Daily Current Affairs Prelims Quiz 31-07-2021 - (Online Prelims Test)

1) Which of the following statement is correct regarding a recent report titled, “Status of Leopards, Co-predators and Megaherbivores in India, 2018”:

a. It was launched by the International Union for Conservation of Nature (IUCN)

b. Srivilliputhur Grizzled Squirrel Wildlife Sanctuary in TN had the largest leopard population in India

c. Indian Leopard has been listed as “Near Threatened” under the IUCN Red List of Threatened Species

d. None of the above

Answer : d

- *Union Ministry of Environment, Forest & Climate Change has recently released a report titled “Status of Leopards, Co-predators and Megaherbivores in India, 2018” on Global Tiger Day 2021.*

Highlights of the report

- Panna Tiger Reserve in Madhya Pradesh had the largest leopard population in India at about 273 leopards followed by Sariska (at about 231 leopards).
- Buxa and Palamau which recorded no presence of tigers during 2018 estimation, had sizeable populations of leopards.
- Srivilliputhur Grizzled Squirrel Wildlife Sanctuary had the highest leopard density of 20.43 in the entire Western Ghats landscape.

Indian Leopard

- Indian Leopard was listed as Vulnerable under the IUCN Red List of Threatened Species.
- It is also listed in Appendix I of the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES) and in Schedule I of the Wildlife (Protection) Act 1972 in India providing it with the highest level of protection.

2) Consider the following statements with respect to Small Satellite Launch Vehicle (SSLV)

1. It is a 3-stage all solid vehicle designed to meet Launch on Demand requirements in a cost-effective manner.
2. It has the capability to launch up to 500 kg satellite mass into 500 km Sun Synchronous Polar Orbit.

Which of the statement(s) given above is/are correct?

a. 1 only

b. 2 only

c. Both 1 and 2

d. Neither 1 nor 2

Answer : a

- *The first developmental flight of the Small Satellite Launch Vehicle (SSLV) is scheduled for the fourth quarter of 2021 from the Satish Dhawan Space Centre, Sriharikota.*

Small Satellite Launch Vehicle (SSLV)

- It is a three stage and all-solid launch vehicle.
- It has the payload capability of 500 kg to 500 km planar orbit or 300 kg to Sun Synchronous Polar Orbit.
- The SSLV is ideal for the on-demand, quick turn-around launch of small satellites.
- The major technologies developed as part of the realisation of the SSLV are flexible nozzle control with electro-mechanical actuators for all stages, miniaturised avionics and a velocity trimming module in the upper stage for precise satellite injection.

3) Consider the following statements with respect to DivyaNayan

1. It is a personal reading machine for visually impaired through which any printed or digital document can be accessed in the form of speech output.
2. It has been developed by the Defence Research and Development Organization (DRDO).

Which of the statement(s) given above is/are correct?

a. 1 only

b. 2 only

c. Both 1 and 2

d. Neither 1 nor 2

Answer : a

- *Union Minister of State (Independent Charge) Science & Technology, Dr Jitendra Singh has recently launched the DivyaNayan.*

DivyaNayan

- It is a personal reading machine for visually impaired developed by CSIR-Central Scientific Instruments Organisation (CSIO), Chandigarh.
- Through this any printed or digital document can be accessed in the form of speech output.
- It is currently available in Hindi, English, Bengali, Telugu, Tamil, Kannada, and Punjabi but is further compatible for other Indian and foreign languages.
- It has interfaces such as USB, Bluetooth, Wifi, LAN, Headphone etc.

Working

- Based on the principle of contact scanning, it can analyse a multi column document and provide seamless reading.
- User can place the device over the document to be read and manually scan it.
- The reading device uses language dependent optical character recognition to convert the image into text and a text to speech converter, further converts the text into audio.
- Audio files are stored in the machine and can be listened back.
- The device is handheld, standalone, portable, completely wireless and IoT enabled.

Some of the such other significant devices developed by CSIR for the benefit of the common man are as below:

1. Myoelectric Hand for the persons having below elbow amputation;
2. Electronic Knee for the persons havingabove knee amputation;
3. Electronic Control Module for powered wheelchair; and

4. 3D Printed Orthosis for children with congenital hemiparesis.

