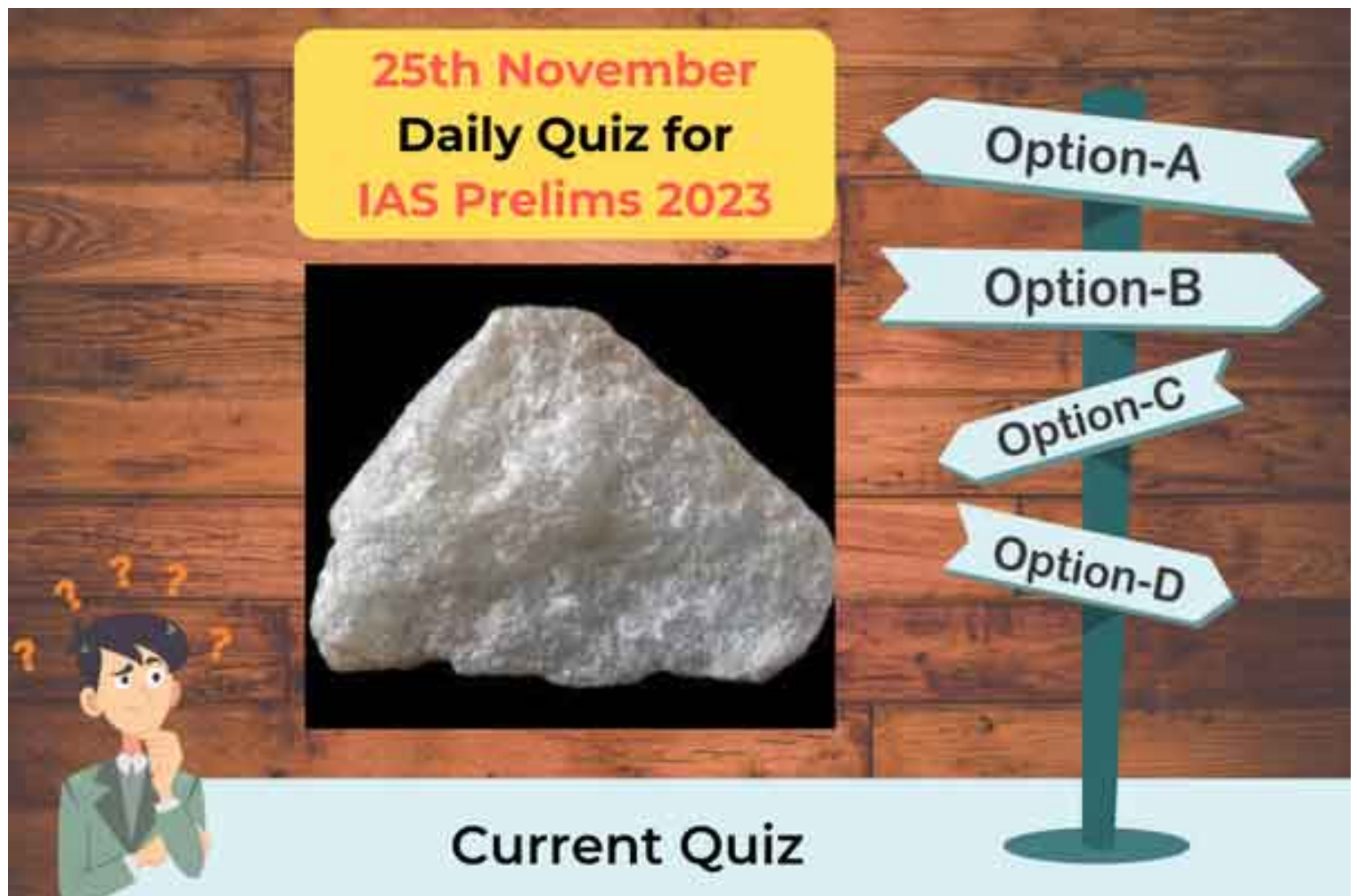


25th November 2022 | [Quiz] Current | For Prelims 2023

By IAS Toppers, 25 Nov, 2022

**# Question 1**

Consider the following statements regarding Duchenne Muscular Dystrophy (DMD)

1. It is caused by a mutation in a gene.
2. It primarily affects boys.
3. In this, there is muscle weakness in the early childhood period.

Which of the above statements is/are correct?

