1. NAVROZ

Tag: Art & Culture; Festivals

- **Context:** Parsi New Year or Navroz will be celebrated across the world on August 17 to mark the beginning of the new Iranian calendar.

About Navroz:

- It is also pronounced as Nowruz is the beginning of the Parsi New Year and is celebrated for health, wealth, prosperity and productivity.
- The celebrations of Navroz are found way back from 6th century.
- While there are two equinoxes in a typical year namely the spring or the vernal equinox in March and the autumn equinox the former marks the beginning of the New Year and not the latter
- **Highlights:** The day is filled with exciting celebrations, wearing new clothes, greetings relatives and friends, exchanging sweets and presents and so on. This is also a day to rejoice the chosen range of delicacies.
- **Feature:** Visiting the Fire Temple and offering prayers to the deities Khorshed and Meher, who are considered the presiding deities of sun and moon respectively.

2. GLYPTOTHORAX GOPII & GARRA SIMBALBARAENSIS

Tag: Environment; Plant/ Animal Species

Context: Scientists of the Zoological Survey of India have discovered two new species of freshwater fish from the north-eastern and northern parts of the country.

- Both fish, measuring less than seven centimetres, are hill stream fauna and are equipped with special morphological features to suit rapid water flow.

Glyptothorax Gopii:

- It is a new species of catfish found in **Mizoram's Kaladan river**.
- It measures 63 mm standard length without caudal fin, is dark brown on its dorsal surface, and its ventral surface is of a yellowish-light brown.
- It has an axe-shaped anterior nuchal plate (bone below dorsal fin), which makes it distinct from other species of the genus Glyptothorax.
- The elliptical thoracic adhesive apparatus and plicae (folds of tissue) present on the ventral surfaces of the pectoral-fin spine help the fish cling to rocks.
- It has been **named to celebrate** the contribution of **taxonomist K.C. Gopi.**

Garra Simbalbaraensis:

- It was found in Himachal Pradesh's Simbalbara river.
- It measures 69 mm standard length without caudal fin and has a yellowish-grey colour fading ventrally and takes its name from the Simbalbara river.
- It has a prominent unilobed and rounded proboscis with tubercles that help the fish in manoeuvrability.

3. DUGONG

Tag: Environment; Plant/ Animal Species

About Dugong:

- It is a Medium-Sized Marine Mammal.
- The dugong is largely dependent on Seagrass communities for subsistence
- It is thus restricted to the coastal habitats which support seagrass meadows, with the largest dugong concentrations typically occurring in Wide, Shallow, Protected Areas such as bays, mangrove channels, the waters of large inshore islands and inter-reefal waters.

IUCN status	Vulnerable
WPA 1972	Schedule I
CITES	Appendix I

4. DIATOMS- COMBATING FOSSIL FUELS

Tag: Environment; Pollution; Biofuels

Context: Scientists from Rutgers University have figured out how Diatoms, small algae that produce 20% of the world's oxygen, harness solar energy

Key Findings:

- The discovery would lead to the development of algae-based biofuels and relief from fossil fuels
- The algae store energy in the form of oils.
- Further understanding this process can release a lot of this oil which can be used as biofuel to drive vehicles

What are Diatoms:

- They are a major group of algae, specifically microalgae, found in the oceans, waterways and soils of the world.
- Living diatoms number in the trillions: they generate about 20 percent of the oxygen produced on the planet each year
- They are unicellular: they occur either as solitary cells or in colonies, which can take the shape of ribbons, fans, zigzags, or stars.

5. KNOW INDIA PROGRAMME

Tag: International Relations

Context: The 54th KIP is scheduled from 1st August to 25th August, 2019 in association with the partner sates of Punjab and Haryana.

About Know India Programme (KIP):

- It is a government initiative by the Ministry of External Affairs, Government of India for the Indian diaspora (excluding NRIs) between the age group of 18 to 30 years.

Purpose:

- It is a flagship initiative for Diaspora engagement which familiarizes Indian-origin youth (18-30 years) with their Indian roots and contemporary India, through a three-week orientation programme organised by the Ministry.
- In 2016, the scheme was revamped to increase duration from 21 to 25 days, with a 10-day visit to one or two States and preference given to PIOs from Girmitiya countries
- Since 2016, six KIPs are being organised in a year.
- A maximum of 40 Indian Diaspora youth are selected for each programme and provided full hospitality in India.

