

UPSC CURRENT AFFAIRS MCQS 25-08-2023

Ques:1

1. With reference to 'Methanotrophs', consider the following statements
2. Statement 1 – Methanotrophic microorganisms oxidize methane to harness energy under oxic and anoxic conditions.
3. Statement 2 – They grow best when the methane concentration is around 5,000-10,000 parts per million (ppm).

Which one of the following is correct in respect of the above statements?

- a) Both Statement-I and Statement-II are correct, and Statement II is the correct explanation for Statement-I
- b) Both Statement-I and Statement-II are correct, and Statement II is not the correct explanation for Statement-I
- c) Statement-I is correct but statement II is incorrect
- d) Statement -I is incorrect but Statement -II is correct

Solution: b

Methane-utilizing bacteria (methanotrophs) are a diverse group of gram-negative bacteria that are related to other members of the Proteobacteria. Methanotrophic microorganisms oxidise methane to harness energy under oxic and anoxic conditions. They grow best when the methane concentration is around 5,000-10,000 parts per million (ppm). It can grow at low methane concentrations ranging from 200-1,000 ppm. These features make this strain a promising candidate for methane removal technology.

Ques:2

Consider the following statements with respect to 'National Curriculum Framework for School Education'

1. It makes the study of Indian languages optional across schools and boards
2. It offers students the freedom to pursue a mix of science and humanities
3. It was framed by the National Steering Committee under the chairmanship of K. Kasturirangan

How many of the statements given above is/are correct?

- a) Only one



- b) Only two
- c) All three
- d) None

Solution: b

The final NCF makes the study of Indian languages imperative across schools and boards, contrary to the optional nature of these subjects at present. It mandates the compulsory instruction of 3 languages (referred to as R1, R2 and R3) up to Class 10. At least 2 of these 3 languages must be native to India.

It offers students the freedom to pursue a mix of science and humanities to reduce the rigid boundaries separating arts, commerce and science in Classes 11 and 12 across school boards. It also offers freedom to all boards to change to semester or term-based systems in Class 12 in the long term. The National Steering Committee under the chairmanship of (former ISRO chief) K. Kasturirangan was set up by the MoE to undertake and develop NCFs.

These 4 NCFs are – National Curriculum Framework for Early Childhood Care and Education (NCFECCE) National Curriculum Framework for School Education (NCFSE) National Curriculum Framework for Teacher Education (NCFTE) National Curriculum Framework for Adult Education (NCFAE)

Ques:3

Consider the following statements with respect to ‘Cholera’

- 1.It is a viral disease usually spread through contaminated water
- 2.The disease is endemic to South Asia
- 3.There is treatment available but vaccines do not exist for the prevention

How many of the statements given above is/are correct?

- a) Only one
- b) Only two
- c) All three
- d) None

Solution: a

Cholera is an acute diarrhoeal infection caused by ingestion of food or water contaminated with the bacterium *Vibrio cholerae*. It remains a global threat to

public health and an indicator of inequity and lack of social development. During the 19th century, cholera spread across the world from its original reservoir in the Ganges delta in India. Six subsequent pandemics killed millions of people across all continents. The current (seventh) pandemic started in South Asia in 1961, reached Africa in 1971 and the Americas in 1991. Cholera is now endemic in many countries.

Currently, there are three WHO pre-qualified oral cholera vaccines (OCV), Dukoral, Shanchol, and Euvichol-Plus. All three vaccines require two doses for full protection.

Ques:4

Consider the following statements with respect to ‘Gene-edited mustard’

- 1.It is based on CRISPR/Cas9 gene editing while being non-genetically modified
- 2.It is India’s first ever low pungent mustard that is pest and disease resistant

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Correct Answer c

CRISPR/Cas9 – a gene-editing tool deploying an enzyme was used, which acts as a “molecular scissors” to cut the DNA at precise targeted locations of the gene, and then letting the natural DNA repair process to take over. The new GTR genes-edited mustard lines are transgene-free or non-genetically modified (GM). Indian scientists have developed the first ever low-pungent mustard that is pest and disease-resistant.

Ques:5

With reference to ‘Kashmir Stag’, consider the following statements

- 1.It is a Critically Endangered animal and is included in Appendix 1 of CITES
- 2.The society of Kashmir stag is matriarchal
- 3.It is primarily found in Hemis National Park in Kashmir

How many of the statements given above is/are correct?



- a) Only one
- b) Only two
- c) All three
- d) None

Solution: b

It is a critically endangered animal found in Jammu & Kashmir. It is also included in Appendix 1 of the CITES. It is essentially a forest animal and is found either singly or in small groups of 2 to 16 members. The social system is matriarchal. It is found in dense riverine forests in the high valleys and mountains of Jammu and Kashmir and northern Himachal Pradesh. In Kashmir, it is found primarily in the **Dachigam National Park** where it receives protection, and elsewhere it is more at risk.