



MONTHLY CURRENT AFFAIRS MAGAZINE
FEBRUARY 2017
FOR UPSC ASPIRANTS

SL

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GS 1 History Culture Social issues and Geography	4
'Lost continent' found lurking under Mauritius - Zircons	4
Muziris Heritage Project	6
Set up mechanism to delete sex determination ads: SC - Pre-conception and Pre-natal Diagnostic Techniques (Prohibition of Sex Selection) Act of 1994	7
Nyokum Yullo festival	7
GS 2 Indian Polity and International Relations	8
The Indian Institutes of Information Technology (Amendment) Bill, 2017	8
Political funding: Donor and recipient to get tax exemption	9
Compassion International to shut down India operations	9
Technical Education Quality Improvement Programme (Phase- III)	10
Hague Convention on Civil Aspects of International Child Abduction	12
Measles Rubella (MR) vaccination campaign	13
All you wanted to know about Electoral bonds	14
Nirbhaya Fund	15
GSTN rejects CAG's request -Goods and Services Tax Network, CAG	17
Karnataka amends law to allow kambala	19
Mahatma Gandhi National Rural Employment Guarantee Act	20
National Pharmaceutical Pricing Authority (NPPA)	21
Exit polls and why they are restricted by the panel: All your questions answered	23
Enemy Property (Amendment and Validation) Ordinance	24
Middle Income Group Legal aid scheme Scheme	25
Aadhaar a must for scholarships	27
Real Estate Regulations Act	28
'SAATHIYA', 'SAATHIYA SALAH', Rashtriya Kishor Swasthya Karyakram (RKSK)	30
Mains : GS 2 Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.	30
Amnesty faults sedition law	31
Universities to compete with IITs, IIMs in rankings- National Institutional Ranking Framework (NIRF).	32
GS 2 Government policies	34
Pradhan Mantri Gramin Digital Saksharta Abhiyan	34
'National Transit Oriented Development Policy'	34
GS 2 International Relations	36
H1-B and L-1 visas	36
Rohingya refugees to be relocated on remote island	37
India - USA Major Defence Partner	39
Japan eases permanent visa norms to draw global talent	39

SELFLEARN'S MONTHLY CURRENT AFFAIRS -FEBRUARY 2017

Bilateral Investment treaty	41
India, Rwanda sign aviation, visa deals	42
Trade Facilitation in Services (TFS) Agreement	42
BARAK Missile System LRSAM, MRSAM	44
GS 3 Indian Economy	45
Income Tax Department begins Operation Clean Money	45
India Innovation Index	46
Foreign Investment Promotion Board (FIPB)	47
India creeps up IP Index, but still at bottom of the pack	48
Electronic development fund	49
GST Council clears Compensation Law	50
Public Sector Asset Rehabilitation Agency or PARA	51
On road to less cash, an attempt to bypass card swipe machines	52
Sovereign gold bond scheme	53
FDI inflow zooms 18% to USD 46 billion in 2016: DIPP	55
SEBI ALGO trading	55
GS 3 Environment and Ecology	56
Oil spill	56
Irrawaddy dolphins- 181 dolphins counted in Odisha census	58
'India's air pollution rivals China's as world's deadliest'	58
There's poison in the air National Air Quality Programme (NAMP)	60
'Microplastic particles clogging oceans'	61
Bharat Stage-VI in 3 years: Race over speedbumps	62
GS 3 Science and Technology	64
Toxins in litchis kill children in Bihar, says study	64
Dwarf planet Ceres may have 'hidden' ice volcanoes, claims study	65
A near-perfect broadband absorber New light-absorbent material cools buildings	66
ISRO launches 104 satellites in one go, creates history	66
Tribe offers clues to hidden wonders of medicinal plant	70
Ballistic Missile Defence system	71
'Thubber' for use in soft, stretchable electronics	72
Cloud seeding for inducing rains	73
Potent malaria vaccine on the anvil	74
Chandrayaan - 2	75
Project Loon	76
7 Earth-like planets spotted	77
Cyber Swachhta Kendra - Botnet Cleaning and Malware Analysis Centre	78
Cyber Swachhta Kendra - Botnet Cleaning and Malware Analysis Centre	78
FORPHEUS - world's first robot table tennis tutor	79

Orion Spacecraft	80
GS 3 Security challenges	81
Govt. junks border wall plan	81
Current Events of National and International Importance	82
Nilambur teak set to enter elite club of products with GI tag	82
Quick Facts	84
Indian Navy's Theatre Level Operational Readiness Exercise (Tropex 2017)	85
India and Austria Sign a Protocol amending the India-Austria Double Taxation Avoidance Convention	85
China conducts exercise with new DF-16 medium range ballistic missile	85
Chillai kalan	85
Central Board of Direct Taxes (CBDT) signs four more unilateral Advance Pricing Agreements (APAs)	85
India to frame policy on synthetic biology	86
PM Modi to inaugurate 3-day National Women's Parliament on Friday	86
India raises concern as China blocks US move to get Masood Azhar banned	86
TAMRA Portal and Mobile Application to ensure transparent award of Statutory Clearances for Mining Operations	86
RBI to rationalise MDR	87
Tarini to be Inducted into Indian Navy on 18 February 17	87
Cabinet approves the investment proposal for generation component of Arun-3 Hydro Electric Project in Nepal	87
Centre doubles solar park capacity to 40,000 MW	87
Russian supply ship heads to space station	88
Arctic vault receives new seed deposits	88
Enormous Lyman-alpha nebula	88
India, ADB ink \$375 mn loan pact for industrial corridor	88
City Liveability Index	88

GS 1 History Culture Social issues and Geography

'Lost continent' found lurking under Mauritius - Zircons

Scientists have confirmed the existence of a "lost continent" under the Indian Ocean island of Mauritius that was left over by the breakup of the supercontinent, Gondwana, which started about 200 million years ago. The discovery was made possible by studying a mineral - Zircon.

Details

- The piece of crust, which was subsequently covered by young lava during volcanic eruptions on the island, seems to be a tiny piece of ancient continent, which

broke off from the island of Madagascar, when Africa, India, Australia and Antarctica split up and formed the Indian Ocean.

- By studying the mineral, zircon, found in rocks spewed up by lava during volcanic eruptions, a team of researchers have found that remnants of this mineral were far too old to belong on the island of Mauritius.
- **Zircons** : Zircons are minerals that occur mainly in granites from the continents. They contain trace amounts of uranium, thorium and lead, and due to the fact that they survive geological process very well, they contain a rich record of geological processes and can be dated extremely accurately.
- According to the new results, this breakup did not involve a simple splitting of the ancient super-continent of Gondwana, but rather, a complex splintering took place with fragments of continental crust of variable sizes left adrift within the evolving Indian Ocean basin,

Gondwana

- In paleogeography, Gondwana also Gondwanaland, is the name given to an ancient supercontinent.
- Gondwana formed prior to Pangaea(the supercontinent), and later became part of it.
- Around 335 Mya Gondwana and Laurasia joined together to form the supercontinent Pangaea, which existed until approximately 215-175 Mya.
- Gondwana then separated from Laurasia (the mid-Mesozoic era) in the breakup of Pangaea, drifting farther south after the split.
- Gondwana itself then also broke apart.
- Gondwana included most of the landmasses in today's Southern Hemisphere, including Antarctica, South America, Africa, Madagascar, and the Australian continent, as well as the Arabian Peninsula and the Indian Subcontinent, which have now moved entirely into the Northern Hemisphere.

Prelims perspective

Model questions

Consider the following statements: [UPSC Prelims 2013]

1. Natural gas occurs in the Gondwana beds.
2. Mica occurs in abundance in Kodarma.
3. Dharwars are famous for petroleum.

Which of the statements given above is/are correct?

- a) 1 and 2
- b) 2 only
- c) 2 and 3
- d) None

Mains Perspective

Model questions

What do you understand by the theory of continental drift? Discuss the prominent evidences in its support. **[UPSC Mains 2013]**

Sources: [The Hindu](#) [Wikipedia](#)

Muziris Heritage Project

The uniquely ambitious Muziris Heritage Project (MHP), seeks to link up heritage sites, restore monuments and community spaces is on the cusp of being revitalised and fast-tracked by the Kerala State Tourism Department.

Muziris

- Muziris was an ancient seaport and urban center on the Malabar Coast (modern-day Indian state of Kerala) that dates from at least the 1st century BC, if not before it. Muziris has found mention in the Sangam literature and a number of classical European historical sources
- The port was a key to the trade between southern India and the Phoenicians, the Persians, the Egyptians, the Greeks and the Roman Empire.

About the project

The Government of Kerala has initiated the Muziris Heritage Project to reinstate the historical and cultural significance of the legendary port of Muziris.

The region is dotted with numerous monuments of a bygone era

The entire project is designed to involve and integrate the local community in all intended developmental initiatives.

Project highlights

- The largest heritage conservation project in India
- The first Green Project of the Government of Kerala
- Involvement of multiple Government Departments and convergence
- More than 25 museums to appreciate the Muziris Heritage
- A research and academic institution to support the project
- Major improvements in infrastructure
- Integration with local communities through native resource persons for data collection, survey etc

Project objectives

- To promote awareness and understanding of the cultural distinctiveness and diversity of Muziris
- To conserve cultural assets and safeguard them for the present and future generations
- To practice and promote sustainable development
- To promote participative approach towards conservation and restoration
- To ensure accessibility for all
- To include the heritage of Muziris in regional educational programmes

- To integrate and heritage management for mutual synergy

Sources: [The Hindu](#) [Muziris Project](#) [Wikipedia](#)

Set up mechanism to delete sex determination ads: SC - Pre-conception and Pre-natal Diagnostic Techniques (Prohibition of Sex Selection) Act of 1994

The Supreme Court ordered three Internet giants — Google, Microsoft and Yahoo — to immediately set up their own in-house expert bodies to keep tabs on and delete online pre-natal sex determination advertisements.

- **Background :** Section 22 of the Pre-conception and Pre-natal Diagnostic Techniques (Prohibition of Sex Selection) Act of 1994 prohibits advertisements relating to pre-natal determination of sex and imposes punishment. However, ads continue to appear online, rendering the law toothless.

Pre-conception and Pre-natal Diagnostic Techniques (Prohibition of Sex Selection) Act of 1994

An Act to provide for the prohibition of sex selection, before or after conception, and for regulation of prenatal diagnostic techniques for the purposes of detecting genetic abnormalities or metabolic disorders or chromosomal abnormalities or certain congenital malformations or sex-linked disorders and for the prevention of their misuse for sex determination leading to female foeticide; and, for matters connected therewith or incidental thereto.

Mains Perspective

Similar questions

Why do some of the most prosperous regions of India have an adverse sex ratio for women? Give your arguments. *[UPSC Mains 2013]*

Sources: [The Hindu](#) [Pre-conception and Pre-natal Diagnostic Techniques \(Prohibition of Sex Selection\) Act](#)

Nyokum Yullo festival

The Golden Jubilee Nyokum Yullo 2017 is being celebrated this year with the theme 'Celebrating Identity, Celebrating Existence' at Joram village.

Mains : Indian culture will cover the salient aspects of Art Forms, Literature and Architecture from ancient to modern times.

Nyokum Yullo festival

- Nyokum is a major socio-agricultural festival celebrated by the Nyishi tribe of the Indian state of Arunachal Pradesh.
- The festival has a close link with cultivation.
- The Word Nyokum has been derived from the combination of two words - Nyok means land (earth) and Kum means collectiveness or togetherness. Therefore, the Nyokum festival may very well be interpreted as inviting all the Gods and

Goddesses of the universe, with the Nyokum Goddess as the principal deity, to a particular venue at a particular time.

- The festival is commonly celebrated by the people from all class and walk of life for better productivity, prosperity and happiness of all human beings on earth.

Prelims perspective

Model questions

The Nyokum Yullo festival recently seen in news is celebrated in which Indian State?

- A. Assam
- B. Nagaland
- C. Manipur
- D. Arunachal Pradesh

Sources: [The Arunachal Times](#) The Hindu

GS 2 Indian Polity and International Relations

The Indian Institutes of Information Technology (Amendment) Bill, 2017

The Union Cabinet has given its approval for introduction of The Indian Institutes of Information Technology (Amendment) Bill, 2017 in Parliament.

Mains : **GS 2** Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

What does the bill contain ?

The amendment Bill provides for inclusion of Indian Institute of Information Technology Design and Manufacturing (IIITDM), Kurnool along with the other IITs in the Principal Act. Subsequently, IIITDM Kurnool will be declared as an institute of National Importance with the power to award degrees to students

Background

- The Indian Institutes of Information Technology Act, 2014 confers the status of Institutions of National Importance on the IIITs and also provides for matters connected with administering these IIITs.
- Subsequently, the Government has approved creation of a new IIIT at Kurnool in Andhra Pradesh
- Due to addition of a new IIIT, amendment has to be made in the IIIT Act, 2014.
- With this, IIITDM. Kurnool will be the fifth Member as a Centrally Funded IIIT.

Mains Perspective

Model questions

Should the premier institutes like IITs/IIMs be allowed to retain premier status, allowed more academic independence in designing courses and also decide mode/criteria of selection of students. Discuss in light of the growing challenges [**UPSC Mains 2014**]

Sources: pib

Political funding: Donor and recipient to get tax exemption

The finance minister in his budget speech has proposed to bring in transparency in the system of political funding, by giving the donor and the recipient tax exemption.

Mains : GS 2 Important aspects of governance, transparency and accountability, e-governance- applications, models, successes, limitations, and potential; citizens charters, transparency & accountability and institutional and other measures.

Highlights of the proposal

- A donor will get a deduction and the recipient, or the political party, will get tax exemption, provided returns are filed by the political party.
- Mass donation : Stating that people could donate by cheque or digital transactions, he suggested that people make small donations by the digital mode.
- For cash transactions maximum ceiling of Rs 2000 be fixed.
- **Electoral bonds** : A notified bank would be issuing bonds. Any donor can buy those bonds from the banks by digital payments or through cheque. So, it will only be white, clean money and tax paid money using which bonds can be purchased. These bonds by the donor can be given to the political party.

Sources: [The Hindu](#)

Compassion International to shut down India operations

Ten months after it was put on the Government's "prior permission" list for donations, U.S.-based NGO Compassion International (CI), the largest international donor in India, says it will shut down India operations as it is unable to function with the strictures on funding.

Mains : GS 2 Development processes and the development industry- the role of NGOs, SHGs, various groups and associations, donors, charities, institutional and other stakeholders

Background

- Compassion International was put on watch list by the home ministry earlier.
- After this donors could not longer sent money directly to NGO in India. They had to get prior permission from the home ministry

Why CI was placed in watch list?

- The 'adverse' reports of two NGOs funded by CI — Chennai-based Caruna Bal Vikas Trust and Compassion East India — were instrumental in putting the foreign donor on the Home Ministry's watch list.
- CI had been accused of funding NGOs unregistered for religious activity,
- CI's own mission statement on its website, which says its aim is for "children in poverty to become responsible and fulfilled Christian adults" had raised a red flag with the government.

Other details

- The Christian charity has been at the forefront of a clash between the Modi

government and the Obama administration.

- The government officials made it clear there would be no change in their position, and Compassion International has been told it will not be taken off the watch list.
- The organisation that has operated in India for over 30 years, bringing in approximately ₹292 crore per year and funds 344 NGOs here.
- CI, insists that it has not broken any Indian laws and said that it will shut down its operations in India.

Mains Perspective

Model questions

Examine critically the recent changes in the rule governing foreign funding of NGOs under the Foreign Contribution (Regulation) Act (FCRA), 1976 [**UPSC Mains 2015**]

Sources: [The Hindu](#) [Economic Times](#)

Technical Education Quality Improvement Programme (Phase- III)

The Union HRD Minister Shri Prakash Javadekar signed MoU for Technical Education Quality Improvement Programme (Phase- III) with 18 States and 1 UT in New Delhi today.

Mains : GS 2 Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

Technical Education Quality Improvement Programme (TEQIP)

TEQIP was launched in December, 2002 by the Ministry of Human Resource Development

Objective

- It aims to upscale and support ongoing efforts in improving quality of technical education and enhancing existing capacities of the institutions
- The Programme was conceived and designed as a long term project to be implemented in 10-12 years in 3 phases to support excellence and transformation in Technical Education in the country.

Highlights

- The project will cover all Government / Government aided engineering institutes, affiliating technical universities (ATUs) and CFTIs from Focus States/UT.
- The programme is implemented in assistance with World Bank in a sustainable way to improve over all standard and quality of technical institutes.

TEQUIP I and TEQUIP II

- TEQUIP I and TEQUIP II had a positive impact on the infrastructure and educational standards in the technical institutions where they were taken up.
- Institutions in the central, eastern and north-eastern region and hill States are at present in need of similar and specific interventions.

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- The initiation and implementation of the project TEQIP-III arises from the need to bridge this gap.

The major impacts/ outcomes of the project are:

- Better academic standards, through accreditation, filling up faculty positions, training faculty in better teaching methods, improved research outputs in institution in Focus States/UTs
- Better administration of the institutions with improved financial/academic autonomy,
- Better systems for assessment of Student Learning, higher transition rates
- Transparent and expeditious release of funds to institutes by way of Direct Funds Transfer (DFT) System.

