

## 25 Sep 2020: PIB Summary & Analysis

### 1. JIMEX 20

#### Context:

Bilateral Maritime Exercise Between Japan and India (JIMEX 20) to Commence off West Coast of India.

#### Details:

- The 4<sup>th</sup> edition of India - Japan Maritime bilateral exercise JIMEX will be held in the North Arabian Sea from 26 to 28 September 2020.
- JIMEX is conducted biennially between the Indian Navy and the Japanese Maritime Self-Defense Force (JMSDF).
- JIMEX series of exercises commenced in January 2012 with a special focus on maritime security cooperation.
- The last edition of JIMEX was conducted in October 2018 off Visakhapatnam, India.
- JIMEX 20 will showcase a high degree of inter-operability and joint operational skills through the conduct of a multitude of advanced exercises, across the spectrum of maritime operations.
  - Multi-faceted tactical exercises involving weapon firings, cross deck helicopter operations and complex surface, anti-submarine and air warfare drills will consolidate coordination developed by the two navies.
- Indigenously built stealth destroyer Chennai, Teg Class stealth frigate Tarkash and Fleet Tanker Deepak will represent the Indian Navy.

### 2. Pinaka Weapon System

#### Context:

AHSP Transfer of Pinaka Weapon System from DRDO to DGQA.

#### Details:

- The Authority Holding Sealed Particulars (AHSP) responsibility of Pinaka weapon system was handed over by [DRDO](#) to DGQA.

#### About Pinaka:

- Pinaka is a free flight artillery rocket system having a range of 37.5 km.
- Pinaka rockets are launched from a multi-barrel rocket launcher which has the capability to launch a salvo of 12 rockets in 44 seconds.
- The weapon system is designed and developed by Pune based DRDO lab, Armament Research & Development Establishment (ARDE).
- Pinaka rockets and its ground systems are currently under bulk production at Ordnance Factories, BEML, BEL, Tata Power and L&T Defence.

#### DGQA:

- The Directorate General of Quality Assurance (DGQA) is an agency under the Department of Defence Production (DDP).
- The DGQA is responsible for checking the quality of arms, ammunition and all other defence equipment used by the Indian armed forces.

### 3. Central Board of Direct Taxes (CBDT)

#### Context:

The Income Tax Department launched the Faceless Income Tax Appeals.

#### Details:

- Under Faceless Appeals, all Income Tax appeals will be finalised in a faceless manner under the faceless ecosystem with the exception of appeals relating to serious frauds, major tax evasion, sensitive & search matters, International tax and Black Money Act.
- From now on, in income tax appeals, everything from e-allocation of appeal, e-communication of notice/questionnaire, e-verification/e-enquiry to e-hearing and finally e-communication of the appellate order - the entire process of appeals will be online, dispensing with the need for any physical interface between the appellant and the Department.
- There will be no physical interface between the taxpayers or their counsel/s and the Income Tax Department. The taxpayers can make submissions from the comfort of their homes and save their time and resources.

Know more about the [CBDT](#) in the linked article.

### 4. Graphene

#### Context:

A new low-cost method of upscaling most conductive material 'graphene' developed.

#### About the Study:

- Researchers from Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), an autonomous institute under the Department of Science & Technology, Government of India, through their recent research work have upscaled graphene production while retaining its thin layered properties.
- The researchers used a combination of two techniques to understand and quantify how much single layer like behaviour exists in the graphene system.
  - Raman spectroscopy - a technique to understand whether a graphene species has single layer like behaviour arising because of no interlayer interaction.
  - Electron diffraction – a technique to study the morphology of the given twisted system.

#### Benefits:

- The new low-cost method of upscaling production of graphene while preserving its single layered properties may reduce the cost of producing this thinnest, strongest and most conductive material in the world.

### What is Graphene?

- Graphene is an allotrope of carbon consisting of a single layer of atoms arranged in a two-dimensional honeycomb lattice.
- The 2010 Nobel Prize in Physics was awarded to Andre Geim and Konstantin Novoselov for their research on graphene.
- Graphene is a transparent and flexible conductor that holds great promise for various material/device applications, including solar cells, light-emitting diodes (LED), touch panels, and smart windows or phones.
- Smartphone products with graphene touch screens are already on the market.
- Graphene is a boon for energy storage, coatings, sensors as well as superconductivity applications.