Daily Current Affairs Prelims Quiz - 10-11-2020 - (Online Prelims Test)

1) Consider the following statements with respect to *saffron*

1. The pH level of the soil is an important factor for saffron production.
2. Areas in Jammu & Kashmir are the only places in India suitable for saffron cultivation.
3. Kashmiri Saffron was given geographical indication tag by the geographical indications registry in 2008.

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

a. 1 only

b. 1 and 2 only

c. 1, 2 and 3

d. None of the above

Answer : a

- So far, the cultivation of saffron – the most expensive spice – in India has been limited to a few areas in Jammu and Kashmir such as Pampore, Budgam, Srinagar and Kishtwar districts.
- The Ministry of Science and Technology, through the Department of Science and Technology (DST), is now looking at extending its cultivation to some states in the Northeast.
- The North East Centre for Technology Application and Reach (NECTAR), an autonomous body under the Department of Science and Technology, supported a pilot project to explore the feasibility of growing saffron in the northeast region of the country with same quality and in higher quantity.
- The project has yielded successful results in Yangyang village of South Sikkim, which produced its first crop of saffron this September.
- The matching of climatic and geographical conditions between Pampore (Kashmir) and Yangyang (Sikkim) led to the successful sample farming of saffron in Yangyang.
- Kashmiri Saffron was given GI Tag recently in July 2020.
- The Kashmiri saffron crop sees both decline in its production as well as shrinking of the land under cultivation despite efforts taken through National Mission on Saffron.

Saffron Conditions

- Saffron needs to remain underground for about 45 days at sub-zero temperatures.
- It also requires adequate rain, especially once sown in August.
- The pH level of the soil was a particularly important factor.

2) *Yarkovsky effect*, sometimes seen in the news recently, refers to?

a. A sharp surge in brightness around zero phase angles

b. A minuscule push on a small body in space, imparted by sunlight

c. Black holes emit thermal radiation with a temperature inverse to the black hole’s mass

d. When light falls on a metal, it kicks out electrons from their orbits around atomic nuclei

Answer : b

- The Asteroid Apophis was discovered in 2004 and since then it was revealed that the probability of a collision are almost negligible.
- It was earlier predicted to pass really close to Earth in 2068.
- But, according to the new calculations, the asteroid is drifting away from its original orbit now.
- The change in orbit is about 557 feet (170 metres) per year.
- The details were revealed by the lead author David Tholen who has been monitoring the asteroid closely from the University of Hawaii at Manoa.

Yarkovsky Effect

- The asteroid's orbit has been disturbed by the heat it is taking from the Sun.
- This phenomenon is called Yarkovsky effect as it celestial object's path changes due to heat energy being radiated asymmetrically.
- Basically, the heat that an asteroid radiates gives it a very tiny push.
- The warmer hemisphere [of the asteroid] would be pushing slightly more than the cooler hemisphere, and that causes the asteroid to drift away from what a purely gravitational orbit would predict.

3) *Shivalik Elephant Reserve* is located in which of the following states?

a. Bihar
b. Uttarakhand
c. Uttar Pradesh
d. None of the above

Answer : b

- The ***Uttarakhand government*** is considering denotifying the Shivalik Elephant Reserve.
- The matter, officials said, will be raised before the state Wildlife Advisory Board for discussion in its next meeting.
- If the board gives an in-principle approval, a detailed proposal will be taken up and the matter communicated to the Ministry of Environment, Forest and Climate Change (MoEF).
- The Shivalik Elephant Reserve which spreads over 5,000 sq km was notified in 2002.

4) The gland that produces tears in eyes is called as?

a. Pineal glands
b. Lacrimal gland
c. Sebaceous glands
d. Ceruminous glands

Answer : b

5) Consider the following statements with respect to *Tarballs*

1. They are small light-absorbing, carbonaceous particles.
2. They are formed from black carbon, emitted during the burning of biomass.
3. It deposits on snow and ice and could potentially contribute to hastening of glacial melt and global warming.

Which of the statements given above are correct?

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

Answer : b

- *A recent study has found that nearly 28 per cent of particles collected from the air samples from a research station in the **Himalaya-Tibetan Plateau** were tarballs.*
- The data revealed that a dense array of active fire spots — corresponding to large-scale wheat-residue burning on the Indo-Gangetic Plain — occurred along the pathways of air masses that reached the Himalayan research station during sampling.

Tarballs

- Tarballs are formed from ***brown carbon***, emitted during the burning of biomass or fossil fuels.
- ***Black Carbon (BC)*** is emitted mainly by high-temperature combustion processes (diesel engines, etc.) whereas ***Brown Carbon*** (BrC), emitted mainly by biomass combustion.
- Tarballs are small light-absorbing, carbonaceous particles that deposit on snow and ice.
- The percentage of the tarballs increased on days of higher levels of pollution and could contribute to hastening of glacial melt and global warming, the study said.
- Until now, black carbon was found to be transported long distances by wind to the Himalayan atmosphere; there was not sufficient direct evidence for Primary brown carbon (BrC) in the Himalayan atmosphere.
- Primary BrC co-emitted with black carbon (BC) from biomass burning is an important light-absorbing carbonaceous aerosol.
- The black carbon from the Indo-Gangetic Plain can reach the Himalaya region and influence glacial melting and climatic change.
- They suggested future climate models to consider the long-range transport of tarballs to the Himalayas to arrest climate change developments.