TEQIP PHASE - I

TEQIP Phase I was implemented with the assistance of World Bank as a Centrally co-ordinated Central and State Sector Project with a total cost of Rs. 1389 crore.

TEQIP Phase-I had the following Objectives:

- Promotion of Academic Excellence;
- Networking of Institutions for quality enhancement and resource sharing;
- Enhancing quality and reach of services to Community and Economy;
- System Management Capacity Improvement.

TEQIP PHASE- II

Based on the achievements made during TEQIP Phase-I, TEQIP Phase-II is to be implemented as a Centrally Sponsored Scheme (CSS) with the assistance of the World Bank at a total cost of Rs. 2430 crore.

Technical Education Quality Improvement Programme (Phase- III)

- The Focus States are 7 Low Income States (Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, Rajasthan and Uttar Pradesh), 3 Hill States (Himachal Pradesh, Jammu & Kashmir and Uttarakhand), 8 North-Eastern States (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura) and Union Territory of Andaman and Nicobar Islands.
- The project will be implemented as Central Sector Scheme with the facility of Direct Funds Transfer to the accounts of beneficiary institutes.
- The project will be initiated in April 2017 and will be coterminous with Fourteenth Finance Commission (FFC) i.e. 2019-20.

Prelims perspective

Model questions

TEQIP, an initiative of the Government of India, aims at

- a) promoting the Self Help Groups in rural areas
- b) improving the quality of technical education in India
- c) promoting the education and health of adolescent girls



d) providing affordable and quality education to the citizens for free

Mains Perspective

Model questions

The quality of higher education in India requires major improvement to make it internationally competitive. Do you think that the entry of foreign educational institutions would help improve the quality of technical and higher education in the country. Discuss **[UPSC Mains 2015]**

Sources: pib [AICTE](#) [MHRD](#)

Hague Convention on Civil Aspects of International Child Abduction

The Ministry of Women and Child Development held a National Consultation to discuss issues related to India's accession to Hague Convention on the Civil Aspects of International Child Abduction.

Mains : GS 2 Governance, Constitution, Polity, Social Justice and International relations.

Hague Convention on Civil Aspects of International Child Abduction

- Hague Convention is a multilateral treaty which came into existence on 1st December, 1983.
- The convention seeks to protect children from the harmful effects of abduction and retention across international boundaries by providing a procedure to bring about their prompt return.
- The convention is intended to enhance the international recognition of rights of custody and access arising in place of habitual residence, and to ensure prompt return of the child who is wrongfully removed or retained from the place of habitual residence.
- It seeks to return children abducted or retained overseas by a parent to their country of habitual residence for the courts of that country to decide on matters of residence and contact.
- The convention shall apply to any child, up to the age of 16 years who is a habitual resident of any of the contacting states.

India's position

- Currently, there is no specific Indian legislation addressing issues related to abduction of children from and into India.
- However Law Commission of India had submitted the 218th Report titled "Need to accede to the Hague Convention on the Civil Aspects of International Child Abduction 1980".
- In view of this report, before acceding to the Convention, the Ministry of Women and Child Development prepared a draft Bill titled "The Civil Aspects of International Child Abduction Bill, 2016".

- The Law Commission of India has recently suggested some modifications in the above mentioned Bill and re-named it as the “The Protection of Children (Inter-country Removal and Retention) Bill, 2016”.

The issue

- A large number of women married to Indians abroad are compelled to return to India with their children when they undergo violence in their marriages.
- There are concerns about the difficulties being faced by the affected parent, whether men or women and their children as a result of breakdown of marriages abroad.
- The problems being faced by the parents and children must be addressed and an effective mechanism for the same must be created according to the minister.

Prelims perspective

Model questions

"Hague Convention ", sometimes seen in the news, is related to

- a) Nuclear weapons proliferation
- b) Legally binding treaty to phase out ballistic missiles and weapons of mass destruction
- c) A WHO programme to prevent spread of contagious diseases
- d) abduction of children across international borders

Sources: pib

Measles Rubella (MR) vaccination campaign

The Ministry of Health and Family Welfare launched Measles Rubella (MR) vaccination campaign in the country.

Mains : GS 2 Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

Highlights

- The campaign against these two diseases will start from five States/UTs and following the campaign, Measles-Rubella vaccine will be introduced in routine immunization.
- All children aged between 9 months and less than 15 years will be given a single shot of Measles-Rubella (MR) vaccination.
- MR vaccine will be provided free- of- cost across the states
- Measles vaccine is currently provided under Universal Immunization Programme (UIP). However, rubella vaccine will be a new addition.

Measles

- Measles is a deadly disease and one of the important causes of death in children.
- It is highly contagious and spreads through coughing and sneezing of an infected person. Measles can make a child vulnerable to life threatening complications such as pneumonia, diarrhoea and brain infection.
- In India, it killed an estimated 49,200 children.

Rubella

- Rubella is generally a mild infection, but has serious consequences if infection occurs in pregnant women, causing congenital rubella syndrome (CRS).
- CRS is characterized by congenital anomalies in the foetus and newborns affecting the eyes (glaucoma, cataract), ears (hearing loss), brain (microcephaly, mental retardation) and heart defects, causing a huge socio-economic burden on the families in particular and society in general.
- In 2010, an estimated 1,03,000 children were born with CRS (congenital rubella syndrome) globally, of which around 47,000 children, i.e. 46% were in South-East Asia Region.

Prelims perspective

Similar question [*UPSC Prelims 2016*]

Consider the following diseases

1. Diphtheria
2. Chickenpox
3. Smallpox

Which of the above diseases has/have been eradicated in India?

- a) 1 and 2 only
- b) 3 only
- c) 1, 2 and 3
- d) None

Answer. B

Mains Perspective

Similar questions [*UPSC Mains 2015*]

Public health system has limitation in providing universal health coverage. Do you think that private sector can help in bridging the gap? What other viable alternatives do you suggest.

Sources: pib

All you wanted to know about Electoral bonds

Electoral Bonds, which neither get one a tax exemption nor earn one an interest, have been proposed as a way of reforming election funding.

Mains : GS 2 Important aspects of governance, transparency and accountability,

What is it Electoral bonds? How it works?

- Electoral bonds will be issued by a notified bank for specified denominations.
- If you are keen to donate to a political party, you can buy these bonds by making payments digitally or through cheque.
- You are then free to gift the bond to a registered political party.
- The bonds will likely be bearer bonds and the identity of the donor will not be known to the receiver.

- The party can convert these bonds back into money via their bank accounts. The bank account used must be the one notified to the Election Commission and the bonds may have to be redeemed within a prescribed time period.

Different from other bonds

The electoral bond is more like a bail-bond than a Government or corporate bond. Electoral bonds are essentially like bearer cheques.

The issuing bank will remain the custodian of the donor's funds until the political party redeems the bond. So, only the RBI will most likely be allowed to issue these bonds, to be sold through notified banks.

Why is it important?

- Today, most political parties use the lax regime on donations to accept cash donations from anonymous sources.
- Nearly 70 per cent of the party funding over an 11-year period came from unknown sources, according to the Association for Democratic Reforms (ADR).
- Currently, political parties are required to report any donation of over Rs. 20,000 to the IT department.
- But there has been a trend of more donations flowing by way of hard cash in smaller amounts. To fix this, the Budget has reduced the disclosure limit to Rs. 2,000 and insists that any amount over this must be paid through cheque or the digital mode.
- The idea is that electoral bonds will prompt donors to take the banking route to donate, with their identity captured by the issuing authority.

The loopholes

While the identity of the donor is captured, it is not revealed to the party or public. So transparency is not enhanced for the voter.

Why should I care?

- If you want to play an anonymous benefactor to a political party, electoral bonds are a neat vehicle. But do note that income tax breaks may not be available for donations through electoral bonds.
- Also, in the electoral bond route, while the party may not know the identity of the donor, the bank will.
- But there do not seem to be many precedents to such a bond in other countries, even where political funding is well evolved.
- It may have been worthwhile to study alternate methods and ensure the process leads to more accountability for voters, before shaking things up.

Sources: [The Hindu Businessline](#)

Nirbhaya Fund

Crores allocated for the Nirbhaya Fund for initiatives to support women's safety and dignity lie unused as crime against women continue to peak, amicus curiae and senior

advocate Indira Jaising informed the Supreme Court.

Nirbhaya Fund

The Ministry of Finance, Government of India had set up a dedicated fund called Nirbhaya Fund in 2013, for implementation of initiatives aimed at enhancing the safety and security for women in the country. It is a non-lapsable corpus fund.

Details

- It is a non-lapsable corpus fund.
- It was set up in 2013
- The guidelines for administration and operationalization of the fund has been issued by Ministry of Finance (DEA) from time to time for
- Ministry of Women and Child Development is the nodal Ministry to appraise schemes under Nirbhaya Fund and also to review and monitor the progress of sanctioned Schemes in conjunction with the line Ministries/Departments.

Present status regarding utilisation of fund

Under Nirbhaya fund, 18 proposals amounting to Rs.2195.97 Crores have been received so far, out of which 16 proposals amounting to Rs. 2187.47 Crores have been appraised and recommended

Schemes of Ministry of Women and Child Development under Nirbhaya Fund

- **One Stop Centre** : Popularly known as Sakhi Centres,it aims at establishing Centres to facilitate women affected by violence. It provides First aid, Medical aid, Police assistance, Legal aid and counselling support.
- **Universalisation of Women Helpline** : Helpline specifically for women with a common number across the country will link the One Stop Centres being established by the Ministry of Women & Child Development. The Department of Telecommunication has allocated the number 181 to all States/UTs for Women Helpline.
- **Mahila Police Volunteers** : Mahila Police Volunteers (MPVs) will act as a link between police and community and help women in distress. Haryana has become the first state to start the Mahila Police Volunteer scheme.

Ministry of Home Affairs:

- **Emergency Response support System-** For creation of an Emergency Response Support System (ERSS) which aims to integrate all emergency numbers to 112 with state of art technology. ERSS envisages an integrated computer aided emergency response platform to respond to distress calls and ensure speedy assistance to the distressed persons.
- **Central Victim Compensation Fund** : A Corpus Fund of Rs.200 crores to be disbursed for supporting States/UTs in providing fund towards compensation to

the victim or her dependents who have suffered loss or injury as a result of the crimes (including survivors of rape and acid attack).

Other Schemes under Nirbhaya Fund

- **Ministry of Railways: Integrated Emergency Response Management System:** It aims to provide round the clock security to women passengers in 983 Railway Stations by strengthening of Security Control Rooms of Railways with 182 Security Helpline, Medical Facilities, RPF and police, installation of CCTV cameras, etc.
- **Abhaya Project Proposal (Andhra Pradesh):** This proposal is for ensuring the safety of Women and Girl child during the transport (auto rickshaw) has been proposed by Andhra Pradesh with a cost of Rs. 138.49 Crores.
- **CHIRALI: Friends Forever (Rajasthan)** is a scheme to constitute Community Action Groups in 7 districts of Rajasthan with an objective to create an enabling environment that would support girls and women to move freely and make use of choices, spaces and opportunities for their overall well being.

Prelims perspective

Model questions

With reference to the Nirbhaya Fund, consider the following statements:

1. The fund has been setup by Ministry of Women and Child Development
2. Mahila Police Volunteers is scheme under Nirbhaya fund

Which of the statements given below is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) None

Answer B

Mains Perspective

Model questions

Questions from this part of the syllabus asked in the past examinations. Visit our [IAS preparation page](#) for details

Sources: [The Hindu](#) pib

GSTN rejects CAG's request -Goods and Services Tax Network, CAG

GSTN has rejected a request from the Comptroller and Auditor General (CAG) to appoint an auditor as well as to conduct a supplementary audit (it done at present for all government companies)

Mains : GS 2 Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies.

Goods and service Tax network

- GSTN (Goods and Services Tax Network) is a private limited company set up in

2013 for providing IT infrastructure to all stakeholders for the implementation of the Goods and Services Tax

- The Government of India, state governments, UT's, together hold 49% of equity in GSTN. Balance 51% equity is with non-Government financial institutions.
- The Company has been set up primarily to provide IT infrastructure and services to the Central and State Governments, tax payers and other stakeholders for implementation of the Goods and Services Tax (GST).

The issue

GSTN has rejected a request from the Comptroller and Auditor General (CAG) to appoint an auditor as well as to conduct a supplementary audit (it done at present for all government companies)

Why GSTN rejected CAG's request?

GSTN claimed that its Articles of Association do not give any right to either the state government or the Centre to exercise control over either the management or the policy of the GSTN.

CAG' power

- As per companies act any company which is either directly or indirectly controlled or owned by the Central/any State Government will have an auditor appointed for it by the CAG after which it (the CAG) will conduct a supplementary audit of the annual financial statements.
- According to CAG's own DPC (Duties, Powers and Conditions of Service),the Central auditor will audit all receipts and expenses of all bodies and authorities which are "substantially" financed by grants or loans from either the Consolidated Fund of India or of any State or Union Territory.

Substantial grants were provided by the government to GSTN.

Comptroller and Auditor General of India (CAG)

- The Constitution of India (Article 148) provides for an independent office of the Comptroller and Auditor General of India (CAG).
- He is the guardian of the public purse and controls the entire financial system of the country at both the levels—the Centre and the state.

Powers and duties of CAG

The Constitution (Article 149) authorises the Parliament to prescribe the duties and powers of the CAG. Accordingly, the Parliament enacted the CAG's (Duties, Powers and Conditions of Service) act. 1971.

The duties and functions of the CAG among other things laid down by the Parliament and the Constitution are:

- Auditing the accounts related to all expenditure from the Consolidated Fund of India, Contingency Fund of India and the Public Account of India and that of the

states

- Auditing the receipts and expenditure of
1. All bodies and authorities substantially financed from the Central or state revenues;
 2. Government companies
 3. Other corporations and bodies, when so required by related laws.

Prelims perspective

Model questions

Which among the following are the powers and functions of CAG?

Mains Perspective

Model questions [*UPSC Mains 2016*]

Exercise of CAG's powers in relation to the accounts of the Union and the states is derived from Article 149 of the Indian Constitution. Discuss whether audit of the Government's policy implementation could amount to overstepping its own jurisdiction

Sources: [The Indian Express](#) [GSTN](#)

Karnataka amends law to allow kambala

The Karnataka Legislative Assembly passed the Prevention of Cruelty to Animals (Karnataka Amendment) Bill, 2017 paving the way for conducting kambala.

Mains : GS 1 Indian Heritage and Culture, History and Geography of the World and Society GS 2 Governance, Constitution, Polity, Social Justice and International relations.

Prevention of Cruelty to Animals (Karnataka Amendment) Bill, 2017

- The Bill seeks to exempt kambala and bullock-cart racing from the ambit of the Prevention of Cruelty to Animals (PCA) Act, 1960.
- Kambala is currently stayed by the High Court following a petition by the People for the Ethical Treatment of Animals (PETA).

What is Kambala?

- Kambala is a traditional buffalo race held annually in the coastal districts of Karnataka

The present issue

- Thousands in the coastal districts of Dakshina Kannada and Udupi, where kambala is widely held, had protested the ban imposed by High Court against conducting the race
- The movement gathered momentum after the jallikattu agitation in the neighbouring Tamil Nadu.
- The protesters argued that the annual kambala races in paddy fields were part of their tradition and the sport did not involve torturing of animals.

Prelims perspective

Model questions

What is "Kambala" recently in the news?

- Buffalo race held in Karnataka
- Cockfight held in Andhra Pradesh
- bull taming sport in Tamil Nadu
- None of the above

Mains Perspective

Model questions

It is all right if popular sentiment can influence legislation, but it cannot undermine the rule of law. Discuss the statement in the context of various protests associated with sports involving animals

Sources: [The Hindu](#)

Mahatma Gandhi National Rural Employment Guarantee Act

All you wanted to know about MGNREGA

Mains : GS 2 Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; mechanisms, laws, institutions and Bodies constituted for the protection and betterment of these vulnerable sections.

What is it?

- MGNREGA is the largest social security scheme in the world
- It guarantees 100 days of unskilled manual work to all rural households in India.
- The MGNREG Act makes right to work a statutory rights. That is making it obligatory for the State to give them work on demand.
- Household could actually sue them for not doing so — at least on paper.

Types of work

- The work is usually on projects to build durable assets like roads, canals, ponds and wells.

Why is it important?

- The act was phenomenal in changing the nature of the rural labour market.
- It gave an opportunity to rural households to earn minimum income by getting job cards under this scheme.
- It helped in reduction of poverty and supplementing the income of poor people during lean agriculture periods.
- higher participation of women and SC and ST individuals makes the scheme inclusive. Today, about one in two jobs created under the scheme is for women and about 40 per cent for SC/ST.
- It helped households to get freed from clutches of local money lenders.
- The direct benefit transfer payment mode forced people to open crores of new bank and post office accounts. The newly opened accounts have aided access to bank credit.
- Some studies even point to improved education for children in MGNREGA

households.

The shortfalls

- The scheme does not measure productivity or durability of the work done.
- While there is incentive for workers to turn out as much as is needed to earn the wage rate, there is no incentive to expedite it, or finish the task on time.
- There are administrative glitches too. Panchayat Samitis don't meet for months – resulting in work sanctioning getting delayed. Only 10 per cent of 4.8 crore households managed to fully benefit with 100 days of work in 2015-16.