- A) a) 1 and 4 only
- B) b) 2 and 3 only

C) c) 1 and 2 only

D) d) 1, 2 and 3

Explanation:

Answer: D

Solution:

All the statements are correct.

Enrich your Learning

Duchenne Muscular Dystrophy (DMD)

- It is a **genetic disorder** characterized by progressive muscle degeneration and weakness due to the alterations of a protein called *dystrophin* that helps keep muscle cells intact.
- The disease primarily **affects boys**, but in rare cases it can affect girls.
- It **affects the muscles**, leading to muscle wasting that gets worse over time.

Symptoms

- Primary symptoms are **progressive weakness and loss** (atrophy) of both skeletal and heart muscle, delayed ability to sit, stand, or walk and difficulties learning to speak.
- **Muscle weakness** is usually noticeable in early childhood.

Causes

- It is **caused by a mutation** in the gene for the protein dystrophin.
- It is **inherited in an X-linked recessive pattern** and may occur in people who do not have a family history of Duchenne Muscular Dystrophy.
- About two thirds of cases are **inherited from a person's mother**, while one third of cases are due to a new mutation.

Treatment

- There is **no known cure** but physical therapy, braces, and corrective surgery may help with some symptoms.

Why in News?

The Delhi High Court has sought the Centre's stand on extending financial assistance from Duchenne Muscular Dystrophy (DMD) under the National Policy for Rare Diseases.

Question 2

Consider the following statements regarding Talc:

1. It is a soft sulphate mineral composed of calcium sulphate dihydrate.
2. It is used as a thickening agent and lubricant.
3. It is able to absorb moisture when reduced to a fine powder.

Which of the above statements is/are correct?

- A) a) 1 and 2 only
- B) b) 2 and 3 only
- C) c) 1 and 3 only
- D) d) 1, 2 and 3

Explanation:

Answer: B

Solution:

- Gypsum is a soft sulphate mineral composed of calcium sulphate dihydrate.
- Talc is composed of hydrated magnesium silicate.

Enrich your Learning

Talc

- It is the **softest known mineral** and is mined from underground deposits.
- Chemically, it is **hydrous magnesium silicate**.
- It causes **choking, infection and respiratory illnesses** if inhaled.

Uses

- It is used as a **thickening agent and lubricant**.
- It is used in a **variety of cosmetic and personal care products**, like baby powder, lipstick, eyeshadow and foundation.
- When reduced to a fine powder, it is able to **absorb moisture** and reduce friction which keeps the skin dry, helps prevent rashes.
- It is used in **leather dressings, toilet and dusting powders, and certain marking pencils**.
- It is used as a **filler in ceramics, paint, paper, roofing materials, plastic, and rubber**; as a **carrier in insecticides**; and as a mild abrasive in the **polishing of cereal grains** such as rice and corn.

- It **stops makeup from caking** and generally helps improve the feel and texture of a product.

Why in News?

Johnson and Johnson have announced that it will discontinue the sale of its talc-based baby powder globally in 2023.

Question 3

Consider the following statements regarding Tantya bhil:

1. He was known as the “Indian Robin Hood” by tribals.
2. He was skilful in Guerrilla warfare.
3. He was the main leader of Munda Rebellion.

Which of the above statements is/are correct?

- A) a) 1 and 2 only
- B) b) 2 and 3 only
- C) c) 1 and 3 only
- D) d) 1, 2 and 3

Explanation:

Answer: A

Solution:

- Birsa Munda was the main leader of Munda Rebellion.
- Tantya Bhil was a dacoit (bandit) active in India between 1878 and 1889.

Enrich your Learning

Tantya Bhil

- Tantya Bhil was a **dacoit (bandit) active in India between 1878 and 1889**.
- He **waged an armed struggle** against the British rule for 12 years.
- He used to **loot the treasuries of the British government** and distribute the wealth among the poor.
- He was known as the “**Indian Robin Hood**” by tribals.
- He was skilful in **Guerrilla warfare**.
- **Dava or Falia** was his main weapon.

- He was also a **great shooter** and proficient in **traditional archery**.
- Tantya was **popularly called Mama** by people of all age groups.
- The Sessions Court, Jabalpur sentenced him **to be hanged** till death in 1889.
- The spot where his wooden effigies were placed is considered to be **the Samadhi**.

Why in News?

