

**Q: Consider the following statement regarding Hox Genes:**

1. In the gestational stage, Hox genes act as architects.
2. Hox genes ensure that organs and tissues develop in the right place.
3. If Hox genes fail through mis-regulation or mutation, cells still exist.

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:

- Almost all animals from humans to fish have an anterior-posterior axis, which is a line that runs from head to tail.
- In the gestational stage, Hox genes act as architects, and direct the roadmap for where cells go along the axis, as well as what body parts they make up.
- Hox genes **ensure that organs and tissues develop in the right place**, such as ensuring the limbs in mammals or the wings of birds end up at their correct anatomical positions.
- If Hox genes fail through mis-regulation or mutation, cells can get lost, playing a role in some cancers, birth defects, and miscarriages.

**Q: Recently, NTPC RE Limited (NTPC REL) has signed a MoU with Gujarat Alkalies and Chemicals Limited (GACL). Consider the following statement:**

1. The MoU envisages collaborating in the field of Renewable Energy only.
2. It seeks to realize green energy and green hydrogen.
3. It seeks to fulfill India's efforts toward the carbon-neutrality economy.

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:

- It seeks to realize green energy and green hydrogen objectives and the Government of India's efforts toward the carbon-neutrality economy.
- The MoU envisages collaborating in the field of Renewable Energy, Green Methanol & Green Ammonia and mutually exploring the opportunities for the supply of 100 MW RE-RTC (Round The Clock) power and synthesizing 75 TPD Green Methanol and 35 TPD Green Ammonia for captive use for the production of various chemicals by GACL at its Vadodara and Dahej complex in Gujarat.

**Q: Consider the following statement regarding Mangarh hillock:**

1. The place is also known as the Adivasi Jallianwala.
2. In this place, Govind Guru led Bhil tribal protest.

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 hillock, situated at the Gujarat-Rajasthan border, is a **site of a tribal uprising** where a massacre of over 1500 Bhil tribal freedom fighters took place in 1913.
- The place is also known as the **Adivasi Jallianwala**, and there has been a demand to build a memorial.
- On November 17, 1913, British forces opened fire on tribals gathered at the site who were holding a meeting in protest, led by a leader from the community Govind Guru, killing over 1,500.

**Q: European Union wants to be the first carbon-neutral region in the world by 2050. Consider the following statement:**

1. Fit-for-55' package
2. Carbon Border Adjustment Mechanism (CBAM)
3. CITE (Carbon Intensive and Trade Exposed) sectors

Which among the above initiatives is taken by EU to fulfil its commitment?

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

Ans: d

Explanation:

- To attain carbon neutrality, the EU has set forth immediate targets and has brought out the 'Fit-for-55' package, a communication of its 2030 climate targets.
- A provision in the policy plan is the introduction of Carbon Border Adjustment Mechanism (CBAM), a carbon-pricing system proposed for imports into the EU.
- The CBAM suggests taxing the imported goods-based difference between carbon used in the production of domestic and imported goods.
- In the initial phase, five CITE (Carbon Intensive and Trade Exposed) sectors such as iron and steel, aluminium, cement, fertilizers and electricity will be taxed under CBAM.

**Q: Consider the following statement regarding Supreme Court Judgement in M/s Apex Laboratories Pvt. Ltd. vs Deputy Commissioner of Income Tax, Large Tax Payer Unit-II case:**

1. The Court held that pharmaceutical companies giving freebies to doctors is clearly 'prohibited by the law'.
2. The decision will help in unethical and illegal practices in the pharma sector.
3. The freebies can be claimed as a deduction under Section 37(1) of the Income Tax Act, 1961.

Which among the above initiatives is taken by EU to fulfil its commitment?

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

Ans: a

Explanation:

- The judgment by a two-judge Bench of the Supreme Court of India in *M/s Apex Laboratories Pvt. Ltd. vs Deputy Commissioner of Income Tax, Large Tax Payer Unit-II*, on February 22, 2022 has struck a blow for public good.
- The judges dismissed the Special Leave Petition by Apex Laboratories to claim deduction on freebies given to doctors.
- Upholding a decision by the Madras High Court, the Bench said that the act of pharmaceutical companies giving freebies to doctors is clearly 'prohibited by the law'. Further, it cannot be claimed as a deduction under Section 37(1) of the Income Tax Act, 1961.
- The judgment will go a long way in checking unethical and illegal practices in the pharma sector, which has become so out of reach for the common man.