The bigger question is: Could sustainable rural jobs have been created by skilling the rural households or by allocation to the neglected animal husbandry sector?

Budget 2017 announced the highest allocation ever to be made under the scheme.

Mains Perspective

Model questions

Could sustainable rural jobs have been created by skilling the rural households or by allocation to the neglected animal husbandry sector? Discuss

Sources: [The Hindu Businessline](#)

National Pharmaceutical Pricing Authority (NPPA)

In a major relief to lakhs of cardiac patients, the government cut prices of life-saving coronary stents by up to 85 per cent by capping them at Rs 7,260 for bare metal ones and Rs 29,600 for drug eluting variety.

Mains : GS 2 Governance, Constitution, Polity, Social Justice and International relations.

Highlights

- A coronary stent is a tube-shaped device placed in the arteries that supply blood to the heart. It keeps the arteries open in the treatment of coronary heart diseases.
- The National Pharmaceutical Pricing Authority (NPPA) decided to fix the ceiling prices for cardiac stents


REMOVING THE PRICE BLOCK

The intervention of National Pharmaceutical Pricing Authority, in its own words, is aimed to check the "irrational, restrictive and exorbitant pricing" of stents

What is a coronary stent?
A tube-shaped device placed in the arteries to keep them unclogged for treatment of coronary heart diseases

Need for stents:
A report by the National Pharmaceutical Pricing Authority states:

- There is a very high incidence of coronary artery disease (CAD) in India. This in turn is associated with high morbidity and mortality
- Coronary stent implants are critical for management of CAD, and hence coronary stents are 'essential' for public health



70% Is share of MNCs in India's stent market

MNC stent makers

- Johnson & Johnson
- Medtronic
- Abbott • Biotronic

Indian companies

- Vascular Concepts
- Meril Life Sciences

Types of stents

Bare Metal Stents They don't have any covering or drug coating. They are the most basic stents

Earlier cost	Present cost
₹45,000	₹7,260

Drug Eluting Stents These are coated with a drug, and they have a longer life

₹1.21 lakh	₹29,600
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According to NPPA, the stent price jumps exponentially by as much as 1,000 % by the time it reaches patients, with some hospitals enjoying abnormally high margins of profits, sometimes close to 600%

Source: National Pharmaceutical Pricing Authority

Image : The Hindu

The National Pharmaceutical Pricing Authority (NPPA),

The National Pharmaceutical Pricing Authority (NPPA), is an independent body of experts under the Ministry of Chemicals and Fertilizers, constituted inter alia, to fix/revise the prices of controlled bulk drugs and formulations and to enforce prices and availability of the medicines in the country, under the Drugs (Prices Control) Order, 1995

Drug Prices Control order

The prices of drugs that figure in national list of essential medicines are controlled by the government. These price limits are given effect by passing the order referred to as DPCO.

Under the provisions of DPCO 2013, the prices of drugs that figure in the National List of Essential Medicines (NLEM) are monitored and controlled by the regulator, the National Pharmaceutical Pricing Authority.

Functions of NPPA

- Fixation and revision of prices of scheduled bulk drugs and formulations
- Monitoring of prices of decontrolled drugs and formulations and recovering amounts overcharged by manufacturers for the controlled drugs from the consumers.
- Implementation and enforcement of the provisions of Drug Price Control Order
- To monitor the availability of drugs, identify shortages, if any, and to take remedial steps;
- Other matter related to drug pricing and policy

Prelims Perspective

Model questions

The National Pharmaceutical Pricing Authority comes under which ministry?

- a) Ministry of Health
- b) Ministry of Social justice
- c) Ministry of Chemicals and fertilizers
- d) Ministry of Commerce

Mains Perspective

Model questions

Recently government has capped the stent prices bringing respite to heart patients, but whether the government will be able to effectively monitor the practices of the hospitals exploiting patients is another matter . The government needs to find new ways if it has to make ceiling price fixation on medicines meaningful. Comment

Sources: [The Hindu](#) [The Hindu](#), [NPPA](#), [The Hindu Businessline](#)

Exit polls and why they are restricted by the panel: All your questions answered

The background and reasons for the curbs on exit polls

Mains : GS 2 Salient features of the Representation of People's Act

Governance, Constitution, Polity, Social Justice and International relations.

What is an exit poll? And how is it different from an opinion poll?

- An opinion poll is a pre-election survey to gather voters' views on a range of election-related issues.
- An exit poll, on the other hand, is conducted immediately after people have voted, and assesses the support for political parties and their candidates.

The Election Commission (EC) opposed to media coverage of opinion polls and exit polls during a multi-phase election. Why?

- Political parties often allege that many opinion and exit polls are motivated and sponsored by their rivals, and could have a distorting effect on the choices voters make in a protracted election.
- Critics say the projections of these surveys can be influenced by the choice, wording and timing of the questions, and by the nature of the sample drawn.

When did the EC first attempt to place curbs on such surveys?

- The Election Commission issued guidelines under Article 324 of the Constitution, in 1998 Lok Sabha elections prohibiting newspapers and news channels from publishing results of pre-election surveys and exit polls during the time of elections.
- The EC also mandated that while carrying the results of exit and opinion polls, newspapers and channels should disclose the sample size of the electorate, the details of polling methodology, the margin of error and the background of the

polling agency.

Present position

In February 2010, *restrictions were imposed on exit polls* through the introduction of Section 126(A) in the Representation of Peoples Act. Exit polls can be published only after the end of polling.

Presently opinion polls are permitted while exit polls are restricted.

Mains Perspective

Model questions

The rationale behind restricting the exit poll is that such polls influence voting behaviour during an election that plays out in multiple phases. Whether exit polls would outweigh the complex calculations voters have is debatable. But even if it is conceded that exit polls influence voting behaviour, why is that a bad thing? Critically evaluate

Sources: The Indian Express

Enemy Property (Amendment and Validation) Ordinance

The recent promulgation of the Enemy Property (Amendment and Validation) Ordinance saw some controversy as it was the fifth time that the law was being introduced through the ordinance route.

Mains : GS 2 Governance, Constitution, Polity, Social Justice and International relations.

Background

- After the wars against China in 1962 and Pakistan in 1965 and 1971, property belonging to the nationals of these two countries was taken over by the Union government under the Defence of India Acts.
- Later, the Enemy Property Act, 1968 was passed to vest all such immovable and movable property in a 'Custodian'.

The Enemy Property (Amendment and Validation) Ordinance, 2016

- **Retrospective application:** The Ordinance amends several provisions of the 1968 Act retrospectively. Some of these changes will be deemed to have come into force from the commencement of the 1968 Act.
- **Definition of enemy:** The ordinance expanded the definition of enemy to include legal heirs of enemies (even they are Indian citizens) and nationals of an enemy country who subsequently changed their nationality to that of another country, etc.
- **Vesting of enemy property:** The Ordinance amends the Act to clarify that even in the following cases these properties will continue to vest with the Custodian: (i) the enemy's death, (ii) if the legal heir is an Indian or citizen of a country that is not an enemy, (iii) enemy changes his nationality to that of another country, etc.

- No laws and customs governing succession will be applicable to these properties.
- **Power of sale:** The Ordinance allows the Custodian to sell or dispose of enemy property.
- **Transfers by enemies:** The Ordinance prohibits all transfers of enemy property by enemies.
- **Bar of jurisdiction:** The Ordinance bars civil courts and other authorities from entertaining cases against enemy properties,
- **Powers of the Custodian:** The 1968 Act authorised the Custodian to take measures to preserve enemy property, and maintain the enemy and his family if they are in India, from the income derived from the property.
- **The Public Premises Act, 1971** regulates removal of unauthorised occupants and construction from public premises. The Ordinance amends this Act to include enemy properties within the definition of public premise

Ordinance

- As per article 123 of the Indian constitution the president can promulgate ordinances when the parliament is not in session
- Ordinances are temporary laws that are promulgated by the President of India on the recommendation of the Union Cabinet.
- They can only be issued when Parliament is not in session.
- Ordinances cease to operate either if Parliament does not approve of them within six weeks of reassembly, or if disapproving resolutions are passed by both Houses.

Prelims perspective

Model questions

Who among the following has the power to promulgate ordinances?

- a) Parliament
- b) Speaker of Lok Sabha
- c) President
- d) None of these

Mains Perspective

Model questions

Resorting to ordinances has always raised concern on violation of the spirit of separation of power doctrine. While noting the rationales justifying the power to promulgate, analyse whether the decision of the Supreme Court on the issue have further facilitated to resorting to this power. Should the power to promulgate the ordinances be repealed? **[UPSC Mains 2015]**

Sources: [The Hindu](#) [Wikipedia](#) pib [PRS](#)

Middle Income Group Legal aid scheme Scheme

The Supreme Court has introduced a self-supporting scheme for providing legal services

to the middle and relatively lower income groups, according to the Union Law Ministry.

Mains : GS 2 Structure, organization and functioning of the Executive and the Judiciary mechanisms, laws, institutions and Bodies constituted for the protection and betterment of vulnerable sections.

About the Middle Income Group Legal aid scheme Scheme

Objective : The scheme is meant **to provide legal services to litigants in the Supreme Court** whose gross income does not exceed ₹60,000 per month or ₹7.5 lakh per annum.

Details

They beneficiaries can avail themselves of the services for a nominal amount.

How it works?

- A sum of ₹500 shall be payable to the Supreme Court Middle Income Group (MIG) Legal Aid Society as service charges.
- The case registered under the MIG Legal Aid Scheme will be forwarded to the Advocate On Record, Arguing Counsel or Senior Counsel on the panel for opinion.

As per the Supreme Court guidelines, cases can be filed before it only through Advocates On Record.

- The view expressed by the Advocate On Record will be final insofar as the eligibility of the applicant for obtaining the benefit of the scheme is concerned
- **Contingent Fund :** A deposit of ₹750 will be collected to meet the miscellaneous expenditure in connection with the case at the stage of admission of the case.
- If the case is found unfit for appeal then the entire amount except service charges will be refunded.
- **Accountability :** If the advocate, who is appointed under the Scheme, is found negligent in the conduct of the case entrusted to him, then he will be required to return the brief together with the fee which he may have received from the applicant. Further, the Society will not be responsible for the negligent conduct of the case but the entire responsibility will be that of the advocate vis-a-vis the client and the advocate's name will be struck off from the panel.

Middle Income Group (MIG) Legal Aid Society

The members of the governing body, to whom the management of the Society is entrusted as required under Section 2 of the Societies Registration Act, include the Chief Justice of India as patron-in-chief, the Attorney General as ex-officio vice-president, the Solicitor General as honorary secretary and other senior advocates as its members.

Prelims perspective

Model questions

"Middle Income Group Legal aid scheme", sometimes seen in the news, is related to

- a. Lok Adalats
- b. Providing free legal services to the poor and vulnerable

- c. Appointing advocates for free to the needy
- d. Providing legal services to litigants in the Supreme Court

Mains Perspective

Model questions

Legal services still remain out of reach for many Indian citizens despite having several mechanisms constituted for the purpose. Comment

Sources: [The Hindu](#)

Aadhaar a must for scholarships

The Human Resource Development (HRD) Ministry has made Aadhaar mandatory for providing scholarships to meritorious school students from economically weaker sections.

Earlier the government made Aadhaar mandatory for availing subsidised foodgrains from the ration shops with a view to better target beneficiaries.

Mains : GS 2 Structure, organization and functioning of the Executive and the Judiciary

Important aspects of governance, transparency and accountability, e-governance-applications, models, successes, limitations, and potential; citizens charters, transparency & accountability and institutional and other measures.

Details

- Students who want to avail scholarship benefits under 'National Means-cum-Merit Scholarship Scheme' need to get enrolled under Aadhaar.
- The responsibility to collect Aadhaar from students or to authenticate them, shall be on the Principal of the School concerned.
- Aadhaar has also been made mandatory for 12 scholarship schemes administered by the Ministry of Social Justice and Empowerment

Supreme Court's order on use of Aadhaar

- An earlier Supreme Court allowed voluntary use of Aadhaar for getting benefits
- It added that no citizen could be denied a service or subsidy for not having an Aadhaar or unique identity number.
- The government's order violated Supreme court's earlier judgement.

Provision in Aadhaar act supporting the government's move

- The Aadhaar Act provides that the Central/State Government while making expenditure from Consolidated Fund of India for any subsidy, may require such individual to furnish proof of possession of Aadhaar number or undergo authentication.

Earlier government orders making Aadhaar mandatory

- The Ministry of Women and Child Development had issued a notification that made Aadhaar a must for Anganwadi workers and helpers. T
- The Ministry of Rural Development made it mandatory for all MGNREGA

workers to get Aadhaar numbers.

- Aadhaar was made mandatory as subsidised foodgrains under the public distribution system.

Mains Perspective

Model questions [*UPSC Mains 2013*]

Electronic cash transfer system for the welfare schemes is an ambitious project to minimize corruption, eliminate wastage and facilitate reforms Comment.

Sources: [The Hindu](#) [The Hindu](#) [The Hindu](#) [The Hindu Businessline](#)

Real Estate Regulations Act

The passing of Real Estate Regulations Act by the Central Government and with several states drafting rules for Real Estate Regulations Act consumers are protection at varying levels while investing in a house.

Mains : GS 2 Statutory, regulatory and various quasi-judicial bodies.

Concerns of a Consumer while investing in house

- Weather the builder has complied with the laws.
- Weather the developer keeps his promises on timeline and delivery;
- The title deeds are clear
- Construction quality leaves nothing to be desired.

RERA offers protection to the consumer, at varying levels, on all these counts.

How RERA offers protection to consumer on different counts?

- RERA requires any project that has 8 dwelling units or is at least 500 sq m in area to be registered with the regulatory authority.
- The builder has to register the project first with the authority before he can sell/ even advertise about the project
- Once registered the entire details regarding the project must be made available online for the end consumer to verify.(registration should include details of the architect, agents and structural consultants,. clearances obtained, status of earlier projects, track record of the developer ...)
- Advance Amount : The builder is eligible to receive only 10% of the money as advance before the agreement with the consumer is inked. Further, 70% of payment has to be put into the designated account for the project (like an escrow).
- Carpet Area : The builder is permitted to sell units only based on carpet area. It is the net usable floor area of an apartment excluding the area covered by the external walls, areas under services shafts..., but includes the area covered by the internal partition walls of the apartment.”
- Every six months, an audit of the structural strength of the building is to done, certified by both the architect and the structural engineer.
- Third party audits will make developer more accountable

- **Insurance** :. Earlier, it was possible that a buyer found out too late that his property belonged not to the seller but another party. To protect consumers against risk of such loss under RERA the builder is required to provide for Title Insurance for all new and ongoing projects
- **Promotors liability** : RERA requires the promoters to be liable for all structural defects in the building for a period of 5 years.

How the new regulation differs from the earlier one?

- Earlier, with just the superstructure being put up, the consumer could be made to pay up 100% of the price even though only 30% of the promoter's cost has gone into the super structure
- There was always danger of the money being siphoned off for other projects.

Issues with implementation.

State of records : The state of land record in the country isn't exactly on a strong footing.

This is one reason that title insurance hasn't matured in India,

Enforcement of law

- RERA is only another piece of legislation.
- Consumer interests were intended to be protected earlier in various forms, yet flouting of rules coupled with poor enforcement led to consumers lose several times in the past.
- If the buyer is not happy with the compliance or progress, he/she can approach the appellate tribunal for relief.
- There is criminal liability if the builder does not get audited for quality of construction and by chartered accountants for deployment of funds.

Real change around the corner

The Real Estate Regulation and Development Act aims to protect the interests of the consumer. Here's a quick take on the rules:

- All new projects are to be registered with the regulator
- All projects are to be sold only on basis of carpet area
- Licences of reselling agents can with be withdrawn in case of complaints
- Homebuyer can complain directly to the regulator
- Consumer complaints to be resolved in 60 days by the regulator
- Developer has liability for 5 years to repair structural defects
- Developer has to deposit 70% of money into the project's an escrow account
- Developer has to ensure that all points mentioned in advertisements are true
- Advance amount to be collected is capped at 10%, prior to inking agreement
 - Deadline for rules, to implement provisions of the Act, to be formed by the State governments was Oct. 3 (2016)
- Maharashtra, Karnataka and Tamil Nadu have formed draft rules. Madhya Pradesh, Uttar Pradesh, West Bengal and Gujarat have notified rules
- Act mandates that state governments should establish the Real Estate Regulatory Authority within a year from May 1, 2016
- Each Regulatory Authority to form regulations concerning day-to-day functioning within 3 months from being constituted
- Real Estate Appellate Tribunals to be formed by April 30, 2017
- Title insurance, which protects buyers against fraud, is mandatory for the builder

Developer will not be able to divert money to other projects without completing the current project

SOURCE: WWW.ROOFANDFLOOR.COM

Prelims perspective

Model questions

Questions relating to details regarding Real Estate Regulatory Authority can be asked in the examinations

Mains Perspective

Model questions

The passage of Real Estate regulatory authority bill will go a long way in bringing in the much needed transparency and accountability in the Real Estate Sector. Comment

Sources: [The Hindu](#)

‘SAATHIYA’ , ‘SAATHIYA SALAH’ , Rashtriya Kishor Swasthya Karyakram (RKSK)

Mains : **GS 2** Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

Rashtriya Kishor Swasthya Karyakram (RKSK)

- Ministry of Health and Family Welfare launched Rashtriya Kishor Swasthya Karyakram (RKSK) in January 2014.
- The programme envisions enabling all adolescents in India to realize their full potential by making informed and responsible decisions related to their health and well being and by accessing the services and support they need to do so.
- The Rashtriya Kishor Swasthya Karyakram (National Adolescent Health Programme), will comprehensively address the health needs of the 243 million adolescents.
- RKSK identifies six strategic priorities for adolescents i.e. nutrition, sexual and reproductive health (SRH), non-communicable diseases (NCDs), substance misuse, injuries and violence (including gender-based violence) and mental health.

