

**Q: Consider the following statement regarding piezoelectric effect in liquids:**

1. In this effect, a body develops an electric current when it is squeezed.
2. Quartz is the most famous piezoelectric crystal.
3. The quartz crystal consists of Lithium and Hydrogen atoms.

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:

- For the first time, scientists have reported evidence of the piezoelectric effect in liquids. The effect has been known for 143 years and in this time has been observed only in solids. In the piezoelectric effect, a body develops an electric current when it is squeezed.
- Quartz is the most famous piezoelectric crystal; it is used in analog wristwatches and clocks. Such crystals are also used in other instruments where converting mechanical stress to a current is useful.
- Quartz is silicon dioxide (SiO<sub>2</sub>). The quartz crystal consists of silicon and oxygen atoms at the four vertices of a three-sided pyramid; each oxygen atom is shared by two pyramids.
- These pyramids repeat themselves to form the crystal. The effective charge of each pyramid is located slightly away from the centre.
- When a mechanical stress is applied, that is when the crystal is squeezed, the position of the charge is pushed further from the centre, giving rise to a small voltage. This is the source of the effect.

**Q: Consider the following statement regarding Passport Index 2023:**

1. Japan had the highest score in South Asia.
2. It is an interactive passport ranking tool based on the access of a country's passport to other nations.
3. It is based on the number of destinations the passport holders of the country can access without a pre-departure visa application.

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:

- Recently, Indian passport slipped six ranks on the Passport Index 2023 released by financial advisory services firm Arton Capital.
- The ranking was topped by the United Arab Emirates (UAE) with a mobility score of 181. It was followed by Sweden, Germany, Finland, Luxembourg, Spain, France, Italy, the Netherlands and Austria, with a joint mobility score of 174.
- South Korea had the highest score of 174 in South Asia and ranked 12th on the list. Japan, with a score of 172, ranked 26th. Almost all the other Asian countries saw a fall in their rankings.
- The Passport Index is an interactive passport ranking tool backed by Arton Capital, based on the access of a country's passport to other nations.
- This is a real-time tool, and the rankings keep changing as the countries change their mobility scores. The full implications of China's lockdown have not been fully realised yet.
- In January, India ranked 85th out of 199 countries in the Henley Passport Index.
- The index ranks countries based on the number of destinations the passport holders of the country can access without a pre-departure visa application.

**Q: Consider the following statement regarding Quality Control Orders (QCO):**

1. Its aim is to control import of sub-quality and cheaper items and to ensure that customers get quality products.
2. The entire supply chain, from the textile manufacturers to exporters, has so far focused on quality standards prescribed by the buyers.

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:

- The Indian textile and clothing industry consumes both indigenous and imported fibres and filaments.
- The imports are for different reasons; cost competitiveness, non-availability in the domestic market, or to meet a specified demand of the overseas buyer.
- The main aim of the QCO is to control import of sub-quality and cheaper items and to ensure that customers get quality products.
- The entire supply chain, from the textile manufacturers to exporters, has so far focused on quality standards prescribed by the buyers.

**Q: Consider the following statement regarding Foreign Trade Policy (FTP) 2023:**

1. Faridabad, Moradabad, Mirzapur and Varanasi are four new Towns of Export Excellence (TEE).
2. The new FTP also seeks to make the Indian rupee a global currency.
3. The latest policy has no end date and will be updated as and when needed.

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:

- Recently, the Commerce Minister unveiled Foreign Trade Policy (FTP) 2023.
- The policy, which aims to boost the country's exports to \$2 trillion by 2030, will shift from incentives to remission and entitlement-based regime.
- However, the FTP this time has done away with 5-year period clause. The latest policy has no end date and will be updated as and when needed.
- The new FTP identifies four new Towns of Export Excellence (TEE); Faridabad, Moradabad, Mirzapur and Varanasi in addition to the already existing 39 TEES.
- The new FTP also seeks to make the Indian rupee a global currency and allow international trade settlement in the domestic currency.

**Q: Consider the following statement regarding Unique Land Parcel Identification Number (ULPIN) or Bhu-Aadhaar:**

1. It is part of the Digital India Land Records Modernisation Programme (DILRMP).
2. It is a 100 per cent centrally funded scheme.
3. Except Nagaland, it is currently under implementation in the remaining states and Union territories.

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 Unique Land Parcel Identification Number (ULPIN) or Bhu-Aadhaar will have longitude and latitude coordinates of the land parcel and is based on detailed surveys and geo-referenced cadastral maps. It will cover all land parcels; rural as well as urban.
- So far, ULPIN has already been rolled out in 26 states and Union territories — Andhra Pradesh, Jharkhand, Goa, Bihar, Odisha, Sikkim, Gujarat, Maharashtra, Rajasthan, Haryana, Tripura, Chhattisgarh, Jammu & Kashmir, Assam, Madhya Pradesh, Nagaland, Mizoram, Tamil Nadu, Punjab, Dadra & Nagar Haveli and Daman & Diu, Himachal Pradesh, West Bengal, Uttar Pradesh, Uttarakhand, Kerala and Ladakh.
- Except Meghalaya, which has a tradition of community ownership of land parcels, it is currently under implementation in the remaining states and Union territories.
- ULPIN is part of the Digital India Land Records Modernisation Programme (DILRMP), a 100 per cent centrally funded scheme.
- It was earlier known as the National Land Record Modernisation Programme and was approved by the cabinet in August 2008. It was later revamped as DILRMP and implemented as a central sector scheme from 1 April 2016.