

Q: Consider the following statement regarding International Solar Alliance:

1. It is a joint initiative of India and France against climate change through the deployment of solar energy solutions.
2. ISA is a coalition of solar resource rich countries lying fully or partially between the Tropic of Cancer and the Tropic of Capricorn.
3. The Cancan Declaration establishes ISA as an alliance dedicated to the promotion of solar energy.

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:

- The ISA was conceived as a joint effort by India and France to mobilise efforts against climate change through the deployment of solar energy solutions.
- It was presented by the leaders of the two countries at the 21st Conference of Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Paris in 2015.
- With the signing and ratification of the ISA Framework Agreement by 15 countries on 6 December 2017, ISA became the first international intergovernmental organisation to be headquartered in India.
- ISA is a coalition of solar resource rich countries lying fully or partially between the Tropic of Cancer and the Tropic of Capricorn to specifically address energy needs by harnessing solar energy.
- The Paris Declaration establishes ISA as an alliance dedicated to the promotion of solar energy among its member countries.

Q: Consider the following statement regarding Indus Water Treaty:

1. IMF played the role of signatory to sign the treaty between India and Pakistan.
2. According to this treaty, all the waters of the eastern rivers is allocated to India.
3. The waters of western rivers have been assigned largely to Pakistan.

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:

- India and Pakistan signed the Indus Water Treaty in 1960 after nine years of negotiations, with the Washington-based World Bank being a signatory.
- The treaty sets out a mechanism for cooperation and information exchange between the two countries regarding their use of the rivers.
- Under the Indus Water Treaty (IWT), all the waters of the eastern rivers Sutlej, Beas, and Ravi amounting to around 33 million acre feet (MAF) annually is allocated to India for unrestricted use.
- The waters of western rivers Indus, Jhelum, and Chenab amounting to around 135 MAF annually have been assigned largely to Pakistan.
- India is permitted to construct the run of the river plants on western rivers with limited storage as per criteria specified in the treaty.

Q: Consider the following statement regarding Pinaka Rocket:

1. India will export this indigenously manufactured rocket launcher to Armenia.
2. It is named from the legendary bow of Shiva

Choose the correct option from the codes given below:

- a) 1 Only
- b) 2 Only
- c) 1 and 2
- d) None of the above

Ans: c

Explanation:

- India is all set to export its indigenously-manufactured Pinaka rocket launcher to Armenia.
- Armenia has placed an export order to be completed within two years and Nigeria and Indonesia are in line to make a purchase.
- The Pinaka rocket launcher gets its name from the legendary bow of Shiva.
- It is a comprehensive system that integrates high energy propulsion, submunition warheads, servo- controlled launcher structure as well as fire control computer.
- The system is mounted on a Tatra truck for mobility.

Q: Consider the following statement regarding Jumping Spider:

1. This new species had been found from Thar Desert of Rajasthan.
2. This spider stays among dry leaf blades.
3. This spider lives in the moist deciduous forest.

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:

- Two new species of Jumping Spiders coming under the family of jumping spiders (Salticidae) were discovered from the Thar desert of Rajasthan and the Kurichiyad forest ranges of the Wayanad Wildlife Sanctuary.
- *Afraflacilla miajlarensis*, the Thar species, is characterised by white fine hairs on a black head and black horizontal lines on the abdomen. This spider stays among dry leaf blades.
- *Afraflacilla kurichiadensis*, the Wayanad species, is characterised by red patches around the eyes and white hairs on the abdomen. The bulged first pair of legs are also a special feature of this species. This spider lives in the moist deciduous forest of Kurichiyad.

Q: Consider the following statement:

1. Large mammalian herbivores like the Yak and Ibex play a crucial role in stabilising the pool of soil carbon.
2. Depending on the soil conditions, nitrogen can either stabilise or destabilise the carbon pool.
3. Soil contains less carbon than all plants and the atmosphere combined.

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:

- The 16-year-long study states that large mammalian herbivores like the Yak and Ibex play a crucial role in stabilising the pool of soil carbon in grazing ecosystems such as the Spiti region in the Himalayas.
- Since soil contains more carbon than all plants and the atmosphere combined, it is important to ensure its persistence. When plants and animals die, dead organic matter remains in the soil for a long duration before microbes break it down and release carbon into the atmosphere as carbon dioxide.

- Depending on the soil conditions, nitrogen can either stabilise or destabilise the carbon pool. Grazing by herbivores, however, changes their interactions in ways that tip the balance in favour of the former.