SAATHIYA' Resource Kit and 'SAATHIYA SALAH' Mobile App

- The most important component and driving force of RKSK program are its Peer Educators - **SAATHIYA-** and this resource kit has been launched to enable them to communicate with the adolescents of their community,
- In order to equip the Saathiyas in helping the adolescents, the Health Ministry has launched the **Saathiya Resource Kit (including 'Saathiya Salah' Mobile App).**

Prelims perspective

Model questions

SAATHIYA' Resource Kit sometimes seen in news is related to

- a. Adolescent health
- b. Online education
- c. Digital payments
- d. Cooperative societies

Mains Perspective

Similar questions

Examine the major provisions on National Child Policy and throw light on the status of its implementation [*UPSC Mains 2016*]

Sources: [National Health mission](#) pib

Amnesty faults sedition law

Amnesty International's State of the World's Human Rights Report 2016-17 has expressed concern over a range of human rights violations in India.

Mains : GS 2 Important International institutions, agencies and fora- their structure, mandate.

Highlights of the report

- Criticises the use of legislations such as the Foreign Currency (Regulation) Act (FCRA) and the sedition law against government critics and civil society

organisations.

- The refusal to not renew FCRA registration to several NGO's constitute the violation of right to freedom of association.
- The report speaks of Caste based discrimination, cow vigilante groups, discrimination faced by dalits.
- Crimes against children in India grew by 5% in 2015.
- The report spoke of India's amendment to the child labour law, which allows children under 14 to work in "family enterprises", and children between 14 and 18 years to work in occupations not classified as "hazardous."
- It also pointed out that India's draft national education policy "made no mention of human rights education."

Amnesty International

- Amnesty International is a non-governmental organisation focused on human rights with over 7 million members and supporters around the world.
- The stated objective of the organisation is "to conduct research and generate action to prevent and end grave abuses of human rights, and to demand justice for those whose rights have been violated."
- Amnesty International was founded in London in 1961.
- Amnesty draws attention to human rights abuses and campaigns for compliance with international laws and standards.

Prelims perspective

Model questions

'Amnesty International' sometimes seen in news is

- a. Specialized agency of United Nations working in the field of human rights
- b. Non governmental organisation working in the field of environmental protections
- c. Non governmental organisation working in the field of human rights
- d. An intergovernmental agency formed to protect human rights

Sources: [The Hindu](#) [Wikipedia](#)

Universities to compete with IITs, IIMs in rankings- National Institutional Ranking Framework (NIRF).

Central and State universities will have to compete with institutions like Indian Institutes of Technology and Indian Institutes of Management in this year's official rankings of higher education institutions.

Mains : GS 2 Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

National Institutional Ranking Framework (NIRF).

- ✓ The NIRF is a comprehensive ranking system for universities developed by the Human Resource Development (HRD) Ministry.
- ✓ The first NIRF rankings were released in 2016 and the next round of NIRF

rankings will be published in this April.

- ✓ 3,600 higher educational institutions in the country classified in 6 categories. These ranking follow an Indian approach, where academic institute will be assessed on parameters.
- ✓ The ranking is done by an independent and autonomous body and the exercise will be an annual affair. Accordingly, the National Board of Accreditation (NBA) has undertaken the task of doing the ranking exercise.
- ✓ Last year NIRF ranked engineering colleges, business schools and universities in three separate categories. This year, the ranking will consist of a common list of all institutions across different disciplines and fields.

Parameters used to rank universities

1. Teaching learning and resources;
2. research, consulting and collaborative performance;
3. graduation outcomes;
4. outreach and inclusivity
5. peer group perception

Each of these has been further subdivided into nearly 20 sub criteria to comprehensively assess an institution.

Why NIRF?

- ✓ These rankings would also help in reaching benchmark of international excellence.
- ✓ The rankings will also help students make informed choices about the institutions they want to join.
- ✓ It will bring in much needed transparency in higher education sector
- ✓ It would empower citizens as it would endow them with the power as to how they observe the institutions to be.

Prelims Perspective

Model question

Which of the following parameters are used to rank universities in National institutional Ranking framework?

1. Teaching learning and resources
2. Research, consulting and collaborative performance
3. Peer group perception

Select the correct answer using the code given below

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 only
- d) 1, 2 and 3

Answer D

Mains Perspective

Model questions

- ✓ One of the biggest challenges in the higher education sector have been that citizens who engage with these institutions feel that there is no level playing field in terms of transparency and the data that they need from these institutions with regard to the choices they, specially the students, need to make. National institutional Ranking framework can do a long way in ensuring bringing in the much needed transparency in higher education sector. Explain

Sources: [The Hindu](#) [pib](#)

GS 2 Government policies

Pradhan Mantri Gramin Digital Saksharta Abhiyan

The Union Cabinet has approved 'Pradhan Mantri Gramin Digital Saksharta Abhiyan' (PMGDISHA) to make 6 crore rural households digitally literate.

Mains : **GS 2** Governance, Constitution, Polity, Social Justice and International relations.

Background

- PMGDISHA is expected to be one of the largest digital literacy programmes in the world. The implementation of the Scheme would be carried out under the overall supervision of Ministry of Electronics and IT in active collaboration with States/UTs through their designated State Implementing Agencies, District e-Governance Society (DeGS), etc.
- The PMGDISHA being initiated under Digital India Programme would cover 6 crore households in rural areas to make them digitally literate.
- This would empower the citizens by providing them access to information, knowledge and skills for operating computers / digital access devices.
- The course content would also have emphasis on Digital payment methods

Prelims perspective

Model questions

The purpose components and other details about government schemes are asked in the examination

Mains Perspective

Model questions

Without digital literacy digital India is bound to fail. Critically evaluate

Sources: pib

‘National Transit Oriented Development Policy’

The Ministry of Urban Development has come out with a multi-pronged policy framework to promote living close to mass urban transit corridors.

Mains : GS 1 Urbanization, their problems and their remedies.

What is Transit oriented development

- This new initiatives seeks to promote ‘Transit Oriented Development (TOD)’ which enables people to live within walking or cycling distance from transit corridors like the Metros, Monorail and Bus Rapid Transit (BRT) corridors, currently being taken up on a large scale.

National Transit Oriented Development Policy

This policy seeks to enhance the depth of understanding of States and UTs on TOD as a viable solution to many of the challenges thrown up by urbanisation

This new urban design and planning in the form of TOD, is being incentivised by the Ministry under two more initiatives viz., Metro Policy and Green Urban Mobility Scheme.

Features

- Under TOD, city densification will be promoted along mass transit corridors through vertical construction
- Promotion of Non-motorised Transport Infrastructure
- Development of street networks
- Multi-modal integration,
- Effective first and last mile connectivity
- Integration of land use planning with transportation and infrastructure development to avoid long distance travel in cities
- Inclusive development by ensuring mixed neighbourhood development in the form of a range of housing choices including affordable housing and ensuring spaces for street vendors.

Prelims perspective

Model questions

National Transit Oriented Development Policy sometimes seen in news is related to

- a. Urban planning
- b. Metro rail development
- c. Railway modernisation
- d. Urban housing

Mains Perspective

Model questions

National Transit Oriented Development Policy can play an important role in improving and making accessible transportation facilities to every urban citizen. Discuss and give your suggestions

Sources: pib

GS 2 International Relations

H1-B and L-1 visas

The White House said it was working on changes in H-1B and other guest worker visa programmes through legislative and executive actions as part of President Donald Trump's immigration reform, even as a Bill introduced by a Democratic lawmaker proposed new restrictions on H-1B visas.

Mains : GS 2 Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

H1-B and L-1 visas

- These are temporary work visas that allows employers in U. S. A to temporarily employ workers in specialized occupations.
- These visa programmes are mandated by the legislature and are widely used by Indian IT companies to place skilled workers in the U.S.
- India is the largest user of temporary work visas provided by the U. S government.

The issue

- A leaked draft of an executive order under consideration for presidential signature proposes restrictions on the Optional Practical Training (OPT) work, a job training opportunity available for Science, Technology, Engineering, Math (STEM) Masters from a U.S. university.
- It also proposes to roll back the permission to work currently available to spouses of H-1B visa holders and to replace the current lottery system that selects the 85,000 annual H-1B visa beneficiaries.
- According to the draft published by Vox.com, the Trump administration is also planning to have federal inspectors regularly visit the sites where guest workers are employed.

The High-Skilled Integrity and Fairness Act of 2017

- The High-Skilled Integrity and Fairness Act of 2017 introduced in the U.S. House of Representatives is aimed at creating more jobs for U.S.-based employees.
- The proposed bill seeks to double the minimum salary required to be paid to holders of H-1B visas to \$130,000, in a bid to prevent recruiters from bringing in low-cost workers into the country.

Nasscom's reaction

- The proposed legislation in the U.S. to overhaul norms covering the H-1B and other work visas will prove to be a challenge for the Indian IT sector.
- The industry lobby also said that the bill could have loopholes that would nullify the objective of saving American jobs.
- Shares of most IT majors plunged following reports of the visa move.
- The BSE Information Technology index was the worst hit among all sectoral

indices.

Prelims Perspective

The term 'The High-Skilled Integrity and Fairness Act' is sometimes seen in the news in the context of

- a) Brexit
- b) Creating more jobs for U. S citizens
- c) National skill development mission
- d) Skill India

Mains Perspective

Model questions

- ✓ Visa Curbs in several developed nations are going to affect the prospects of Indian IT sector. While developed nations are pitching for liberalisation of trade in goods what India wants is easy transfer of human resources across borders. Explain how can a trade off between both can be achieved.

Sources: The Hindu [The Hindu](#)

Rohingya refugees to be relocated on remote island

Bangladeshi authorities have decided to relocate thousands of Myanmar refugees to a thinly populated island in the Bay of Bengal to avoid adverse socioeconomic impacts in the mainland.

Mains : GS 2 India and its neighborhood- relations.

The issue

Who are Rohingya people?

The Rohingya people are a Muslim minority group residing in the Rakhine state, formerly known as Arakan in Myanmar.

What is Rohingya crisis?

The 2015 Rohingya refugee crisis refers to the mass migration of thousands of Rohingya people from Myanmar (also known as Burma) and Bangladesh in 2015, collectively dubbed 'boat people' by international media.

- Nearly all that fled traveled to Southeast Asian countries including Malaysia, Indonesia, the Philippines and Thailand undertook dangerous journeys

Why do they migrate?

- The Rohingya people are considered “stateless entities”, as the Myanmar government has been refusing to recognise them as one of the ethnic groups of the country.
- For this reason, the Rohingya people lack legal protection from the Government of Myanmar, are regarded as mere refugees from Bangladesh, and face strong hostility in the country—often described as one of the most persecuted people on earth. To escape the dire situation in Myanmar, the Rohingya try to illegally enter Southeast Asian states, begging for humanitarian support from potential host

countries.

Bangladesh seeks peaceful resolution of crisis

- The foreign office of Bangladesh has earlier handed a formal letter to Myanmar asking the authorities to intervene so that the Rohingya Muslims fleeing the conflict-zone can return to their homes.
- Despite tight security, many Rohingya families have entered Bangladesh along river routes. In some cases, the border security guards pushed them back after giving humanitarian assistance.
- The UNHCR urged Bangladesh to keep its border with Myanmar open for the Rohingyas.
- According to the International Organization for Migration, around 21,000 Rohingyas have already fled to Bangladesh in recent weeks to escape violence in Myanmar.
- Bangladesh prime minister asked Myanmar to resolve the issue through internal negotiations
- Earlier, Ms. Hasina had told Parliament on Wednesday that Bangladesh, which has already sheltered half a million Rohingya refugees, would not accept more of them.

Bangladeshi authorities decides to relocate Myanmar refugees to remote island

- The Rohingya refugees, including those who moved into the country from Myanmar in the recent months, would be relocated to Thengar Char, an island in the Bay of Bengal. Thengar Char is about 30,000 hectares in area and more than 37 miles from the mainland.
- Living in different camps.
- Officially disclosing the plan for the first time, Bangladeshi Foreign Minister A.H. Mahmud Ali told the diplomatic community based in Dhaka, including top officials of the UN agencies, that the country needs international support to provide “assistance in developing the island and in transporting the refugees to the new place”.
- The relocation would be a “temporary arrangement”, government officials stressed. Bangladesh has requested the international community to take “meaningful measures” for repatriation of the refugee population in Myanmar

Prelims Perspective

Consider the following pairs [*UPSC Prelims 2016*]

Community sometimes In the affairs of mentioned in the news

1. Kurd : Bangladesh
2. Madhesi : Nepal
3. Rohingya : Myanmar

Which of the pairs given above is/are correctly matched?

- (a) 1 and 2
- (b) 2 only
- (c) 2 and 3
- (d) 3 only

Solution: C

Sources: [The Hindu](#) [The Hindu](#) [The Hindu](#) [Wikipedia](#)

India - USA Major Defence Partner

Recognising India's status as a 'Major Defence Partner,' the U.S. has made changes in its export control laws that will benefit India by facilitating smoother transfer of technologies and arms.

Mains : GS 2 International relations Effect of policies and politics of developed and developing countries on India's interests

Major Defence Partner

- This status puts India on a par with the closest allies and partners of the U.S.
- This is a unique designation conferred on India, outside the North Atlantic Treaty Organisation (NATO) countries and U.S. treaty allies such as Australia and Japan.
- India was accorded this status during Prime Minister visit to Washington in June.
- With Major Defence Partner status, India will be offered simplified licensing requirements

Significance

- This comes at a time when India is considering proposals for a new fighter aircraft to be built under the "Make in India" initiative, in significant numbers
- The MDP eases [the process of] licensing for military and dual-use items.
- It streamlines the process and reduces India's licensing requirements,
- However, the status will not help circumvent multilateral control regimes.
- Officials said the designation was envisaged as a way to bring India on the same level as the U.S. treaty allies, in the absence of a formal treaty between the two countries.

Also Read : [India U.S.A defence partnership](#)

Mains Perspective

Model questions

Discuss the growing economic and defence ties between India and U.S. Evaluate the pros and cons.

Sources: [The Hindu](#)

Japan eases permanent visa norms to draw global talent

Japan is wooing foreign direct investment through a slew of measures such as an easier visa regime and lower corporate taxes, at a time when the proposed visa curbs and other

protectionist measures by developed nations, including the U.S., continue to trouble Indian firms.

Mains : GS 2 Effect of policies and politics of developed and developing countries on India's interests

Details about 'Japanese Green Card for Highly Skilled Foreign Professionals'

- In a bid to attract global talent, from India and other nations, Japan has said it will soon introduce a new Green Card programme —billed as the fastest such system in the world — and expedite the granting of permanent residency to highly skilled foreign professionals.
- **Time period cut :** The new 'Japanese Green Card for Highly Skilled Foreign Professionals' will substantially reduce the period of stay required — before highly skilled foreign professionals can apply for permanent residence — from the current five years to just one year in cases where the applicant secures the required points.
- Incidentally, there is a fall in native-born population in Japan, a country where foreign workers account for a minuscule 1-2% of its total workforce.

India Japan trade ties

The investments by Japan in India as at the end of 2015 were \$14.1 billion, while investments from India into Japan were worth only \$0.074 billion.

He also pointed out that FDI (2015 figures) from India to Singapore, U.S.and to the U.K. were much more than to Japan.

Observations made by Executive Vice President of the Japan External Trade Organisation (JETRO)

- JETRO is a Japanese government-related organisation working to promote trade and investment between Japan and the rest of the world.
- Japan is looking to attract investments from Indian companies in sectors including IT/ITeS, pharmaceuticals and tourism.
- In the case of significant investors and human resources in growth fields such as IT and regenerative medicine, Japan is looking at expediting applications for permanent residence by highly skilled foreign professionals.

Agriculture reforms : To lure more investments, Japan is also opening up its electricity market and carrying out reforms in sectors such as medicine, medical equipment and agriculture,

Prelims perspective

Model questions

The organisation JETRO sometimes seen in the news, is related to

- a. India U.S relations
- b. India Japan relations
- c. Bengaluru Chennai Industrial corridor

d. Conservation of endangered species

Mains Perspective

Model questions [*UPSC Mains 2016*]

Economic ties between India and Japan while growing in the recent years are still far below their potential. Elucidate the policy constraints which are inhibiting this growth.

Sources: [The Hindu](#)

Bilateral Investment treaty

Mains : GS 2 Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests

Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

Bilateral Investment treaty

A **bilateral investment treaty (BIT)** is an agreement establishing the terms and conditions for private investment by nationals and companies of one country in another country (For Foreign Direct investments). BITs are established through trade pacts.

