

Q: Consider the following statement regarding United Nations Forum on Forests:

1. It promotes the management, conservation, and sustainable development of all types of forests.
2. India is a founding member of UNFF.
3. It was established by UNEP.

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:

- United Nations Forum on Forests promotes the management, conservation, and sustainable development of all types of forests.
- It was established in 2000 by the UN Economic and Social Council of the United Nations (ECOSOC).
- The Forum meets annually at the UN Headquarters in New York, bringing together representatives of all member states and forest-related agencies for high-level dialogue on technical matters in odd years and policy matters in even years.
- The forum has universal membership, and is composed of all Member States of the United Nations and specialized agencies.
- India is a founding member of UNFF.

Q: Consider the following statement regarding Sea Cucumber:

1. They exhibit only asexual reproduction.
2. They excrete inorganic nitrogen and phosphorus, enhancing the productivity of benthic biota.
3. These are benthic, meaning they live on the ocean floor.

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:

- Sea Cucumber species is a part of a larger animal group called echinoderms and is invertebrates that lives on the seafloor.
- Their body shape is similar to that of a cucumber, but they have small tentacle-like tube feet that are used for locomotion and feeding.
- There are about 1,250 species of sea cucumber, all of which belong to the taxonomic class Holothuroidea.
- They are found in all marine environments throughout the world, from shallow to deep-sea environments.
- These are benthic, meaning they live on the ocean floor.
- They excrete inorganic nitrogen and phosphorus, enhancing the productivity of benthic biota.
- They exhibit both sexual and asexual reproduction.

Q: Consider the following statement regarding Vikram-1 Rocket:

1. It is an all-carbon-fibre-bodied rocket that can place multiple satellites into orbit.
2. It is a multi-stage launch vehicle with a capacity to place around 300 kg of payloads in low-earth orbit.

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:

- Vikram-1, named after the father of India's space programme, Vikram Sarabhai, is a multi-stage launch vehicle with a capacity to place around 300 kg of payloads in low-earth orbit.
- It has been built by Hyderabad-based Skyroot Aerospace, a space startup.
- It is an all-carbon-fibre-bodied rocket that can place multiple satellites into orbit.
- Being a solid-fuel rocket and using relatively simpler technologies would mean that launching this vehicle would require minimal infrastructure and that the rocket could be assembled and launched within 24 hours from any site.

Q: Consider the following statement regarding Nancy Grace Roman Space Telescope:

1. It will provide one of the deepest-ever views into the heart of our Milky Way galaxy
2. The mission will monitor hundreds of millions of stars the outskirts of our solar system, and isolated black holes.
3. It will measure light from a billion galaxies over the course of the mission's lifetime.

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: d

Explanation:

- Nancy Grace Roman Space Telescope will provide one of the deepest-ever views into the heart of our Milky Way galaxy.
- The mission will monitor hundreds of millions of stars in search of tell-tale flickers that betray the presence of planets, distant stars, small icy objects that haunt the outskirts of our solar system, and isolated black holes.
 - ❖ It will have two instruments
 - ❖ Wide Field Instrument: It will have a field of view that is 100 times greater than the Hubble infrared instrument, capturing more of the sky with less observing time.
 - ❖ It will measure light from a billion galaxies over the course of the mission's lifetime.
 - ❖ It will perform a microlensing survey of the inner Milky Way to find ~2,600 exoplanets.

Q: Consider the following statement regarding *Alcalus fontinalis*:

1. It is a newly discovered species of frog.
2. The frog appeared to be a mix of a bush frog and a water frog.
3. It was discovered in the Bandipur Tiger Reserve, Arunachal Pradesh.

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:

- *Alcalus fontinalis* is a newly discovered species of frog.
- It was discovered in the Namdapha Tiger Reserve, Arunachal Pradesh.
- The frog appeared to be a mix of a bush frog and a water frog.
- The researchers used multiple lines of evidence using morphological, osteological, and molecular analysis, revealing they are no ordinary frogs but members of a dwarf mountain frog of the genus *Alcalus*, hitherto unknown from India.
- It was formally named *Alcalus fontinalis*, meaning “spring or fountain,” referencing the tiny streams or brooks where the frog was found.