07 May 2020: PIB Summary & Analysis

Parliamentary Committees

Context:

RS Chairman and LS Speaker discuss COVID and meetings of Parliamentary Committees.

Details:

- The Vice President and the Speaker discussed the role being played by Members of Parliament and the feasibility of holding meetings of Committees of Parliament in the wake of COVID-19.
- To know more about Parliamentary Committees, click on the linked article.

Environment Impact Assessment (EIA)

Context:

Notice period for draft Environment Impact Assessment Notification (EIA), 2020 extended till 30th June.

To know more about Environment Impact Assessment (EIA), click on the linked article.

AYUSH Sanjivani App

Context:

The Union Health & Family Welfare Minister launched the 'AYUSH Sanjivani' App and two AYUSH based studies related to the COVID-19 situation.

Details:

- **AYUSH Sanjivani App:**
  - The App will help to generate data on the acceptance and usage of AYUSH advocacies and measures among the population and its impact in prevention of COVID-19.
  - It is developed by the Ministry of AYUSH and the Ministry of Electronics and Information Technology (MeitY) and shall reach out to a target of 50 lakh people.
- The AYUSH Ministry, in collaboration with the Health Ministry, launched the clinical trials of Ayurvedic medicines for the novel coronavirus infection.
- The scientific studies on Ayurveda interventions as preventive prophylaxis and as an add-on to standard care to COVID-19 are a joint initiative of AYUSH Ministry, Health Ministry and Council of Scientific and Industrial Research (CSIR) with technical support of Indian Council of Medical Research (ICMR).
- **Ayurvedic medicines such as Ashwagandha, Yashtimadhu, Guduchi Pippali, and a poly herbal formulation (Ayush-64) are being used in the clinical trials involving health workers and those working in COVID-19 high-risk areas.**
- The researchers would test Ashwagandha for prevention against SARS-CoV-2 in subjects with increased risk during the COVID 19 Pandemic - a comparison with Hydroxychloroquine in the health care providers.
- Another study is to assess the effectiveness of Ayurveda Formulation as an adjunct to 'Standard of Care' for the treatment of mild to moderate COVID-19.

Prime Minister's Research Fellowship Scheme (PMRF)

Context:

Union HRD Minister announces modifications in PMRF Scheme to boost research in the country.

Details:

- The modifications will enable more students to avail of the benefits under PMRF scheme.
- After the amendments, now for the students from any recognised institute/university (other than IISc/IITs/NITs/IISERs/IIEST/CF IIITs), the requirement of GATE Score is reduced to 650 from 750 apart from minimum CGPA of 8 or equivalent.
- Now, there will be two channels of entries, direct entry and lateral entry.

- Under the lateral entry, candidates pursuing PhD in any PMRF granting institution can apply for the PMRF scheme if he/she satisfies certain conditions, as prescribed.

For more on the Prime Minister's Research Fellowship Scheme, click on the linked article.

MahaKavach App

Context:

MahaKavach App has been introduced by the Government of Maharashtra.

Details:

- MahaKavach is a real-time digital contact tracing mobile application which enables citizens to contribute and assist the health authorities in contact tracing, geo-fencing and tracking of quarantined COVID-19 patients.
- Selfie attendance feature has been also added in the application to get virtual attendance.
- This app is to be used by individuals as directed by their doctor or medical worker.
- The app also encourages to update the quarantine status for greater adherence.
    - This update increases reliability of home location data.
    - It also ensures a breach update is sent only once.
- The app is not being openly listed on Android or iOS app stores, and according to internal sources, will only be used by the government to track specific, suspected COVID-19 cases, or those who have already been put in quarantine by health officials in the state.
- The app will use smartphone-based location services, and will be used to geo-fence the individuals.
- The app will not be accessible to everyone, as the state government aims to use it for very targeted cases.

JNCASR scientists fabricate energy-efficient photodetector for security application

Context:

Scientists from Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), an autonomous institute under the Department of Science and Technology, have fabricated an economical and energy-efficient **wafer-scale photodetector** (thin slice-based) using gold – silicon interface, for security applications.

Details:

- This photodetector could help detect weak scattered light as an indication of unwanted activity.
- This invention provides a simple and cost-effective solution-based fabrication method for high-performance photodetector.
- The scientists have fabricated gold (Au)– silicon (n-Si) interface, which showed high sensitivity towards light demonstrating the photodetection action.
    - The Au–Si interface was brought about by galvanic deposition, a technique for electroplating of metals, wherein water-based solutions (electrolytes) are used, which contain the metals to be deposited as ions.
    - In addition, a nanostructured Au film also was deposited on top of p-type silicide (having an excess of positive charges), which acts as a charge collector.
- Being a solution-based technique, the method is highly economical and enables large-area fabrication without compromising the detector response.
- The process is quick, taking only minutes to fabricate a detector of any arbitrary area.
- The metal nanostructures enhanced the performance of the fabricated detector through trapping the incoming light.
- This photodetector displayed long-term environmental stability.
- The detector exhibits a rapid response of 40 microseconds and can detect low light intensities.
- The device covers a broad spectral range from Ultraviolet to Infrared.

- Besides, it shows excellent uniformity throughout the entire active area with less than 5% variation in response.
- Notably, the detector operates in self-powered mode, which means the device does not require external power for its operation, thus making it energy efficient.
- With a commonly available protective coating, excellent environmental stability is shown for the device under harsh conditions for several days.
- The scientists also demonstrated the photodetector's utility as a prototype imaging system, lux and power meter, and also as a tool for security applications.

About Photodetectors:

- Photodetectors are sensors that can convert the photon energy of light into electrical signal. They are microelectronic devices that can detect light in order to record image information.
- They are absolutely necessary for various scientific implementations like fiber optic communication systems, process control, environmental sensing, safety and security, and also in defense-related applications.
- Photodetectors are at the heart of any optoelectronic circuit that can detect light.
- They are employed for a wide variety of applications ranging from controlling automatic lighting in supermarkets to detecting radiation from outer galaxy as well as security-related applications.