Most BITs grant investments made by an investor of one Country in a foreign country a number of guarantees, which typically includes fair and equitable treatment, protection from expropriation, free transfer of means and full protection and security.

Investor – State dispute resolution

The distinctive feature of many BITs is that they allow for an alternative dispute resolution mechanism, whereby an investor whose rights under the BIT have been violated could have recourse to international arbitration, often under the auspices of the ICSID (International Center for the Settlement of Investment Disputes), rather than suing the host country in its own courts This process is called investor-state dispute settlement.

The Issue

- The Bilateral investment treaty with most of the European Union members would lapse within first half of 2017.
- The Bilateral investment treaty with The Netherlands had already lapsed
- The absence of BIT will hurt Foreign Direct Investment (FDI) from EU to India.
- The European Commission, therefore, wants India to extend the expiry date of these BITs or start negotiation on the **new comprehensive BTIA (Bilateral Trade and Investment Agreement)**
- There has been no movement on the BTIA/FTA talks that were suspended in 2013 after 16 rounds of negotiation.

Why India wants new BIT and scrap the old one?

- India has experienced instances of investors invoking some of the BITs signed. This dragged India into international arbitration to seek huge compensation for “losses” suffered by the companies due to reasons including government policy changes.
- **New Bilateral Investment Treaty:** To find a solution to this issue India has decided to negotiate a new Bilateral Investment treaty. This new model BIT contains an **Investor State Dispute Settlement (ISDS)** mechanism which allows companies to seek international arbitration only when all domestic legal options have been exhausted.

Prelims Perspective

A question can be expected from any of the following areas

The term ‘Bilateral investment treaty’ is sometimes seen in the news in the context of

- a) Policy measure adopted by countries to curb Black money
- b) Curbing of the tax evasion by multinational companies
- c) Protecting the FDI’s in the foreign country
- d) Trade facilitation agreement under WTO

Solution: C

Mains Perspective

Model questions

- ✓ What do you mean by bilateral investment treaty? Evaluate the pros and cons of the India’s proposed new bilateral investment treaty.

Sources: [The Hindu](#) [The Hindu](#) [Wikipedia](#)

India, Rwanda sign aviation, visa deals

India and Rwanda have concluded a bilateral air services agreement enabling direct flights between the two countries. This is among the three Memorandums of Understanding (MoU) concluded between the two countries during Vice-President Hamid Ansari’s visit to Rwanda.

Mains : GS 2 Bilateral, regional and global groupings and agreements involving India and/or affecting India’s interests

Highlights of Vice President’s visit to Rwanda

Three memorandum of understandings were signed between both the nations.

1. Bilateral Air services agreement : It will Enable direct flights between India and Rwanda
2. Setting up of an entrepreneurial development centre in Rwanda
3. Exemption of visa for entry of diplomatic and official passports.

Sources: [The Hindu](#)

Trade Facilitation in Services (TFS) Agreement

India has submitted to the World Trade Organisation (WTO) a legally vetted proposal

on a global services pact.

Mains : GS 2 Important International institutions, agencies and fora- their structure, mandate.

GS 3 Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

What is Trade Facilitation in Services (TFS) Agreement?

- The proposed TFS pact, among other things, aims to make it easier for professionals and skilled workers to move across borders for short-term work, as well as ensure portability of their social security contributions.
- Proposed accord will ease travel across borders for work
- The proposed pact aims to create a single window mechanism for foreign investment approvals and cross-border insurance coverage to boost medical tourism.

TFA in Goods : *Meanwhile, the TFA in Goods – adopted by the WTO Members in 2014 – entered into force. The TFA in Goods aims to streamline, simplify and standardise customs procedures. By doing so, it will help to cut trade costs around the world.*

Why TFS is mooted?

- According to a ‘communication’ from India to the WTO in November 2016, “while services occupy a significant and growing share of domestic and international transactions, trade flows in services still remain subject to numerous border and behind-the-border barriers as well as procedural bottlenecks.
- These impediments particularly limit the benefits of trade in services for small and medium enterprises as well as small exporters worldwide.

Merits of having TFS agreement

- The TFS Agreement will address the key issues pertinent to facilitating services trade, such as transparency, streamlining procedures, and eliminating bottlenecks.
- The TFS Agreement is aimed at ensuring that the market access arising out of existing as well as future liberalisation commitments is effective and meaningful

What is the WTO?

- The World Trade Organization (WTO) is the only global international organization dealing with the rules of trade between nations.
- At its heart are the WTO agreements, negotiated and signed by the bulk of the world’s trading nations and ratified in their parliaments.
- The goal is to help producers of goods and services, exporters, and importers conduct their business.
- The WTO officially commenced on 1 January 1995 under the Marrakesh Agreement, signed by 123 nations replacing the General Agreement on Tariffs

and Trade (GATT), which commenced in 1948.

- The WTO deals with regulation of trade between participating countries by providing a framework for negotiating trade agreements and a dispute resolution process aimed at enforcing participants' adherence to WTO agreements, which are signed by representatives of member governments and ratified by their parliaments.
- The WTO is headquarters is located in Geneva Switzerland
- Presently WTO consists of 164 members

Prelims perspective

Questions related to WTO affairs

In the context of which of the following do you sometimes find the terms 'amber box, blue box and green box' in the news?

- (a) WTO affairs
- (b) SAARC affairs
- (c) UNFCCC affairs
- (d) India-EU negotiations on FTA

Solution: A

Mains Perspective

Questions related to WTO affairs

"The broader aims and objectives of WTO are to manage and promote international trade in the era of globalization. But the Doha round of negotiations seem doomed due to differences between the developed and the developing countries." Discuss in the Indian perspective. **[UPSC Mains 2016]**

WTO is an important international institution where decisions taken affect countries in a profound manner. What is the mandate of WTO and how binding are their decisions? Critically analyse India's stand on the latest round of talks on Food security. **[UPSC Mains 2014]**

Sources: [The Hindu](#) [WTO](#) [Wikipedia](#)

BARAK Missile System LRSAM, MRSAM

India has approved a deal to develop jointly with Israel a medium range surface-to-air missile (MR-SAM) system for the Army. This is the latest in a series of other variants of SAM (Surface to Air) systems for the Navy and the Air Force being jointly developed with Israeli help under deals estimated at billions of dollars.

Mains : GS 3 Achievements of Indians in science & technology; indigenization of technology and developing new technology.

BARAK Missile System

- Long Range Surface-to-Air Missile (LR-SAM) and Medium Range Surface-to-Air Missile (MR-SAM) are jointly developed by Defence Research and Development Organisation (DRDO), India and M/s Israel Aerospace Industry (IAI), Israel

- Israel Aerospace Industry I refers this missile as Barak-8 missile system (upgraded version of BARAK Missile System).
- LR-SAM is the Ship Launch Version and Project MR-SAM is the Land Launch Version of Barak-08 Missile system.
- MR-SAM detects incoming enemy aircraft while they are well over 100 km away and destroys them at range upto 70 km.
- LR-SAM has got long range engagement capability to penetrate in deep water/land to intercept all types of aerial targets (like Subsonic & Supersonic Missiles, Fighter Aircraft, Maritime Patrolling Aircraft (MPA), Helicopter and Sea Skimming Missiles).

Recent agreement

India has approved a deal to develop jointly with Israel a medium range surface-to-air missile (MR-SAM) system for the Army. The systems will be manufactured in India and would have an 80% indigenous content.

Prelims perspective

Model questions

Barak - 8 sometimes seen in news is a missile system jointly developed by

- a) India - Russia
- b) India - U.S.A
- c) India - France
- d) India - Russia

Sources: [The Hindu](#) pib

GS 3 Indian Economy

Income Tax Department begins Operation Clean Money

The Income Tax Department (ITD) announced the initiation of its Operation Clean Money, the e-platform the Department will be using to analyse deposits made during the demonetisation window.

Mains : GS 3 Money-laundering and its prevention

About Operation Clean Money

- Initial phase of the operation involves e-verification of large cash deposits made during 9th November to 30th December 2016.
- Data analytics has been used for comparing the demonetisation data with information in Income tax department's databases.
- In the first batch, around 18 lakh persons have been identified in whose case, cash transactions do not appear to be in line with the tax payer's profile.
- ITD has enabled online verification of these transactions to reduce compliance cost for the taxpayers while optimising its resources.

- The information in respect of these cases is being made available in the e-filing window of the PAN holder
- Email and SMS will also be sent to the taxpayers for submitting online response on the e-filing portal.
- Data analytics will be used to select cases for verification, based on approved risk criteria. If the case is selected for verification, request for additional information and its response will also be communicated electronically.
- In case explanation of source of cash is found justified, the verification will be closed without any need to visit Income Tax Office. The verification will also be closed if the cash deposit is declared under Pradhan Mantri Garib Kalyan Yojna (PMGKY).

Prelims perspective

Model questions

"Operation Clean Money ", sometimes seen in the news, is related to

- a. Voluntary income disclosure scheme
- b. Pradhan Mantri Garib Kalyan Yojna
- c. e-verification of large cash deposits during demonetization window
- d. Black money

Mains Perspective

Model questions

Explain the major steps taken by government to curb the Black money menace. How far do you think the government has been successful in eradicating the black money menace? Evaluate

Sources: [The Hindu](#) pib

India Innovation Index

To make India an innovation-driven economy, NITI Aayog, Department of Industrial Policy & Promotion (DIPP) and Confederation of Indian Industry (CII) together launched a mega initiative "India Innovation Index"

Mains : GS 3 Technology, Economic Development, Bio diversity, Environment, Security and Disaster Management.

India Innovation Index

- It will rank states on Innovations through country's first online innovation index portal that will capture data on innovation from all Indian states on innovation and regularly update it in real time.
- The India Innovation Index Framework will be structured based on the best practices followed in Global Innovation Index (GII) indicators and additionally by adding India-centric parameters those truly reflect the Indian innovation ecosystem.

- This initiative will be the point of reference for all international agencies to collect India's up to date data points for global indices and analytic.
- The access to this portal will be hosted on the NITI Aayog website, and NITI Aayog will update this data periodically.
- India currently ranks 66th out of 128 countries on the Global innovation Index (GII) 2016.
- The Global Innovation Index (GII), co-published by World-Intellectual Property Organization (WIPO), Cornell University and INSEAD with CII as a Knowledge Partner since inception, has been ranking world economies including India since 2007 according to their innovation capabilities and outcomes using 82 indicators among a host of other important parameters.
- It has established itself as both a leading reference on innovation and a 'tool for action' for policy makers.

Prelims perspective

Model questions

What is " India innovation index" recently in the news?

- a. Index that ranks Indian states based on innovation
- b. Index that ranks Indian universities based on number of patents obtained
- c. Ranking system for Indian universities based on R&D capabilities
- d. None of the above

Sources: pib

Foreign Investment Promotion Board (FIPB)

The budget 2017-18 has proposed to abolish Foreign investment promotion board.

Mains : GS 3 Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.

Highlights

- The Centre had, in the Budget 2017-18, proposed that the FIPB will be abolished in FY'18.
- The applications – on foreign direct investment (FDI) in India in sectors under the approval route – considered by the inter-ministerial Foreign Investment Promotion Board (FIPB) will soon be taken up by the concerned ministries and sectoral regulators.

Why government want to abolish FIPB?

- More than 92% of the FDI inflows were through the automatic route. For the rest of the FDI (about 8% of the total FDI inflows), every department concerned has a framework or a regulator for it.
- This decision also keeps in line with the government's policy of maximum governance and minimum government,

Foreign Investment Promotion Board (FIPB)

- The Foreign Investment Promotion Board (FIPB) is housed in the Department of Economic Affairs, Ministry of Finance, is an inter-ministerial body, responsible for processing of FDI proposals and making recommendations for Government approval.
- The Foreign Investment Promotion Board (FIPB) offers a single window clearance for applications on Foreign Direct Investment (FDI) in India that are under the approval route.
- The sectors under automatic route do not require any prior approval from FIPB and are subject to only sectoral laws.
- The Minister of Finance who is in-charge of FIPB would consider the recommendations of FIPB on proposals with total foreign equity inflow of and below Rs. 3000 crore.
- The recommendations of FIPB on proposals with total foreign equity inflow of more than Rs. 3000 crore would be placed for consideration of Cabinet Committee on Economic Affairs (CCEA).
- FIPB comprises of the secretaries to the Government of India from various departments.

Prelims perspective

Model questions

The Foreign Investment Promotion Board (FIPB) is housed under which ministry?

- a) Ministry of commerce
- b) Ministry of Finance
- c) Ministry of Home
- d) Ministry of External affairs

Mains Perspective

Model questions

Foreign direct investment related questions were asked in the previous examinations.

To know more visit our [IAS preparation page](#)

Sources: [The Hindu FIPB](#)

India creeps up IP Index, but still at bottom of the pack

The annual index released in Washington by the United States Chamber of Commerce's Global Intellectual Property Centre ranked India at the bottom of the pack, for the fifth year on a trot. India stands at 43 of the 45 economies assessed on IP, a shade better than its previous rankings of being the last but one or the last

Mains : GS 3 issues relating to intellectual property rights

India and the US have a strained relationship when it comes to IP, especially on the pharmaceutical front, among others.

About the index

The Index assesses countries on criteria including patents, trademarks, copyright, trade

secrets, enforcement, and international treaties.

About India' ranking

- Though India has crept up one notch, that has largely to do with performance against the five new criteria used to assess the IP environment in the country, rather than actual improvement in the environment itself, the report said.
- The new indicators included design rights, patent opposition proceedings and barriers to licensing agreements.
- Although India has made incremental progress, the government needs to build upon the positive rhetoric of its IPR policy with the substantial legislative reforms that innovators need.
- Besides the overall “anaemic IPR policy” , the report points to challenges in the scope of patentability for computer-implemented inventions, Section 3(D) of the Indian Patent Act, and the recent High Court of Delhi decision regarding photocopying copyrighted content.

Prelims perspective

Model questions

India's ranking in the "International IP index", is sometimes seen in the news. Which of the following has declared that ranking?

- a. World Intellectual property organisation
- b. Global Intellectual Property Centre
- c. United Nation
- d. World Bank

Mains Perspective

Model questions

1. Bringing out the circumstances in 2005 which forced amendment to the section 3(d) in Indian Patent Law, 1970, discuss how it has been utilized by the Supreme Court in its judgement in rejecting Novartis' patent application for 'Glivec'. Discuss briefly the pros and cons of the decision. **[UPSC Mains 2013]**
2. In a globalized world, Intellectual Property Rights assume significance and are a source of litigation. Broadly distinguish between the terms—Copyrights, Patents and Trade Secrets. **[UPSC Mains 2014]**

Sources: [The Hindu Businessline](#)

Electronic development fund

The Centre government is targeting an investment of about Rs. 2,200 crore by 2019 in start-ups working on new technologies in the electronic sector under the Electronics Development Fund (EDF).

Mains : GS 3 Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

Background

- The Digital India programme of the government is envisaged to develop the Electronics System Design and Manufacturing (ESDM) sector so as to achieve “Net Zero Imports” by 2020.
- One of the strategies adopted by the government to achieve net zero imports is Setting up of Electronic Development Fund (EDF)

Electronic development funds

- Electronic Development Fund (EDF) is set up as a “Fund of Funds” to participate in professionally managed “Daughter Funds” which in turn will provide risk capital to companies developing new technologies in the area of electronics, nano-electronics and Information Technology (IT).

Fund of Funds is an investment strategy in which a fund invests in other types of funds. This strategy invests in a portfolio that contains different underlying assets instead of investing directly in bonds, stocks and other types of securities.

- The EDF will also help attract venture funds, angel funds and seed funds towards R&D and innovation in the specified areas.
- **Fund Manager: CANBANK Venture Capital Funds Ltd. (CVCFL)** is the Fund Manager for EDF. The role of the Fund Manager of EDF is to consider requests from applicant Venture Funds, Angel Funds and Seed Funds and make recommendations to the Department of Electronics and IT, Government of India.

Prelims perspective

Model questions

'EDF' launched by Government of India pertains to

- a. Credit support for MSMEs
- b. Capital goods manufacturing
- c. Electronics manufacturing
- d. Providing for financial assistance for adopting energy efficient vehicles

Mains Perspective

Model questions

Electronics will be the next major item that adds to India's current account deficit. Explain the steps taken by the government to boost electronic manufacturing in India. Also explain ways to improve electronic manufacturing in India so that India achieve its target of zero imports by 2020

Sources: [The Hindu](#) [Investopedia](#) [MeitY](#)

GST Council clears Compensation Law

The Goods and Services (GST) Council cleared the final version of the Compensation Law

Mains : GS 3 Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

GS 2 Government policies and interventions for development in various sectors and

issues arising out of their design and implementation.