4) Consider the following statements with respect to Biotech-PRIDE Guidelines

1. It deals with generation of biological data and enables exchange of information to promote research and innovation in different research groups across the country.
2. It will be implemented through Indian Biological Data Centre (IBDC).

Which of the statement(s) given above is/are correct?

a. 1 only

b. 2 only

c. Both 1 and 2

d. Neither 1 nor 2

Answer : b

- *Union Minister of State (Independent Charge) Science & Technology, Dr Jitendra Singh has recently released "Biotech-PRIDE (Promotion of Research and Innovation through Data Exchange) Guidelines".*
- It has been developed by Department of Biotechnology (DBT), Ministry of Science and Technology.
- The Minister also launched the website of Indian Biological Data Centre, IBDC.

Biotech PRIDE Guidelines

- The guidelines will enable exchange of information to promote research and innovation in different research groups across the country.
- It aims at providing a well-defined framework and guiding principle to facilitate and enable sharing and exchange of biological knowledge, information and data.
- It is specifically applicable to high-throughput, high-volume data generated by research groups across the country.
- These guidelines do not deal with generation of biological data per se but an enabling mechanism to share and exchange information and knowledge generated as per the existing laws, rules, regulations and guidelines of the country.
- Initially, these Guidelines will be implemented through Indian Biological Data Centre (IBDC) at Regional Centre for Biotechnology supported by Department of Biotechnology.
- Other existing datasets/ data centres will be bridged to this IBDC which will be called Bio-Grid.
- This Bio-Grid will be a National Repository for biological knowledge, information and data and will be responsible for enabling its exchange, developing measures for safety, standards and quality for datasets and establishing detailed modalities for accessing data.

5) Consider the following statements with respect to NISAR Mission

1. It aims to make global measurement of all land masses including the Polar cryosphere and the Indian Ocean region using advanced radar imaging.
2. It is a joint Earth-Observation mission between ISRO and U.S. space agency NASA.

Which of the statement(s) given above is/are correct?

a. 1 only

b. 2 only

c. Both 1 and 2

d. Neither 1 nor 2

Answer : c

- NISAR Mission is proposed to be launched in early 2023.

NISAR (NASA-ISRO Synthetic Aperture Radar) Mission

- It aimed at making global measurement of land surface changes for global observations over all land masses including the Polar cryosphere and the Indian Ocean region using advanced radar imaging.
- It is a joint Earth-Observation mission between ISRO and U.S. space agency NASA.
- It is a dual-band (L-band and S-band) radar imaging mission with the capability of full polarimetric and interferometric modes of operation to observe minor changes in land, vegetation and cryosphere.
- NASA is developing L-band SAR and associated systems while ISRO is developing S-band SAR, spacecraft bus, the launch vehicle and associated launch services.
- The major scientific objectives of the mission are to improve understanding of the impact of climate change on Earth's changing ecosystems, land and coastal processes, land deformations and cryosphere.
- NISAR is one of the crucial collaborations of the ISRO and NASA.
- India and the U.S. had agreed upon this mission during then President Barack Obama's visit to India in 2015.

6) Consider the following statements with respective to *Minorities*

1. The term Minority is well defined in the constitution however constitution recognises only linguistic minorities.
2. Article 350-B provides for a Special Officer for Linguistic Minorities appointed by the President of India.

Which of the statement(s) given above is/are correct?

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : b

Minorities

- The term "Minority" is not defined in the Indian Constitution. However, the Constitution recognises only religious and linguistic minorities.
- 6 Minority Communities in India: Jain, Parsi, Buddhist, Christian, Sikh and Muslim (notified by the Government).
- **Article 29:** It provides that any section of the citizens residing in any part of India having a distinct language, script or culture of its own, shall have the right to conserve the same.
- It grants protection to both religious minorities as well as linguistic minorities.
- **Article 30:** Under the article, all minorities shall have the right to establish and administer educational institutions of their choice.
- The protection under Article 30 is confined only to minorities (religious or linguistic) and does not extend to any section of citizens (as under Article 29).
- **Article 350-B:** The 7th Constitutional (Amendment) Act 1956 inserted this article which provides for a Special Officer for Linguistic Minorities appointed by the President of India.

7) Which of the following statement(s) is/are *incorrect* with respect to Kendu leaf

1. It is one of the Minor Forest Produce and a nationalised product like bamboo and sal seed.
2. Odisha is largest producer of kendu leaf, followed by Maharashtra and Jharkhand.

