

Q: Consider the following statement:

1. Non-sugar sweeteners (NSS) are marketed as low or no-calorie.
2. Aspartame is popularly used to sweeten diet colas.
3. Sucralose is used to sweeten tea or coffee.

Choose the correct option from the codes given below:

- 1 and 2
- 2 and 3
- 1 and 3
- 1, 2 and 3

Ans: a

Explanation:

- Non-sugar sweeteners (NSS) are marketed as low or no-calorie alternatives to free sugars which aid in weight loss, and in controlling blood glucose in individuals with diabetes.
- NSS categories studied by WHO include acesulfame K, aspartame, advantame, cyclamates, neotame, saccharin, sucralose, stevia, and stevia derivatives.
- Aspartame is popularly used to sweeten diet colas that claim to have ‘no sugar, no calories.’ Saccharin is used to sweeten tea or coffee.

Q: Consider the following statement:

1. 42nd Amendment introduces a legislative Assembly for Delhi.
2. Article 309 of the Constitution clearly distinguished between the Centre and State services.
3. The civil services in a Union Territory clearly belonged to the Centre.

Choose the correct option from the codes given below:

- 1 and 2
- 2 and 3
- 1 and 3
- 1, 2 and 3

Ans: b

Explanation:

- The five-judge Bench judgment contradicts a 1997 nine-judge Bench decision of the Supreme Court in *New Delhi Municipal Corporation vs State of Punjab*, in which it was “clearly held that notwithstanding the 69th Amendment introducing a Legislative Assembly for Delhi, the NCT of Delhi remains a Union Territory”.
- The Centre said Article 309 of the Constitution clearly distinguished between the Centre and State services. The civil services in a Union Territory clearly belonged to the Centre.
- The appointments and transfers are made in the Delhi administration in accordance with the Central recruitment rules approved by the President through Lieutenant-Governor (LG) under Article 309.

Q: Consider the following statement regarding International Pathogen Surveillance Network (IPSN):

1. The network aims to help ensure infectious disease threats are swiftly identified and tracked.
2. The network will rely on pathogen genomics to analyse the genetic code of viruses.

Choose the correct option from the codes given below:

- 1 Only
- 2 Only
- 1 and 2
- None of the above

Ans: c

Explanation:

- The **International Pathogen Surveillance Network (IPSN)** will provide a platform for connecting countries and regions, improving systems for collecting and analysing samples.

- The network aims to help ensure infectious disease threats are swiftly identified and tracked while the information is shared and acted on to prevent catastrophes like the Coronavirus pandemic.
- The network will rely on pathogen genomics to analyse the genetic code of viruses, bacteria and other disease-causing organisms.

Q: Consider the following statement:

1. Carbon-14 has a half-life of 5,700 years.
2. Calcium-41 has a half-life of 99,400 years.
3. Calcium-41 is produced when cosmic rays from space smash into calcium atoms in the soil.

Choose the correct option from the codes given below:

- 1 and 2
- 2 and 3
- 1 and 3
- 1, 2 and 3

Ans: d

Explanation:

- Since its invention in 1947, carbon dating has revolutionised many fields of science by allowing scientists to estimate the age of an organic material based on how much carbon-14 it contains.
- However, carbon-14 has a half-life of 5,700 years, so the technique cannot determine the age of objects older than around 50,000 years.
- In 1979, scientists suggested using calcium-41, with a half-life of 99,400 years. It is produced when cosmic rays from space smash into calcium atoms in the soil, and is found in the earth's crust, opening the door to dating fossilised bones and rock. But several problems need to be overcome before it can be used to reliably date objects.

Q: Consider the following statement regarding World Health Organisation (WHO):

1. It acts as the directing and coordinating authority on international health work.
2. It is an inter-governmental organization and works in collaboration with its member states.
3. Its headquarter is in Paris.

Choose the correct option from the codes given below:

- 1 and 2
- 2 and 3
- 1 and 3
- 1, 2 and 3

Ans: a

Explanation:

- It is an inter-governmental organization and works in collaboration with its member states usually through the Ministries of Health.
- The WHO provides leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries and monitoring and assessing health trends.
- It began functioning on April 7, 1948 – a date now being celebrated every year as World Health Day.
- To act as the directing and coordinating authority on international health work.
- To establish and maintain effective collaboration with the United Nations, specialized agencies, governmental health administrations, professional groups and such other organizations as may be deemed appropriate.