Compensation law

- The Bill provides compensation to the states for loss of revenue, following the implementation of Goods and Services Tax (GST).
- Such compensation will be provided to a state for a period of five years from the date on which the state brings its State GST Act into force.
- **Projected growth rate and base year:** The growth rate of revenue for a state during the five-year period is assumed to be 14% per annum. For the purpose of calculating the compensation amount in any financial year, year 2015-16 will be assumed to be the base year, from revenue will be projected.
- **Base year revenue:** The base year tax revenue consists of the states' tax revenues from: (i) state Value Added Tax (VAT), (ii) central sales tax, (iii) entry tax, octroi, local body tax, (iv) taxes on luxuries, (v) taxes on advertisements, etc. However, any revenue among these taxes arising related to supply of (i) alcohol for human consumption, (ii) certain petroleum products, will not be accounted as the base year revenue.
- **Calculation and release of compensation:** The compensation payable to a state has to be provisionally calculated and released at the end of every quarter.
- **Levy and compensation of GST compensation cess:** A cess known as the GST Compensation Cess may be levied on the supply of certain goods and services and the proceeds arising from these receipts will be used for providing compensation.

Also read : [All you want to know about- Goods and Services Tax or GST](#)

Prelims perspective

Any question related to GST can figure in the examination

Mains Perspective

UPSC MAINS 2013- General Studies Paper 3

Discuss the rationale for introducing the Goods and Services Tax (GST) in India. Bring out critically the reasons for the delay in rollout for its regime. (200 words)

Sources: [The Hindu](#) [PRS](#)

Public Sector Asset Rehabilitation Agency or PARA

All you wanted to know about PARA- Public Sector Asset Rehabilitation Agency

UPSC syllabus and relevance of news

Prelims : Economic and Social Development - Sustainable Development, Poverty, Inclusion, Demographics, Social Sector initiatives, etc.

Mains : GS 3 Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

Bad Bank : A bank set up to buy the bad loans of a bank with significant nonperforming assets at market price. By transferring the bad assets of an institution to

the bad bank, the banks clear their balance sheet of toxic assets but would be forced to take write downs.

Economic Survey has mooted the idea of a 'bad bank', the Public Sector Asset Rehabilitation Agency (PARA), with 49 per cent government ownership to solve the NPA crisis.

What is Public Sector Asset Rehabilitation Agency?

The Public Sector Asset Rehabilitation Agency or PARA will be an independent entity that will identify and buy NPA accounts held by different banks.

How PARA would help in solving the NPA crisis?

1. It can effect speedier settlements with borrowers by cutting out individual banks.
2. As a single large lender, it can drive a better bargain with borrowers and take more stringent enforcement action against them.

The present NPA crisis

- A total of 16.6 per cent of loans are stressed assets. This reduces the capacity of the bank to lend which in turn will affect fresh capital infusion into new projects.
- Public sector banks, which hold over 70 per cent of all deposits, are the worst hit by the bad loan problem.
- High NPAs force banks to keep their lending rates high to boost their profits.

Significance

- The government can separate the capital infusion exercise from the clean-up exercise. PARA can raise money from institutional investors rather than looking only to the Government.
- Once stressed assets are sold to PARA, the RBI can lean harder on banks to pass on its rate cuts.

Prelims Perspective

A bad bank sometimes seen in news is

- a. a bank with more than 10 percent of its assets classified as NPA
- b. a public sector agency that specializes in debt recovery
- c. a bank set up to buy the bad loans of a bank
- d. a bank that is on the verge of collapse

Mains Perspective

Model questions

Resolution of bad loans and restoring the health of PSBs is among the biggest challenges the economy faces today. It's a challenge that requires a response on multiple fronts. A bad bank cannot be the sole response for it. Evaluate the merits and demerits with the proposal to set up a bad bank for resolving the NPA crisis

Sources: [The Hindu Businessline](#) [The Hindu Businessline](#) [Investopedia](#)

On road to less cash, an attempt to bypass card swipe machines

BharatQR code, an interoperable payment acceptance solution, was launched on

Monday to quicken the move towards a less-cash economy at an 'insignificant' cost.

Mains : GS 3 Money-laundering and its prevention Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

What is BharatQR?

- BharatQR is the first common quick response (QR) code developed jointly by the four prominent card payment companies in the country – MasterCard, Visa, American Express and the National Payments Corporation of India (NPCI).
- Apart from working as a common interface for the card platforms, BharatQR will also facilitate acceptance using the Unified Payments Interface (UPI), and Aadhaar-enabled payments.

What is QR code? A QR code essentially is a label that can be read or scanned by a machine (such as a camera mobile phone) to access account details of a merchant to make online payments.

How will BharatQR work?

- BharatQR code will work as a digital Point of Sale (PoS) machine.
- Merchants will be identified with one QR code and will be able accept payment from any debit or credit card through mobile phones.
- Merchants will have to pay a merchant discount rate or MDR to the issuing bank every time a transaction is executed.

Difference from other wallets such as Paytm, Freecharge, etc.?

- BharatQR is not a wallet. Typically, ewallets like Paytm, Mobikwik and others can enable transactions through QR code only if both the customer and merchant have the same wallet. BharatQR code is an alternative to physical PoS machines, and is integrated within the bank's payment or mobile banking application.

Prelims perspective

Model questions

'BharatQR' sometimes seen in news is related to

- a. cashless payments
- b. tourism industry
- c. skill India
- d. mobile technology

Mains Perspective

Model questions

Discuss the various challenges faced by India while transforming into a cashless society.

Sources: [The Indian Express](#)

Sovereign gold bond scheme

Government of India, in consultation with the Reserve Bank of India(RBI), has decided to issue Sovereign Gold Bonds 2016-17–Series IV.

Mains : GS 3 Indian Economy and issues relating to planning, mobilization of

resources, growth, development and employment.

Sovereign gold bond scheme

Sovereign gold bond scheme is designed to reduce the import the physical gold and thereby to reduce the India's current account deficit. Under the scheme citizens can hold paper gold.

How gold bonds works?

Similar to bank deposits instead of cash gold in held by people under this scheme. When gold bond is brought one pays an amount equivalent to prevailing market prices of gold. He/ she earns interest on the the same amount at a rate of 2.75% for 8 years.(Tenure of gold bond). Finally on redemption one gets the prevailing market price on redeming time plus interest earned.

Features

- Tenure : 8 years with exit option from 5th year onwards
- Interest rate 2.75%
- This is the seventh tranche of Sovereign Gold bond issued by the government.
- The Bonds will be sold through banks, Stock Holding Corporation of India Limited (SHCIL), designated post offices and recognised stock exchanges viz., National Stock Exchange of India Limited and Bombay Stock Exchange.

Advantages and attractions of the scheme

- Can be used as collateral for loans.
- Capital gains tax exemption on redemption.
- Zero risk of theft/ impurities associated with handling of physical gold.
- Tradability through stock exchanges.
- Availability in DEMAT and paper form.

Prelims Perspective

UPSC prelims 2016

What is/are the purpose/purposes of Government's 'Sovereign Gold Bond Scheme' and 'Gold Monetization Scheme'?

1. To bring the idle gold lying with Indian households into the economy
2. To promote FDI in the gold and jewellery sector
3. To reduce India's dependence on gold imports

Select the correct answer using the code given below.

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Solution: C

Mains Perspective

Model Questions

- Craze for gold in Indians has led to a surge in import of gold in recent years and

put pressure on balance of payments and external value of rupee. In view of this, examine the merits of the Gold Monetization Scheme [UPSC Mains 2015]

Sources: [The Hindu](#) [The Hindu](#) PIB releases [Economic Times](#)

FDI inflow zooms 18% to USD 46 billion in 2016: DIPP

Foreign direct investment (FDI) in India grew 18 per cent during 2016 to touch \$46 billion, data released by the Department of Industrial Policy and Promotion (DIPP) showed.

Mains : GS 3 Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment. Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.

Highlights

- Foreign direct investment (FDI) in India grew 18 per cent during 2016 to touch \$46 billion,
- The main sectors which attracted the highest foreign inflows include services, telecom, trading, computer hardware and software and automobile.
- Bulk of the FDI came in from Singapore, Mauritius, the Netherlands and Japan.

Policy measures to attract FDI's

- The government has announced several steps to attract foreign inflows.
- Liberalisation of FDI policy and improvement in business climate.
- Relaxation of foreign investment norms and phasing out the Foreign Investment Promotion Board (FIPB).

Importance of FDI in India

- Foreign investments are considered crucial for India, which needs around \$1 trillion for overhauling its infrastructure sector such as ports, airports and highways to boost growth.
- A strong inflow of foreign investments will help improve the country's balance of payments situation and strengthen the rupee value against other global currencies, especially the U.S. dollar.

Mains Perspective

Model questions

Justify the need for FDI for the development of the Indian Economy. Why there is gap between MOUs signed and actual FDIs? Suggest remedial steps to be taken for increasing actual FDIs in India. [UPSC Mains 2016]

Sources: [The Hindu](#)

SEBI ALGO trading

The Securities and Exchange Board of India (SEBI) plans to tighten the regulations for algorithmic trading to minimise instances of misuse of such systems that can be used to execute complex trading strategies at a very high speed.

Mains : GS 2 Statutory, regulatory and various quasi-judicial bodies.

What is ALGO trading?

- Algorithmic trading refers to the use of software programmes to execute trading strategies at a much faster pace. On the National Stock Exchange (NSE), algo trades accounted for close to 16% of all trades. On the BSE, it was 8.56% in January.
- India is one of the few countries in the world to regulate algorithmic trading. The strengthened regulations would aim to minimise instances of flash crashes

Flash crashes is an extremely rapid decline in the price of one or more commodities or securities, typically one caused by automated trading.

About SEBI

ESTABLISHMENT

- The Securities and Exchange Board of India was established on April 12, 1992 in accordance with the provisions of the Securities and Exchange Board of India Act, 1992.
- SEBI is the capital market regulator in India

Function of the SEBI

"...to protect the interests of investors in securities and to promote the development of, and to regulate the securities market and for matters connected therewith or incidental thereto" (**Preamble - SEBI**)

Prelims Perspective

A question can be expected from any of the following areas

- Functions of SEBI

Mains Perspective

Model questions

- How far various regulatory bodies in India have been able to aid the growth of different sectors. Discuss whether these institutions have been wielding too much power or too little.

Sources: [The Hindu](#) [SEBI](#)

GS 3 Environment and Ecology

Oil spill

A large quantity of oil was released into the sea, due to collision between two ships of the Chennai coast affecting marine life and livelihoods of coastal communities.

Mains : GS 3 Conservation, environmental pollution and degradation, environmental impact assessment. Disaster and disaster management.

How do oil spills occur?

- During tanker accidents
- discharge of ballast, sludge and water used for the cleaning of tanks.
- Blowouts at offshore drilling rigs, during normal drilling operations

- Waste oil of all kinds from industries, automobile workshops and homes ultimately reach the ocean

Environmental effects of oil spills and oil leaks

- Many marine organisms and coral reefs are killed by the oil
- Birds and marine mammals get a thick coating of the black oil and die
- The heavier component of the oil sink to the bottom and kill organisms like crabs and mussels or make them unfit for human consumption
- When the oil spill reaches the coast, it destroys fishing activities and makes the beach unfit for use

How do we clean up oil spill?

- Contain oil with floating booms and take out the same with skimmers sponge(only when oil spill is in small area)
- Adding dispersal agents that enable oil to bond with water which then starts to move to the shore
- Using biological agents: This method employs microorganisms to break down oil into harmless substances

National Oil spill Disaster Contingency Plan

- National Oil spill Disaster Contingency Plan was drawn up by the Indian Coast guard which is the central coordinating authority for combating oil spill in Indian waters
- It was promulgated in July 1996 and subsequently updated several times.
- The 2014 edition was revised to facilitate India's obligation to have a national plan to respond to pollution caused by Hazardous and Noxious substance under the OPRC-HNS protocol.
- **OPRC-HNS protocol** : Protocol on Preparedness, Response, and Cooperation to pollution incidents by Hazardous and Noxious Substances, 2000 is a protocol under International Maritime organization. It defines Hazardous and Noxious substance as any substance other than oil which if introduced into the marine environment is likely to create hazards to human health, harm living resources and marine life, damage amenities or interfere with other legitimate uses of the sea.

Prelims perspective

Model questions

Who is responsible for combating oil spill in Indian waters?

Mains Perspective

Model questions

How important are vulnerability and risk assessment for pre-disaster management? As an administrator what are the key areas that you would focus in a disaster Management System? [*UPSC Mains 2013*]

Sources: [The Hindu Environment And Ecology-A Complete Guide by R. Rajagopalan](#)

Irrawaddy dolphins- 181 dolphins counted in Odisha census

As many as 181 endangered Irrawaddy dolphins have been sighted in Odisha, according to a census carried out by the State Forest and Environment department. In 2015, survey teams had sighted 206 Irrawaddy dolphins.

Mains : GS 3 Conservation, environmental pollution and degradation, environmental impact assessment.

Highlights of the survey

- The Chilika Lake, the largest brackish water lagoon of the country, has recorded a marginal drop in the population of Irrawaddy dolphins from 144 in 2015 to 134 this year. About 55 dolphins were sighted this year in Bhitarkanika, compared to 58 spotted in 2015.
- In the Bhadrak Wildlife Sanctuary jurisdiction, only five Irrawady dolphins were sighted.

Irrawaddy dolphins

- Irrawaddy dolphins are found in coastal areas in South and Southeast Asia, and in three rivers: the Ayeyarwady (Myanmar), the Mahakam (Indonesian Borneo) and the Mekong. The Mekong River Irrawaddy dolphins inhabit a 118-mile stretch of the river between Cambodia and Lao PDR and are scarce
- These dolphins have a bulging forehead, short beak, and 12-19 teeth on each side of both jaws.
- The Irrawaddy dolphin (under the common name of snubfin dolphin) is included the Indian Wildlife Protection Act, Schedule I, which bans their killing, transport and sale of products.
- They are classified as Vulnerable in IUCN Redlist

Prelims perspective

Model questions

Environment and Ecology is an important topic for preliminary examination. The number of questions asked from this part of the syllabus has seen a rise in the recent past. Visit our [IAS preparation page](#) to know more.

Sources: [The Hindu](#) [Wikipedia](#) [WWF](#)

‘India’s air pollution rivals China’s as world’s deadliest’

India’s rapidly worsening air pollution is causing about 1.1 million people to die prematurely each year and is now surpassing China’s as the deadliest in the world, a new study of global air pollution shows.

Mains : GS 3 Conservation, environmental pollution and degradation, environmental impact assessment.

Highlights of the report

- Report points to fine particulate matter as cause for rise in premature deaths

- The number of premature deaths in China caused by dangerous air particles, known as PM_{2.5}, has stabilised globally in recent years but has risen sharply in India.

What are the reasons for increased deaths?

The confluence of rapid industrialisation, population growth and an ageing populace in India that is more susceptible to air pollution.

What should be done?

- India had yet to undertake sustained public policy initiatives to reduce pollution,
- Weak environmental regulation in India, leaves India's citizens with few alternatives other than to petition the courts to take action to protect the public's health. But the courts often lack the power or mechanisms to enforce their actions, he said.
- Policy measures and Political will to implement the same is required for India to reduce the harmful effects of pollution.

What are particulate Matter?

- A fraction of the width of a human hair, these particles can be released from vehicles, particularly those with diesel engines, and by industry, as well as from natural sources like dust.
- They enter the bloodstream through the lungs, worsening cardiac disease and increasing the risk of stroke and heart failure, in addition to causing severe respiratory problems, like asthma and pneumonia.

Particulates in the atmosphere may be viable or non-viable. The viable particulates e.g., bacteria, fungi, moulds, algae etc., are minute living organisms that are dispersed in the atmosphere. Human beings are allergic to some of the fungi found in air. They can also cause plant diseases.

Non-viable particulates may be classified according to their nature and size as follows:

1. Smoke particulates consist of solid or mixture of solid and liquid particles formed during combustion of organic matter.
2. Dust is composed of fine solid particles (over 1 μ m in diameter), produced during crushing, grinding and attribution of solid materials.
3. Mists are produced by particles of spray liquids and by condensation of vapours in air.
4. Fumes are generally obtained by the condensation of vapours during sublimation, distillation, boiling and several other chemical reactions.

Prelims perspective

Model questions

Environment and Ecology is one area that can be the determinant of one clearing the exam. At least 80 percent of the questions are relatively simple and straightforward. This is an area, where your efforts can directly correlate the marks scored. Any aspirant

should give top most priority to this section in UPSC Preliminary Exam. To know more about the importance of this topic visit our [IAS preparation page](#)

Mains Perspective

Model questions

The issues relating to worsening air quality and associated health risks have occupied the headlines of the newspapers recently. Discuss briefly various policy initiatives undertaken by the government to curb pollution and examine how far it have been able to achieve its objective

Sources: [The Hindu](#) NCERT Class 11 Chemistry Environmental Chemistry

There's poison in the air National Air Quality Programme (NAMP)

Nearly a third of Indian cities have breached annual pollution limits mandated by the Central Pollution Control Board (CPCB) between 2011 and 2015

Mains : GS 3 Conservation, environmental pollution and degradation, environmental impact assessment.

National Air Quality Programme (NAMP)

- Central Pollution Control Board is executing a nation-wide programme of ambient air quality monitoring known as National Air Quality Monitoring Programme (NAMP).
- The objectives of the N.A.M.P. are to determine status and trends of ambient air quality; to ascertain whether the prescribed ambient air quality standards are violated; to Identify Non-attainment Cities; to obtain the knowledge and understanding necessary for developing preventive and corrective measures and to understand the natural cleansing process undergoing in the environment through pollution dilution, dispersion, wind based movement, dry deposition, precipitation and chemical transformation of pollutants generated.