Recently, the central government has commemorated warriors such as Thalakkal Chanthu, Tantya Bhil, Tirot Singh, and Sela and Nura among the 75 tribal women and men who fought against the British and other invaders to mark 75 years of India's Independence.

Question 4

Consider the following statements regarding hoisting of flag:

1. The President hoists flag from the Red Fort on Independence Day.
2. The national flag lays at half-mast as a sign of state mourning.
3. One should hold the national flag in right hand.

Which of the above statements is/are correct?

- A) a) 1 and 2 only
- B) b) 2 and 3 only
- C) c) 1 and 3 only
- D) d) 1, 2 and 3

Explanation:

Answer: B

Solution:

- The Prime Minister of India hoists flag from the Red Fort on Independence Day.
- The President unfurls the Tricolour on Republic Day on Rajpath.

Enrich your learning

Hosting of National Flag

- On both Independence and Republic Days, the national flag is flown high.
- A difference in unfurling and hoisting also **lies in the positioning** of the flag.

Independence Day

- The **Prime Minister of the country raises the flag up from Red Fort** and hoists it with the aim to honour the historical event of the day.
 - It is **followed by his address to the nation**.
- The flag is hoisted as it signifies the **rise of a new nation, free from colonial domination**.
- When the flag is to be hoisted, it is tied and **sits at the bottom of the pole**.

Republic Day

- The flag remains closed and **tied up at the top of the pole on Rajpath** before presiding over a parade that showcases India's military might and cultural diversity.
 - It is unfolded to **commemorates the day the Constitution was adopted**.
- The **President of India 'unfurls' the Tricolour** on Republic Day as the constitutional head and first citizen of the country.
- He **unfurls the flag without pulling** it up like it is done on Independence Day.

Rules

- One has to ensure that the **national flag never touches the ground**.
- Even before it is hoisted, while it lays at the bottom of the pole, the flag is **kept away from ground level** as a **mark of respect to the Tricolour**.
- The national flag lays at **half-mast as a sign of state mourning**.
 - The decision to do so lies with the President of India, who also decides the period of such mourning.
- When the flag is to be flown at half-mast, it must **first be raised to the top of the mast** and then slowly lowered.
- When **carrying a flag, it should always be held in the right hand**, as this is the position of authority.
- When the **Indian flag is flown on Indian soil**, the rule is that the **Tricolour should be the starting point of all flags**.
- When flags are **placed in a straight line**, the **rightmost flag is the Indian flag**, followed by other national flags in alphabetical order.
- When **placed in a circle**, the **Indian flag is the first point** and is followed by other flags alphabetically.

Question 5

Consider the following statements regarding Avulsion:

1. It refers to water quickly submerging land to another location.
2. Rivers that run through temperate regions are more vulnerable to avulsions.

Which of the above statements is/are correct?

A) a) Only 1

- B) b) Only 2
- C) c) Both 1 and 2
- D) d) Neither 1 nor 2

Explanation:

Answer: A

Solution:

- Rivers that run through tropical and desert areas are more vulnerable to avulsions.

Enrich your Learning

Avulsion

- It is the **rapid abandonment of a river channel** and the **formation of a new river channel**.
- They are **caused by channel slopes that are much less steep** than the slope that the river could travel if it changed course.
- They are common in **river deltas**.
- It occurs where **sediment deposits as the river enters the ocean** and channel gradients are typically very small.
 - This process is called **delta switching**.
- When the Avulsion occurs, the **new channel carries sediment out to the ocean**, building a new deltaic lobe.
- **Rivers can also avulse** due to the erosion of a new channel that creates a straighter path through the landscape.
 - **It can happen during large floods** in situations in which the slope of the new channel is significantly greater than that of the old channel.
- Where the new channel's slope is about the same as the old channel's slope, a **partial avulsion will occur in which both channels** are occupied by flow.

Occurrence

- It **occurs during large floods** which carry the power necessary to rapidly change the landscape.
 - Dam removal could also lead to avulsion.
- It **occurs as a downstream** to upstream process via head cutting erosion.
- Rivers that run through **tropical and desert areas** are more vulnerable to avulsions.
- It occurs rarely, **only once a decade or century**, or even less.
- If a **bank of a current stream** is breached a new trench will be cut into the existing floodplain.
- It either cuts through **floodplain deposits or reoccupies an old channel**.

Why in News?

As per recent studies, deltas are losing land at an unprecedented rate due to avulsion and will need more sediment influx.