Select the correct answer using the codes given below:

a. 1 only

b. 2 only

c. Both 1 and 2

d. Neither 1 nor 2

Answer : b

Kendu Leaf

- Kendu leaf is called the green gold of Odisha, It is a nationalised product like bamboo and sal seed.
- It is one of the most important non-wood forest products in Odisha.
- The leaves are used to wrap bidis, a popular smoke among the locals.
- The states producing bidi leaves in India comprises mainly Madhya Pradesh, Chhattisgarh, Odisha, Andhra Pradesh, Jharkhand, Gujarat and Maharashtra.
- Odisha is the third-largest producer of kendu leaf, after Madhya Pradesh and Chhattisgarh.
- The Uniqueness of Odisha's Tendu (kendu) leaf is in processed form whereas the rest of the states in India produce in Phal Form.

8) Which of the following statement(s) is/are correct with respect to *Circumplanetary Disc*

1. It is ring-shaped accumulation of matter composed of gas, dust, asteroids or collision fragments in orbit around a planet.
2. The disc around PDS 70c Exoplanet possesses enough mass to produce up to three moons the size of Earth's moon.

Select the correct answer using the codes given below:

a. 1 only

b. 2 only

c. Both 1 and 2

d. Neither 1 nor 2

Answer : c

Circumplanetary Disc

- Around the planets, they are the reservoirs of material out of which moons (or exomoons or subsatellites) may form.
- Such a disk can manifest itself in various ways.
- Recently, scientists for the first time have spotted a Moon-Forming Region around a planet beyond our solar system (Exoplanet).
- Scientists detected a disc of swirling material accumulating around two exoplanets seen orbiting a young star called PDS 70.
- The disc around PDS 70c (The Exoplanet), with a diameter about equal to the distance of the Earth to the sun, possesses enough mass to produce up to three moons the size of Earth's moon.

9) Consider the following statements with respective to *Near-Surface Shear Layer (NSSL)*

1. It is the region very close to the visible solar surface, where there is a change in the rotation profile of the Sun.
2. It plays a significant role in defining the nature of large-scale convective patterns that drive the Sun's magnetism.

Which of the statement(s) given above is/are correct?

a. 1 only

b. 2 only

c. Both 1 and 2

d. Neither 1 nor 2

Answer : c

Near-Surface Shear Layer (NSSL)

- Apart from differentiation rotation between equator and poles, the helioseismology has revealed that the Sun has a Near-Surface Shear Layer (NSSL).
- Helioseismology is a technique of using sound waves to peek inside the Sun.
- The NSSL is the region very close to the visible solar surface, where there is a change in the rotation profile of the Sun.
- This layer exists very close to the solar surface, within which the angular velocity decreases rapidly with radius.
- This NSSL is thought to play a significant role in defining the nature of large-scale convective patterns that drive the Sun's magnetism.
- Recently, Indian astronomers from Aryabhatta Research Institute of Observational Sciences (ARIES), and Indian Institute of Science, Bangalore, have for the first time given the theoretical explanation of the existence of a near-surface shear layer (NSSL) in the Sun.

10) Consider the following statements with respective to *Earth Overshoot Day*

1. UN-Environment Programme (UNEP) partnered with World Wide fund for Nature to launch the first global Earth Overshoot Day campaign.
2. Earth Overshoot Day is computed by dividing the planet's bio capacity by humanity's Ecological Footprint and multiplying by 365.

Which of the statement(s) given above is/are *incorrect*?

a. 1 only

b. 2 only

c. Both 1 and 2

d. Neither 1 nor 2

Answer : a

Earth Overshoot Day

- The day marks the date when humanity's demand for ecological resources (fish and forests, for instance) and services in a given year exceeds what the Earth can regenerate in that year.
- UK think tank New Economics Foundation, partnered with Global Footprint Network in 2006 to launch the first global Earth Overshoot Day campaign.
- The Ecological Footprint is a metric that comprehensively compares human demand on nature against nature's capacity to regenerate.
- Earth Overshoot Day is computed by dividing the planet's biocapacity (the amount of ecological resources Earth is able to generate that year), by humanity's Ecological Footprint (humanity's demand for that year), and multiplying by 365, the number of days in a year:
- (Earth's Biocapacity / Humanity's Ecological Footprint) x 365 = Earth Overshoot Day