Central Pollution Control Board

- The Central Pollution Control Board (CPCB) is a statutory organisation, constituted under the Water (Prevention and Control of Pollution) Act, 1974.
- CPCB was entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.
- It serves as a field formation and also provides technical services to the Ministry of Environment and Forests of the provisions of the Environment (Protection) Act, 1986.
- The CPCB can only give guidelines on controlling air pollution, it is up to the States to implement them
- Monitoring and enforcing pollution limits was done by the State pollution control boards

Prelims perspective

Model questions

Central pollution control board (CPCB) was established by which of the following acts

- a. Environment protection Act 1986
- b. Wildlife Protection Act 1972
- c. Air (Prevention and Control of Pollution) Act 1981
- d. Water (Prevention and Control of Pollution) Act 1974

Mains Perspective

Model questions

The rising air pollution in India's major cities is a cause of concern. How far various initiatives taken by the government helped in curbing air pollution? Explain

Sources: [The Hindu](#) [CPCB](#)

'Microplastic particles clogging oceans'

Micro particles account for 15-31% of the estimated 9.5 million tonnes dumped in oceans, says IUCN

Mains : GS 3 Conservation, environmental pollution and degradation, environmental impact assessment.

Highlights of the report Primary Microplastics in the Oceans by IUCN

- Invisible particles, washed off products like synthetic clothing and car tyres account for up to a third of the plastic polluting oceans
- Unlike other garbage patches which are clearly visible the microplastic particles that wash off textiles and roadways leave the waterways looking pristine.

What are microplastics?

- Microplastics are small plastic pieces less than five millimeters long which can be harmful to our ocean and aquatic life.
- Microplastics come from a variety of sources, including from larger plastic debris that degrades into smaller and smaller pieces.
- In addition, microbeads, a type of microplastic, are very tiny pieces of manufactured polyethylene plastic that are added as exfoliants to health and beauty products, such as some cleansers and toothpastes.
- These tiny particles easily pass through water filtration systems and end up in the ocean and Great Lakes, posing a potential threat to aquatic life.
- Plastic microbeads first appeared in personal care products about fifty years ago, with plastics increasingly replacing natural ingredients.

International Union for Conservation of Nature

- The International Union for Conservation of Nature (IUCN) is a membership Union uniquely composed of both government and civil society organisations. It provides public, private and non-governmental organisations with the knowledge and tools that enable human progress, economic development and nature conservation to take place together. It is an international organization working in the field of nature conservation and sustainable use of natural resources.

- It is involved in data gathering and analysis, research, field projects, advocacy, lobbying and education. IUCN's mission is to "influence, encourage and assist societies throughout the world to conserve nature and to ensure that any use of natural resources is equitable and ecologically sustainable."
- Created in 1948, IUCN has evolved into the world's largest and most diverse environmental network.
- Headquartered in Switzerland, IUCN Secretariat comprises around 950 staff in more than 50 countries.

Prelims perspective

Model questions

With regard to International Union for Conservation of Nature and Natural Resources (IUCN) consider the following statements.

1. It is a programme under United nations environment programme
2. IUCN's mission is to "influence, encourage and assist societies throughout the world to conserve nature and to ensure that any use of natural resources is equitable and ecologically sustainable."
3. It's headquarters is located at Gland, Switzerland
4. IUCN was established in 1948

Which of the above statements are correct

- a. 1 only
- b. all the above
- c. 2,3 and 4 only
- d. 1,2 and 4 only

Sources: [The Hindu](#) [NOAA](#)

Bharat Stage-VI in 3 years: Race over speedbumps

Bharat Stage Emission norms and issues face in its implementation

Mains : GS 3 Conservation, environmental pollution and degradation, environmental impact assessment.

What are BS norms?

- Bharat Stage emission standards, introduced in 2000, are emission standards that have been set up the Central government to regulate the output of air pollutants from internal combustion engine equipment, including motor vehicles.
- The different norms are brought into force in accordance with the timeline and standards set up by the Central Pollution Control Board which comes under the Ministry of Environment and Forests and Climate Change.
- The Bharat Stage norms are based on European regulations. India has been following the European (Euro) emission norms, though with a time-lag of five years.

- In 13 major cities, Bharat Stage IV emission standards were put in place in April 2010. BS-IV norms were supposed to come into effect nationwide from April 2017.
- All of India moves to Bharat Stage IV (BS-IV) vehicular emission norms. The auto sector is lobbying for extension of deadline citing the need to sell of the inventory
- The ministry has decided to leapfrog to BS-VI from April 1, 2020 skipping BS-V all together.

Why the industry is resisting:

- There are two major industries which now face problems: first is the oil refineries that will need a substantial investment to upgrade. Second, the automobile manufacturers also need to progress gradually and skipping a step like BS-V might put extra pressure on the manufacturers to produce compliant vehicles.

Prelims perspective

Model questions

Consider the following statements about Bharat Stage emission standards:

1. Bharat Stage emission standards, introduced in 2000, are emission standards that have been set up by the Central government to regulate the output of air pollutants from internal combustion engine equipment, including motor vehicles.
2. The Bharat Stage norms are based on European regulations.
3. India had recently decided to skip the Bharat V stage to introduce Bharat VI emission standards.

Which of the above statement(s) is/are correct?

Select the correct answer from the codes given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

Mains Perspective

Model questions

India had recently decided to skip the Bharat V stage to introduce Bharat VI emission standards. What impact it will have on automobile and petroleum industries? Give your suggestions

Sources: [The Hindu](#) [The Indian Express](#)

GS 3 Science and Technology

Toxins in litchis kill children in Bihar, says study

Scientists have found the reasons for an unexplained illness that affects children aged 15 years and younger in Muzaffarpur, Bihar, during the summer.

Mains : GS 2 Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

The Mystery illness

- Every year since 1995, a mystery illness has plagued the town of Muzaffarpur in Bihar.
- Around May and June each year, large numbers of young children would start showing signs of fever. They'd have seizures and convulsions, before slipping in and out of consciousness.
- In 2014, hundreds of children were admitted to hospital exhibiting symptoms of this illness, branded locally as "chamki ki bimari," or "tinsel disease." Of 390 admitted for treatment, 122 died.
- Recently Scientists have found the reasons for this unexplained illness

The findings of a study

- A team of researchers from the U.S. and India have found that consumption of the litchi fruit, along with skipping evening meals, can result in very low blood glucose levels (less than 70 mg/dL) and acute encephalopathy, where brain functioning suffers.
- Those affected can have seizures and coma, and die in many cases.
- The results of the study were published in the journal Lancet Global Health .
- Children in Muzaffarpur frequently spend the day eating litchis, which is a summer fruit, and some skipped meals in the evening.
- Skipping an evening meal by itself results in low blood sugar levels during the night.
- This is particularly so in the case of young children as they have limited hepatic glycogen reserves.
- Hypoglycin A and methylenecyclopropylglycine (MCPG), which are naturally present in litchi fruit, make the condition worse.
- The toxins block enzymes involved in normal glucose metabolism, and this results in an inability to synthesis glucose leading to acutely low levels of blood sugar.
- The build-up of other metabolic by-products could also have an adverse effect (encephalopathy) on children, the study found.
- The study details the effect of skipping the evening meal on the impact of these toxins.

The solution:

- The data from the research supports a public health recommendation — minimising litchi consumption, eating evening meal throughout the outbreak period and implementing rapid glucose correction for suspected illness.
- These recommendations are specific to children in Muzaffarpur

Prelims perspective

Model questions

A disease caused due to consumption of litchi fruit is sometimes seen in the news. Which Indian state have been affected by this disease

- a) Kerala
- b) Bihar
- c) Jharkhand
- d) Madhya Pradesh

Sources: [The Hindu](#) [CNN](#)

Dwarf planet Ceres may have 'hidden' ice volcanoes, claims study

The dwarf planet Ceres may actually host many “hidden” ice volcanoes, besides the only one discovered recently, a study says.

Mains : GS 3 Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

Ice volcanoes on Ceres

- NASA's Dawn spacecraft discovered Ceres's four-kilometre tall Ahuna Mons cryovolcano in 2015.
- Ahuna Mons is a prominent feature on Ceres, rising to about half the height of Mount Everest.
- Other icy worlds in the solar system, like Pluto, Europa, Triton, Charon and Titan, may also have such mountains of icy rock — called cryovolcanoes — but Ahuna Mons is conspicuously alone on Ceres.
- Ceres has no atmosphere, so the processes that wear down volcanoes on Earth — wind, rain and ice — are not possible on the dwarf planet.

Ceres

- Dwarf planet Ceres is the largest object in the asteroid belt between Mars and Jupiter and the only dwarf planet located in the inner solar system.
- It was the first member of the asteroid belt to be discovered when Giuseppe Piazzi spotted it in 1801.
- Ceres became the first dwarf planet to receive a visit from a spacecraft when NASA's Dawn spacecraft arrived there
- Called an asteroid for many years, Ceres is so much bigger and so different from its rocky neighbors that scientists classified it as a dwarf planet in 2006. It wasn't until Pluto's demotion in 2006 did Ceres become known as a dwarf planet.
- Ceres is named for the Roman goddess of harvests. The word cereal comes from

the same name.

- Ceres was first called a comet, then a planet and then an asteroid.

Prelims perspective

Model questions

With reference to the Ceres, consider the following statements:

1. Ceres is the only dwarf planet located in the inner solar system
2. Ceres is found in the asteroid belt between Jupiter and Saturn

Which of the statements given below is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) None of the above

Sources: [The Indian Express](#) [NASA](#)

A near-perfect broadband absorber New light-absorbent material cools buildings

Scientists have developed a thin, flexible, lightweight material that can block thermal detection and absorb light from every angle to keep buildings and cars cool on hot summer days.

Mains : Science and Technology- developments and their applications and effects in everyday life .

About the material - a near-perfect broadband absorber.

- The material, developed by engineers at the University of California San Diego in the U.S., is called a near-perfect broadband absorber.
- It absorbs more than 87 per cent of near-infrared light
- The material is capable of absorbing light from every angle.
- It also can theoretically be customised to absorb certain wavelengths of light while letting others pass through.
- Materials that “perfectly” absorb light already exist, but they are bulky and can break when bent. They also cannot be controlled to absorb only a selected range of wavelengths, which is a disadvantage for certain applications.
- The absorber relies on optical phenomena known as surface plasmon resonances, which are collective movements of free electrons that occur on the surface of metal nanoparticles upon interaction with certain wavelengths of light.
- Metal nanoparticles can carry a lot of free electrons, so they exhibit strong surface plasmon resonance — but mainly in visible light, not in the infrared.

Sources: [The Hindu](#)

ISRO launches 104 satellites in one go, creates history

India, a one-rocket fledgling in space transportation compared to its European and U.S.

counterparts, created launch history by placing a record 104 spacecraft in their desired orbits.

Mains : GS 3 Achievements of Indians in science & technology; indigenization of technology and developing new technology.

Highlights of the mission

- 101 small foreign commercial satellites and 3 Indian satellite were carried by the mission
- A single U.S. Earth imaging company, Planet, has made an bulk booking for 88 of its small 'cubesats'.
- **CubeSat** : CubeSats are a class of research spacecraft called nanosatellites. CubeSats are built to standard dimensions (Units or "U") of 10x10x11. They can be 1U, 2U, 3U, or 6U in size, and typically weigh less than 1.33 kg (3 lbs) per U. They often use commercial off-the-shelf (COTS) components for their electronics and structure. CubeSats are most commonly put in orbit by deployers on the International Space Station, or launched as secondary payloads on a launch vehicle.
- **Breaking records** : No space agency has launched such a large number of satellites in a single flight so far. (While ISRO's PSLV launched 20 satellites last year, Russia's Dnepr launcher holds the record for lifting 37 satellites to orbit in June 2014.)
- All the payloads will totally weigh around 1,500 kg.

Cartosat-2 series

- The main payload on PSLV-C37 will be the fourth in the Cartosat-2 series, a very high resolution Earth observation satellite of about 650 kg
- The imageries from Cartosat-2 series satellite will useful for cartographic applications, urban and rural applications, coastal land use and regulation, utility management like road network monitoring, water distribution, creation of land use maps, change detection to bring out geographical and manmade features and various other Land Information System (LIS) and Geographical Information System (GIS) applications.

ISRO Nano Satellites

PSLV-C37 also carried two ISRO Nano Satellites – INS-1A and INS-1B. ISRO Nano Satellite (INS) is a versatile and modular Nano satellite bus system envisioned for future science and experimental payloads. The INS system is developed as a co-passenger satellite to accompany bigger satellites on PSLV.

The primary objectives of INS system are to:

- Design and develop a low cost modular Nano satellite in the weight range of 10 kg capable of carrying payloads up to a weight of 5 kg
- Provide an opportunity for ISRO technology demonstration payloads
- Provide a standard bus for launch on demand services

- Provide an opportunity to carry innovative payloads for Universities / R&D laboratories

Prelims perspective

Similar questions *[UPSC Prelims 2016]*

With reference to `Astrosat`, the astronomical observatory launched by India, which of the following statements is/are correct?

1. Other than USA and Russia, India is the only country to have launched a similar observatory into space.
2. Astrosat is a 2000 kg satellite placed in an orbit at 1650 km above the surface of the Earth.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Solution: D

Mains Perspective

Model questions *[UPSC Mains 2016]*

Discuss India's achievements in the field of Space Science and Technology. How the application of this technology has helped India in its socio-economic development?

Sources: [The Hindu](#) [The Hindu](#) [Wikipedia](#) [NASA](#) [ISRO Nano Satellites](#) [ISRO](#)



INDIAN TRIUMPH

CARTOSAT 2D

WHAT IS CARTOSAT 2D?

India's satellite and the pictures clicked through it will be of great help in mapping of resources and infrastructure, evaluating development and planning for urban development.

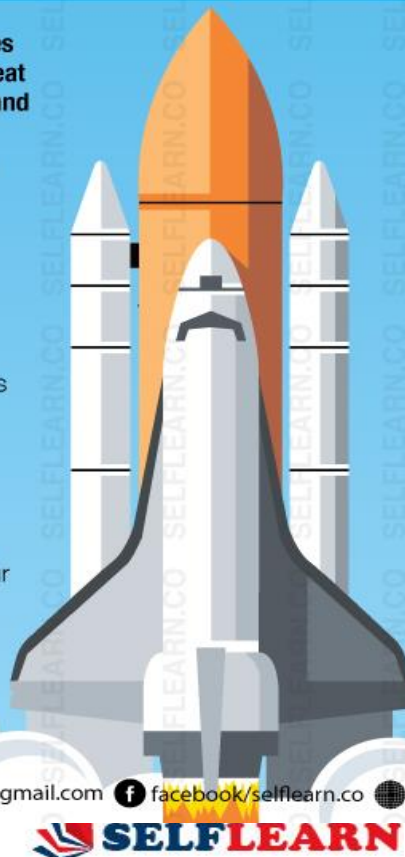
Cartosat 2D will be immensely helpful on a whole lot of subjects:

- 1 knowing how much water is there in our existing water sources
- 2 how this should be best put to use
- 3 It has commenced functioning.
- 4 entire campaign was led and steered by our young scientists, **our women scientists.**

PARTICIPANTS IN THE MISSION

ISRAEL
AMERICA
NETHERLANDS

UAE
KAZAKHSTAN
SWITZERLAND



38th
successive
successful launch
of PSLV



Tribe offers clues to hidden wonders of medicinal plant

A medicinal plant endemic to the southern parts of Western Ghats and Sri Lanka could offer scientists the key to new herbal formulations and modern drugs for the treatment of cancer and wounds and burns.

Mains : GS 3 Science and Technology- developments and their applications and effects in everyday life .

About medicinal plant Neurocalyx calycinus

- Scientists at the Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI) here have confirmed the multiple therapeutic properties of Neurocalyx calycinus used by the Cholanaickan tribe, one of the particularly vulnerable groups in Kerala, to treat inflammations and wounds.
- The researchers have filed for a patent on a novel herbal drug formulation possessing wound-healing, burn-healing, anti-cancer, analgesic, anti-inflammatory, immuno- enhancing, platelet-augmentation and anti-oxidant effects. The research group said that JNTBGRI would share the commercial benefits of its work with the dwindling Cholanaickan tribe.

Discovery of the drug

- The scientists came to know of the miracle plant in 1988 during a biological survey deep inside the Nilambur forests.
- N.calycinus, is known in local parlance as 'pacha chedi,'
- Animal trials have proved that the leaves of N.calycinus possess wound-healing properties comparable to the standard drug Povidone/ Iodine in the early phase of inflammation.
- The anti-inflammatory activity of the leaves was found comparable to the drug diclofenac sodium.
- The pre-clinical trials confirmed the therapeutic effects of N.calycinus against burn wounds and pain, besides its immuno-enhancing, platelet augmentation, and anti-oxidant potential.
- The presence of high Vitamin E content and potent cytoprotective activity in cell lines in the plant species have also enhanced the prospects of developing an anti-cancer drug.

Cholanaickan tribe.

- The Cholanaikkans are an ethnic group of India.
- They primarily inhabit the southern Kerala State, especially Silent Valley National Park, and are one of the last remaining hunter-gatherer tribes of the region.
- The Cholanaikkans speak the Cholanaikkan language, which belongs to the Dravidian family.

