

Que-1 What are urban heat islands?

1- An urban heat island is a local and temporary phenomenon experienced when certain pockets within a city experience higher heat load than surrounding or neighbouring areas on the same day.

2- The variations are mainly due to heat remaining trapped within locations that often resemble concrete jungles.

3- The temperature variation can range between 0.3 to 0.5 degrees Celsius.

Which of the following given above is/are correct

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

Que-2 Consider the following statements about 6G (network)

1- 6G is the sixth generation standard currently under development for wireless communications technologies supporting cellular data networks.

2- 6G networks will be able to use higher frequencies than 5G networks and provide substantially higher capacity and much higher latency.

3- The 6G technology market is expected to facilitate large improvements in the areas of imaging, presence technology and location awareness.

Which of the following given above is/are correct

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

Que-3 With reference to National Startup Advisory Council, consider the following statements

1- To advise the government on measures needed to build a strong ecosystem for nurturing innovation and startups in the country.

2- The term of the non-official members will be for a period of four years.

3- It is chaired by the Commerce and Industry Minister.

Which of the following given above is/are correct

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

Que-4 With reference to Sela Tunnel project, consider the following statements about

1- Located in Pithoragarh district of Uttarakhand.

2- This will boost all-weather connectivity to the Line of Actual Control with China.

3- Tunnel 2 of this project will be one of the longest tunnels to have been constructed above an altitude of over 13,000 feet.

Which of the following given above is/are correct

- a) 1 only b) 3 only
c) 1, 2 and 3 d) 2 and 3 only
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Que-5 Consider the following statements according to a report by the World Meteorological Organisation (WMO)

1- The past seven years were the warmest on record, and 2021 did not see record-breaking temperatures because of a La Niña event at the start and end of the year.

2- The average global temperature in 2021 was about 2 (\pm 0.13) °C above the pre-industrial level.

3- Ocean surface temperatures were at a record high.

Which of the following given above is/are correct

- a) 1 only b) 1 and 3 only
c) 1, 2 and 3 d) 2 only
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Que-6 Key climate change indicators are

- 1- Ocean acidification
2- Greenhouse gas concentrations
3- Sea level rise

Which of the following given above is/are correct

- a) 2 only b) 1 and 3 only
c) 1, 2 and 3 d) 3 only
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Que-7 Consider the following statements about Nordic countries

1- 'Nordic' is a term derived from the local Scandinavian-language word 'Norden' which in literal terms means, the northern islands.

2- These countries share same flags, languages, and many cultural traits.

3- Nordic countries include Finland, Iceland, Norway, Denmark, Sweden, and the Faroe Islands (an archipelago of islands as an autonomous country within the kingdom of Denmark).

Which of the following given above is/are correct

- a) 1 only b) 1 and 3 only
c) 1, 2 and 3 d) 2 only
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Que-8 What is the biofuel policy?

1- Introduced in 2018, the National Biofuel Policy is aimed at reducing dependence on imports by encouraging fuel blending

2- After setting a 20% blending target for 2030 initially, the central government had announced premium rates for ethanol produced from sugar syrup, cane juice as well as B heavy molasses.

3- The policy also allows usage of excess rice or damaged foodgrains as feedstock for ethanol production.

Which of the following given above is/are correct

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

- 1- (a)
- The temperature variation can range between 3 to 5 degrees Celsius.
- 2- (b)
- 6G networks will be able to use higher frequencies than 5G networks and provide substantially higher capacity and much lower latency.
 - This is 1,000 times faster -- or 1/1000th the latency -- than one millisecond throughput.
- 3- (b)
- The term of the non-official members will be for a period of two years.
- 4- (d)
- Located in West Kameng district of Arunachal Pradesh.
 - The project, being executed by the Border Roads Organisation, includes two tunnels and a link road. While Tunnel 1 will be 980 metres long single-tube, Tunnel 2 will be 1,555 metres with one bi-lane tube for traffic and one escape tube for emergencies running alongside. The link road between the two tunnels will be 1,200 metres.

- Tunnel 2 will be one of the longest tunnels to have been constructed above an altitude of over 13,000 feet. The project also involves construction of an approach road of 7 km to Tunnel 1, which takes off from BCT Road, and a link road of 1.3 km, which connects Tunnel 1 to Tunnel 2. The total length of the project, including the tunnels, the approach and the link roads, will be around 12 km.

5- (b)

- La Nina is a cooling of surface temperatures in the Central Pacific. While this had a temporary cooling effect, it did not reverse the overall trend of rising temperatures. The average global temperature in 2021 was about 1.11 (\pm 0.13) °C above the pre-industrial level.

6- (c)

- Four key climate change indicators — greenhouse gas concentrations, sea level rise, ocean heat and ocean acidification.

7- (b)

- These countries share similar flags, languages, and many cultural traits.
- Nordic countries include Finland, Iceland, Norway, Denmark, Sweden, and the Faroe Islands (an archipelago

of islands as an autonomous country within the kingdom of Denmark).

- They are also the least corrupt in the world and have a low crime rate.
- They have the world's most high-rated gender equality ratio and world's highest proportion of women in senior leadership position.
- In the current scenario, while the term 'Scandinavia' is commonly used for Denmark, Norway and Sweden, the term "Nordic countries" is vaguely used for Denmark, Norway, Sweden, Finland and Iceland, including their associated territories of Greenland, the Faroe Islands and the Åland Islands.
- However, both Svalbard and Greenland are classified as separate from both Scandinavia and the Nordics.

8- (c)

- With bioethanol, biodiesel and bioCNG in focus, its key parts include Ethanol Blending Programme (EPB), production of second generation ethanol (derived from forest and agricultural residues), increasing capacity for production of fuel additives, R&D in feedstock, which is the starting material for ethanol

production, and financial incentives for achieving these goals.

- After setting a 20% blending target for 2030 initially, the central government had announced premium rates for ethanol produced from sugar syrup, cane juice as well as B heavy molasses. Molasses is the sticky liquid formed during sugar production from cane juice, and depending on the percentage of sugar left, it is categorized as B heavy and C. Molasses is the feedstock used by sugar mills to produce ethanol.
 - The National Biofuel Coordination Committee (NBCC), with the Union Minister for Petroleum and Natural Gas as its head, is the agency to coordinate this blending programme.
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