRISPR technology has been used increasingly in insects, including moths and butterflies, for their economic benefits in silk production.
- It has also been used to enhance insect genomes for pest control in agriculture without negatively affecting non-pest insects.
- Mosquitoes, specifically, are genetically enhanced for their ability to target insect-borne diseases.