

### 1. PERSEIDS METEOR SHOWER

**Context:** Recently, the Perseid meteor shower reached its peak, with streaks of light zooming across the skies up to once every minute

#### About Perseids:

- ▶▶ The Perseids are **one of the brighter meteor showers** of the year.
- ▶▶ They occur every year between July 17 and August 24 and tend to peak around August 9-13.
- ▶▶ Made of tiny space debris from the **comet Swift-Tuttle**, the Perseids are named after the constellation Perseus.
- ▶▶ This is because the direction, or radiant, from which the shower seems to come in the sky lies in the same direction as Perseus.
- ▶▶ The Perseids are widely sought after by astronomers and stargazers because most years at its peak, one can see 60 to 100 meteors in an hour from a dark place.
- ▶▶ They are **visible in the Northern Hemisphere** and can be viewed in skies all across.

### 2. HOLMBERG 15A

**Context:** A Monster Black Hole has been Found with **40 Billion Times the Mass of the Sun.**

#### About:

- ▶▶ Astronomers using **ESO's Very Large Telescope (VLT)** have discovered an enormous black hole at the center of Holmberg 15A, a supergiant elliptical galaxy and the central, dominant member of the galaxy cluster Abell 85.



#### Holmberg 15A:

- ▶▶ It is a **ultramassive black hole** is estimated to have **a mass of 40 billion times that of the Sun.**
- ▶▶ This is the most massive black hole with a direct dynamical detection in the local Universe
- ▶▶ It is a factor of two larger than black holes in NGC 4889 (21 billion times that of the Sun) and NGC 1600 (17 billion times that of the Sun).”
- ▶▶ This black hole is not only one of the most massive known, it is also **4 to 9 times larger** than expected given the **galaxy's bulge stellar mass.**

### 3. SECTION 129 OF THE MOTOR VEHICLES ACT, 198

**Context:** Protective headgear of prescribed standards has been made mandatory for children above 4 years while travelling on a motorcycle.

#### About MVA:

- ▶▶ The safety measures for the children travelling on motorcycles have been included in the **Motor Vehicles (Amendment) Act 2019**
- ▶▶ According to Section 129 “Every person, above four years of age, driving or riding or being carried on a motorcycle of any class or description shall, while in public place wear protective headgear conforming to standards prescribed by the Central government”.

#### Exceptions:

- ▶▶ Only **Sikhs wearing turban** have been **exempted** from the provision of Section 129.

### 4. PM-JAY

**Context:** Government of India is planning to include **all types of cancers and their treatment under the Ayushman Bharat Yojana.**

- ▶▶ It is because cancer care costs cause massive financial crisis among people and many had to go without treatment.

#### Cancer in India Scenario:

- ▶▶ According to the **World Health Organisation (WHO)**, the rate of mortality due to cancer in India is high, with cancer the **second-most common disease in India**, responsible for maximum mortality, with about 0.3 million deaths per year.
- ▶▶ **Lung cancer is the most common type** of cancer in India, followed by **breast cancer and oral cancers.**

#### Key Facts:

- ▶▶ The estimated number of people living with the disease stands at around 2.25 million, with over 11 lakh new cancer patients registered each year.
- ▶▶ In India, the risk of developing cancer before the age of 75 years for males stands at 9.81% and females at 9.42%.
- ▶▶ The risk of dying from cancer before the age of 75 years stood at 7.34% in males and 6.28% in females.

#### Ayushman Bharat Yojana- Pradhan Mantri Jan Arogya Yojana (PM-JAY):

- ▶▶ It is the Central Government's health insurance scheme
- ▶▶ **Aim:** To give medical cover to over 10 crore poor and vulnerable families of approximately 50 crore beneficiaries, providing coverage of up to ₹5 lakh per family per year for secondary and tertiary care hospitalisation.

- ▶▶ **Beneficiaries:** So far, 16,000 hospitals have been empanelled, nearly 34 lakh beneficiaries have been admitted, and 9 crore e-cards have been issued.

## 5. PET BOTTLES

**Context:** A comprehensive evaluation by the **CSIR-Central Food Technological Research Institute (CFRTI)**, Mysore has determined that PET bottles are safe.

### Study:

- ▶▶ The CFRTI analysis concluded that antimony, arsenic, barium, cadmium, chromium, cobalt, lead, mercury, selenium and zinc “were below” their detection limits (BDL) of 0.001 mg/kg.
- ▶▶ **BPA (bis-phenol A)** was below its detection limit of 0.02 mg/kg.

### About BPA:

- ▶▶ BPA is a **synthetic organic compound** and used in the manufacture of PET bottles.
- ▶▶ But it is now phased out after research found a link between the presence of BPA and the disruption of hormone regulation, as well as breast cancer.
- ▶▶ They were also below the EU (European Union) regulation norms of the “**specific migration limit**”, which is the maximum amount of a substance that can migrate from a food packaging material or food container into food.
- ▶▶ The study was commissioned by the industry body named Pet Packaging Association for Clean Environment (PACE).

## 6. NATIONAL YOUTH AWARDS

**Context:** Ministry for Youth Affairs & Sports conferred the **National Youth Awards** 2016-17 upon the following 20 individuals and 3 organizations.

### About Youth Awards:

- ▶▶ **Recipients:** The awards were conferred on individuals (aged between 15-29 years) and organizations for excellent work and contribution in different fields of development and social service, such as health, promotion of human rights, active citizenship, community service etc.
- ▶▶ **Objective:** To motivate young persons to achieve excellence in the field of national development and social service.

## 7. LEAD IN PVC PIPES

**Context:** The National Green Tribunal (NGT) has directed the Centre to submit a report on standards of lead and to phase out lead as a stabiliser in **Polyvinyl Chloride (PVC)** pipes that are commonly used in most buildings.

- ▶▶ The NGT had directed the Centre to finalise within two months the standards for using lead in PVC pipes.
- ▶▶ The NGT was earlier informed that water passing through PVC pipes commonly used in most buildings may contain toxic materials like lead, which has a hazardous effect on human health.

## 8. INDIA'S FIRST ECOTOXICOLOGY CLINIC

**Context:** AIIMS, Delhi, launched a clinical ecotoxicology facility, a first-of-its-kind in India, to investigate increasing cases of diseases resulting from exposure to environmental toxins contaminating water, food and air.

### Highlights:

- ▶▶ The new facility will provide diagnostic consultation as well as research services to all the clinical departments dealing with diseases due to ecotoxicity.
- ▶▶ According to the Lancet Commission on Pollution and Health, contaminated water, air and soil are responsible for about nine million early deaths.
- ▶▶ About 92 per cent of these deaths due to environmental toxicity occur in the low-income and middle-income countries, which include India.

### Ecotoxicology:

- ▶▶ It is that branch of science that deals with the nature, effects, and interactions of substances that are harmful to the environment, on ecological entities, i.e. populations, communities or ecosystems.
- ▶▶ Ecotoxicology will engage in knowing the origin of unknown factors of a certain rise in the number of cancer cases, even among those who don't smoke.