



# IAS PARLIAMENT

*Information is Empowering*  
A Shankar IAS Academy Initiative

## Prelim Bits 14-06-2017

### LIGO-India

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- U.S.-based Laser Interferometer Gravitational Wave Observatory (LIGO)'s detectors have picked up signals of **yet another merger of two black holes** that are three billion light years away.

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- Indians have made a significant contribution to this, with nearly 67 Indians from 13 institutions across the country taking part in the theory and experiment.

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- LIGO is the world's largest **gravitational wave observatory** and a cutting edge physics experiment.

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- Comprised of **two enormous laser interferometers** located thousands of kilometers apart, LIGO exploits the physical properties of light and of space itself to detect and understand the origins of gravitational waves.

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- But, there will remain some blind spots which can be overcome if the LIGO-India project enters, as planned, in 2024.

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- Gravitational waves are 'ripples' in the fabric of space-time caused by some of the most violent and energetic processes in the Universe.

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- **Albert Einstein predicted** the existence of gravitational waves in 1916 in his general theory of relativity.

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### Anti-tank Missile Nag

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- DRDO Successfully Test-fires Anti-tank Missile Nag in Rajasthan.  
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- Nag is a third-generation, **fire-and-forget**, anti-tank guided missile developed by India's state-owned DRDO to support both mechanised infantry and airborne forces of the Indian Army.  
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- The missile incorporates an advanced passive homing guidance system and possesses high single-shot kill probability.  
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- It is designed to **destroy modern main battle tanks** and other heavily armoured targets.  
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- Nag can be launched from land and air-based platforms.  
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## AUSINDEX 17

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- Three Indian warships arrived in the port city of Freemantle in Western Australia on June 13 to participate in a week-long naval exercise off the Western Australian coast.  
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- The so-called Exercise Australia-India (AUSINDEX) is the **first-ever bilateral military exercise in Australian waters** involving the Indian Navy and Royal Australian Navy and aims to develop “a deeper understanding and cooperation between the two navies.”  
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- Indian warships participating in AUSINDEX 17 include **INS Kamorta**, the first of four anti-submarine Kamorta-class stealth corvettes; the **INS Shivalik**, the lead ship of India’s first class of stealth multi-role frigates; and the **INS Jyoti**, a Komandarm Fedko-class replenishment oiler.  
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## ANUGA

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- ANUGA - General Food and Non essential Provisions Exhibition is the **world’s biggest and most important trade fair** for Food and beverage trade.

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- It takes place **biennially**. ANUGA 2017 is the 34th edition.

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- It offers an extensive supporting programme with Lectures, Special exhibition and attractive industry events.

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- It is the leading export platform with 7,189 exhibitors from 109 countries with over 85% of Exhibitors from abroad.

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