- It provides an opportunity to the youth of Indian origin to learn about the culture and heritage of India.
- It also helps them to understand their roots and family connections

Girmitiyas:

- "Girmitiyas" or Indentured Labourers, is the name given the Indians who left Indian in the middle and late 19th Century to serve as labourers in the British colonies, where the majority eventually settled.
- Mauritius, Fiji, Suriname, Guyana, Trinidad & Tobago are known as Girmitiya Countries.

6. NATIONAL ESSENTIAL DIAGNOSTICS LIST (NEDL)

Tag: Governance; Health

Context: India has got its first National Essential Diagnostics List (NEDL) finalised by the Indian Council of Medical Research (ICMR).

- It aims to bridge the current regulatory system's gap that do not cover all the medical devices and in-vitro diagnostic device (IVD).
- The current system is equipped to manage only the few notified devices.
- With this, India has become the first country to compile such a list that would provide guidance to the government for deciding the kind of diagnostic tests that different healthcare facilities in villages and remote areas require and is meant for facilities from village till the district level.
- Implementation of NEDL would enable improved health care services delivery through evidence-based care; effective utilisation of public health facilities; effective assessment of disease burden, disease trends, surveillance, and outbreak identification etc.

7. OKJOKULL GLACIER

Tag: Geography; Environment; Climate Change

Context: In Iceland, people will gather to commemorate the loss of the glacier Okjokull, which was officially declared dead in 2014 at the age of 700.

About:

- The glacier was officially declared dead by the Icelandic Meteorological Office when it was no longer thick enough to move
- What once was glacier has been reduced to a small patch of ice atop a volcano.
- Okjokull is the first Icelandic glacier to lose its status as glacier.
- The plaque is also labelled "415 ppm CO_2", referring to the record level of carbon dioxide measured in the atmosphere last May.

- Iceland loses about 11 billion tonnes of ice per year, and scientists fear that all of the island country's 400-plus glaciers will be gone by 2200.

8. NASA'S PARKER SOLAR PROBE

Tag: Science & Technology; Space Technology; NASA

Context: On August 12, NASA's Parker Solar Probe completed a year in service

About Parker Solar Probe:

- It is a part of NASA's "Living With a Star" programme that explores different aspects of the Sun-Earth system
- The probe seeks to gather information about the Sun's atmosphere.
- **Objective:** To investigate what mechanism might be driving extreme heating in the sun's outermost layer, known as the corona.
- **Aim:** To trace how energy and heat move through the Sun's corona and to study the source of the solar wind's acceleration.
- Scientists are curious as why the corona is over a million degrees Fahrenheit (over 555,000 degrees Celsius), while the solar layers below are only a few thousand degrees Fahrenheit each.
- It is the closest a human-made object has ever gone to the Sun.
- The mission is likely to last for seven years during which it will complete 24 orbits.

9. REGN-EB3; mAb114

Tag: Science & Technology; Biotechnology; Vaccines

Context: Clinical trials conducted amid an Ebola epidemic in the Democratic Republic of Congo (DRC) have identified two new drugs that can dramatically cut mortality from the disease.

About:

- The drug mAb114 was developed using antibodies harvested from survivors of Ebola while REGN-EB3 comes from antibodies generated within mice infected with the disease.
- The two anti-Ebola drugs tested in the DRC employ monoclonal antibodies -- protein molecules made by the immune system in response to infection. The drugs work by attacking the Ebola virus with antibodies, neutralising its impact on human cells.
- They are the "first drugs that, in a scientifically sound study, have clearly shown a significant diminution in mortality" Preliminary results from 499 patients suggest that prompt use of –
- REGN-EB3 cuts mortality rates to 29% and
- mAb114 cuts mortality rate to 34%.

- The experimental drugs will now be used to treat patients infected with the viral disease in an ongoing outbreak in the DRC.
- Ebola is a viral hemorrhagic fever that kills up to 90% of those it infects. The latest outbreak, in the Democratic Republic of Congo (DRC), has so far killed nearly 1,900 people.

10.CARBON DOTS

Tag: Science & Technology

Context: Researchers in the UK have developed a new technique that could make light-based cancer treatment more effective and safer for patients while reducing its cost.

About:

- Light-based or photo-dynamic therapy is already a clinically-approved treatment, which uses drugs that only work when exposed to light to destroy cancer cells.
- However, many of these drugs are frequently toxic even without light, causing many side effects in patients and leading to treatment failure.
- Now, researchers in the UK have sought to improve these drugs by using small carbon dots as a way to get the drug to the tumour.
- **Carbon dots**: They are fluorescent nanoparticles with very little toxicity, making them extremely useful for this application.