Mains Perspective

Model questions [*UPSC Mains 2015*]

India's Traditional Knowledge Digital Library(TKDL) which has a database containing formatted information on more than 2 million medicinal formulations is proving a powerful weapon in the country's fight against erroneous patents. Discuss the pros and cons making this database publicly available under open-source licensing

Sources: [The Hindu](#) [Wikipedia](#)

Ballistic Missile Defence system

India's efforts to develop an impregnable Ballistic Missile Shield has received a major boost. Defence scientists have demonstrated the capability to destroy an incoming ballistic missile by hitting it directly above the Earth's atmosphere with an interception missile.

Mains : GS 3 Achievements of Indians in science & technology; indigenization of technology and developing new technology.

Ballistic Missile Defence system

- The DRDO labs have been developing the two layered (Endo & Exo or inside and above the Earth's atmosphere respectively) BMD system.
- The robust missile shield will aid in securing its skies, key installations and assets from incoming enemy missiles.
- It contains a host of technologies and the indigenous ballistic missile.
- With the successful testing of Ballistic Missile technology India entered into the exclusive club of four nations, which include the US, Russia and Israel, to possess the technology.

Indian Ballistic Missile Defence Programme

- The Indian Ballistic Missile Defence Programme is an initiative to develop and deploy a multi-layered ballistic missile defence system to protect from ballistic missile attacks.
- It is a double-tiered system consisting of two land and sea-based interceptor missiles, namely the Prithvi Air Defence (PAD) missile for high altitude interception, and the Advanced Air Defence (AAD) Missile for lower altitude interception.
- The two-tiered shield should be able to intercept any incoming missile launched 5,000 kilometres away. The system also includes an overlapping network of early warning and tracking radars, as well as command and control posts
- The **Prithvi Air Defence (PAD)** is an anti-ballistic missile developed to intercept incoming ballistic missiles outside the atmosphere (exo-atmospheric). Based on the Prithvi missile, PAD is a two-stage missile with a maximum interception altitude of 80 km.
- **Advanced Air Defence (AAD)** is an anti-ballistic missile designed to intercept incoming ballistic missiles in the endo-atmosphere at an altitude of 30 km.

Prelims perspective

Model questions

With reference to the **Indian Ballistic Missile Defence Programme**, consider the following statements:

1. The Prithvi Air Defence (PAD) is developed to intercept incoming ballistic missiles inside the atmosphere (endo-atmospheric). Based on the Prithvi missile, PAD is a two-stage missile with a maximum interception altitude of 80 km.
2. Advanced Air Defence (AAD) is an anti-ballistic missile designed to intercept incoming ballistic missiles outside the atmosphere (exo-atmosphere)

Which of the statements given below is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Mains Perspective

Model questions

Since India is making advancements in Space and Missile technology, an aspirant is expected to be aware of these developments. Questions from the topic vary in number different mains examination. One question from previous year mains examination is given below. To know more visit our [IAS preparation page](#)

Discuss India's achievements in the field of Space Science and Technology. How the application of this technology has helped India its socio-economic development? [UPSC Mains 2016]

Sources: [The Hindu Businessline](#) [Wikipedia](#)

'Thubber' for use in soft, stretchable electronics

In a breakthrough for creating soft, stretchable machines and electronics, scientists have developed a novel rubber material with high thermal conductivity and elasticity.

Prelims : General Science.

About Thubber

- It is a novel rubber material with high thermal conductivity and elasticity.
- The material, nicknamed 'thubber', is an electrically insulating composite that exhibits an unprecedented combination of metal-like thermal conductivity, elasticity similar to soft, biological tissue
- It can stretch over six times its initial length.

How will it be useful?

- The material is critical for rapid heat dissipation in applications such as wearable computing and soft robotics, which require mechanical compliance and stretchable functionality
- Applications could extend to industries like athletic wear and sports medicine

(Eg: lighted clothing for runners and heated garments for injury therapy)

- Until now, high power devices have had to be affixed to rigid, inflexible mounts that were the only technology able to dissipate heat efficiently

Components of thubber

- The key ingredient in “thubber” is a suspension of non-toxic, liquid metal micro-droplets.
- The liquid state allows the metal to deform with the surrounding rubber at room temperature.
- When the rubber is pre-stretched, the droplets form elongated pathways that are efficient for heat travel.

Prelims perspective

Model questions

What is "thubber" recently in the news?

- a. A heat resistant material developed by ISRO
- b. Novel synthetic rubber which can conduct electricity
- c. a novel rubber material with high thermal conductivity and elasticity.
- d. a material developed by NASA to use in spacecrafts

Sources: [The Hindu](#)

Cloud seeding for inducing rains

Maharashtra government had approved a plan to seed clouds for inducing rain in the Vidarbha region. The government has adopted this plan in response to frequent droughts in Vidarbha

General issues on Environmental Ecology, Bio-diversity and Climate Change - that do not require subject specialisation

About the Experiment

- During monsoon 2017, weather scientists spray silver iodide over clouds to induce rain.
- The programme will be coordinated by the Indian Institute of Tropical Meteorology,
- It will be the first controlled experiment to quantify the extent to which clouds form water drops large enough to make rain.

What is Cloud seeding?

- Seeding involves spraying chemicals into clouds.
- China used the technique during the 2008 Olympics to veer rain away from the inaugural venue

HOW IT WORKS



1 Silver iodide is released into the atmosphere by a propane flame, mostly with the help of a jet, rocket or ground propellers

2 The iodide particles rise into the clouds, cause the moisture to freeze

3 The particles act as a base for water vapour to settle on

4 The water vapour crystallises, falls as snow or rain



Image : The Hindu

Prelims perspective

Model questions

Details about cloud seeding, definition, state in which it going to be introduced... can be asked.

Sources: [The Hindu](#)

Potent malaria vaccine on the anvil

A malaria vaccine that mimics a mosquito bite yielded encouraging results in human trials.

Mains : GS 3 Science and Technology- developments and their applications and effects in everyday life .

About the Vaccine - PfSPZ

- The drug, called PfSPZ, provided up to 100% protection for 10 weeks in a trial in Germany, although a trial in real life conditions in Mali gave a lower level of defence

SELFLEARN'S MONTHLY CURRENT AFFAIRS -FEBRUARY 2017

- PfSPZ uses a live, immature form of the malaria parasite, called a sporozoite, to stimulate an immune reaction in humans.
- The ability to complete an immunisation regime in 10 days will facilitate the use of PfSPZ-CVac in mass vaccination programmes to eliminate the malaria parasite and to prevent malaria in travellers
- Another vaccine called **RTS,S**, developed by GlaxoSmithKline, is being tested in children Though considered the most advanced candidate, but results last year from a Kenyan trial showed it was only about four per cent effective after seven years.

Malaria

A disease caused by a plasmodium parasite, transmitted by the bite of infected mosquitoes.

More than 1 million cases per year (India)

Details

- ✓ The severity of malaria varies based on the species of plasmodium.
- ✓ Symptoms are chills, fever and sweating, usually occurring a few weeks after being bitten.
- ✓ People travelling to areas where malaria is common typically take protective drugs before during and after their trip.
- ✓ Treatment includes antimalarial drugs.

How it spreads

- ✓ By animal or insect bites or stings.
- ✓ By blood products (unclean needles or unscreened blood).

Prelims Perspective

A question can be expected from any of the following areas

- ✓ Details about Malaria disease

Mains Perspective

Model questions

- ✓ Several of India's neighbouring countries have been able to achieve better health prospects despite not having achieved India's level of economic development.
Discuss

Sources: [The Hindu](#) [Google health card](#)

Chandrayaan - 2

Flush with the success of the PSLV- C37 mission which set a world record by placing 104 satellites in orbit, the Indian Space Research Organisation (ISRO) is turning its attention to India's second lunar mission, Chandrayaan- 2, scheduled for 2018.

Mains : GS 3 Science and Technology- developments and their applications and effects in everyday life Achievements of Indians in science & technology; indigenization of technology and developing new technology. Awareness in the fields of IT, Space,

Chandrayaan - 2

- Chandrayaan 2 is India's second mission to the Moon, is an advanced version of the previous Chandrayaan-1 mission.
- It will be a totally indigenous mission – the vehicle, the spacecraft, the lander and the rover are all made in India. .
- It consists of an Orbiter, Lander and Rover configuration. It is planned to be launched as a composite stack into the Earth Parking Orbit (EPO) by GSLV-Mk II.
- The Orbiter carries the combined stack up to moon till the Lunar Orbit Insertion (LOI). The combined stack is then inserted into a lunar orbit . The Lander is separated from the Orbiter in this orbit.
- The Orbiter with scientific payloads will orbit around the moon.
- The Lander will soft land on the Moon at a specified site and deploy the Rover. The scientific payloads onboard the Orbiter, Lander and Rover are expected to perform mineralogical and elemental studies of the lunar surface.

Prelims Perspective

ISRO and space related questions had repeatedly figured in the past civil service preliminary examinations [UPSC civil service prelims 2016]

With reference to 'Astrosat', the astronomical observatory launched by India, which of the following statements is/are correct?

1. Other than USA and Russia, India is the only country to have launched a similar observatory into space.
2. Astrosat is a 2000 kg satellite placed in an orbit at 1650 km above the surface of the Earth.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Solution: D

Mains Perspective

Model questions

- ✓ Discuss India's achievements in the field of Space Science and Technology. How the application of this technology has helped India its socio-economic development? [UPSC Mains 2016]

Sources: [The Hindu](#) [ISRO](#)

Project Loon

Researchers at Google have moved a step closer to rolling out a network of huge balloons to provide Internet connectivity to billions of people around the world,

particularly those in difficult-to-reach rural areas.

Mains : GS 3 Science and Technology- developments and their applications and effects in everyday life

Context

- The Project Loon team, part of the company's X research lab, said it can now use machine learning to predict weather systems.
- The advance means Google has much more control over where its balloons reach, making it possible to focus on a specific region, rather than circumnavigating the globe.
- By using machine-learning algorithms, Google thinks it has found a way to predict weather with enough accuracy to make it possible to hover balloons over a relatively small area for a long period of time.

Project Loon

- **Project Loon** is a research and development project being developed by X (formerly Google X) with the mission of providing Internet access to **rural** and remote areas.
- The project uses high-altitude balloons placed in the stratosphere at an altitude of about 18 km (11 mi) to create an aerial wireless network.
- The balloons are maneuvered by adjusting their altitude in the stratosphere to float to a wind layer

How it works?

- Users of the service connect to the balloon network using a special Internet antenna attached to their building.
- The signal travels through the balloon network from balloon to balloon, then to a ground-based station connected to an Internet service provider (ISP), then onto the global Internet.

Prelims perspective

Model questions

'Project Loon', sometimes seen in the news, is related to

- a. waste management technology
- b. wireless communication technology
- c. solar power production technology
- d. water conservation technology

Sources: [The Hindu](#) [Wikipedia](#)

7 Earth-like planets spotted

Scientists have spotted seven Earth-sized planets, with mass similar to Earth, orbiting around a dwarf star the size of Jupiter, just 39 light years from the Sun.

Mains : GS 3 Awareness in the fields of IT, Space

About the discovery

- The seven Earth sized planets has been discovered orbiting a dwarf star TRAPPIST-1.
- The planets' temperature is low enough to make possible the presence of liquid water on their surface.
- This is the first time so many Earth-like planets are found around a star.
- The star is low-mass and small
- These planets are found in the habitable zone of the star.

Prelims perspective

Model questions

TRAPPIST-1 recently seen in news is

- a. newly discovered planet
- b. a dwarf star
- c. NASA's interplanetary mission
- b. Electric plane developed by Japanese

Sources: [The Hindu](#)

Cyber Swachhta Kendra - Botnet Cleaning and Malware Analysis Centre

Extending the 'Swachh Bharat' campaign to the cyber world, the **Cyber Swachhta Kendra**–Botnet Cleaning and Malware Analysis Centre for analysis of malware and botnets that affect networks and systems was launched.

Mains : GS 3 Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security.

Cyber Swachhta Kendra - Botnet Cleaning and Malware Analysis Centre

- This is a part of MeitY's Digital India initiative aimed at creating a secure cyber space by detecting botnet infections in India and to notify, enable cleaning and securing systems of end-users to prevent further infections.
- The centre is operated by the Indian Computer Emergency Response Team (CERT-In).
- The Centre aims to enhance coordination between the Government and industry in order to encourage cyber hygiene among all end-users and to create a secure and safe internet ecosystem in India.
- The Centre will operate in close co-ordination and collaboration with Internet Service Providers (ISP) and Anti-Virus companies.
- Whenever an infection is detected, the Centre will send alerts on the infected IP addresses to the Internet Service Providers, who in turn will inform the end-user about the malware and botnet infections on their system.
- The Centre will also work in close collaboration with the Banks to detect malware infections in their banking network and enable remedial actions.

- The launch of the Centre will help the Internet service providers and the banks to keep their networks clean and prevent cases of cyber fraud and theft.

Some of the tools released for citizens by the centre are

- **USB Pratirodh** -A desktop security solution, which protects from USB mass storage device threats.
- **AppSamvid** - A desktop solution which protects systems by allowing installation of genuine applications through white listing. This helps in preventing threats from malicious applications.
- **M-Kavach** – An indigenously developed solution to address the security threats in mobiles.

What are Botnets?

- Botnets are formed as hackers lured people to download a link or a file that downloads malicious software into the computers. The infected computer becomes part of a botnet that virtually is commanded by hackers.
- Essentially a botnet compromises computers and give control to a third party. Infected systems are known to steal sensitive user information including credit card details and passwords that cause financial loss to the users as well as have an adverse impact on the economy as a whole.

What is the objective of National Botnet Cleaning Centre ?

Hackers are taking control of computers building Botnets and this centre would help the victims clean the systems. The facility will automatically detect botnets that trigger various cyber crimes and suggest the device owner to remove it from their device with help of the facility.

Prelims Perspective

A question can be asked on the following.

- The term botnet is sometime seen in news. What does it mean?
- National Botnet Cleaning Center - What is its purpose?

Mains Perspective

- Considering the threats cyberspace poses for the country, India needs a “Digital Armed Forces” to prevent crimes. Critically evaluate the National Cyber Security Policy, 2013 outlining the challenges perceived in its effective implementation. [UPSC Mains , GS3 , 2015]
- Digital and cyber crimes have increased rapidly in the past decade. Which sectors are vulnerable to such a threat and what measures can be taken to address this?

Sources: pib [The HinduBusinessLine](http://www.thehindubusinessline.com)

FORPHEUS - world's first robot table tennis tutor

The world's first robot table tennis tutor in Japan has set a new Guinness World Record for its uncanny ability of being able to play the game better than most humans.

Mains : GS 3 Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

FORPHEUS

- FORPHEUS (Future Omron Robotics Technology for Exploring Possibility of Harmonised aUtomation with Sinic Theoretics) has officially been given the Guinness title for its unique technological intelligence and educational capabilities.
- The goal of FORPHEUS is to harmonise humans and robots, by way of teaching the game of table tennis to human players.
- The machine is easily able to act as a coach due to its cutting edge vision and motion sensors it can use to gage movement during a match.

Prelims perspective

Model questions

What is 'FORPHEUS', recently in the news?

- (a) Electric plane tested by NASA
- (b) Solar-powered two-seater aircraft designed by Japan
- (c) Robot table tennis tutor de
- (d) Reusable rocket designed by ISRO

Sources: The Hindu [Economic Times](#)

Orion Spacecraft

The U.S. space agency is considering putting astronauts on an upcoming test flight of the deep space capsule Orion as it aims to orbit the Moon.

Mains : GS 3 Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

Orion

- Orion is a spacecraft built with an eye to ferrying astronauts to Earth's neighboring planet, Mars.
- NASA mulls possibility of sending astronauts on test flight of Orion. The current plan is to send astronauts on Orion's second flight, EM-2, an eight-day mission in 2021
- Until now, the Orion test flight known as Exploration Mission 1 (EM-1) was scheduled for 2018 and was expected to be unmanned.
- The capsule will be propelled to space atop a rocket called the Space Launch System (SLS), which is currently being developed. NASA has described it as the "most powerful rocket in the world".
- Orion will fly farther than any spacecraft built for humans has ever flown

Prelims perspective

Model questions

What is 'Orion', recently in the news?

- (a) Electric plane tested by NASA
- (b) Solar-powered two-seater aircraft designed by Japan
- (c) Spacecraft built to transport humans to Mars
- (d) Reusable rocket designed by ISRO

Sources: [The Hindu](#)

GS 3 Security challenges

Govt. junks border wall plan

The Centre has given up its proposal to build a wall along the Pakistan border in Jammu, originally envisaged as a barrier to cross-border terror.

Mains : GS 3 Security challenges and their management in border areas.

Highlights

- The raised embankment, initiated by the UPA government in 2013 after the twin attacks in the Hiranagar/Samba sector, was to come up along 179 km of the International Border in Jammu.
- The wall proposal was opposed by Pakistan, which took the matter to United Nations accusing India of converting what it called a “working boundary” into a “quasi international boundary.”

Why the proposal was given up?

- The plan was not materialising and the government has decided to depend on technological solutions such as smart fence, with sensors to identify infiltration.
- The Army opposed the embankment, saying it would pose hurdles for their forward movement during military operations.
- Multiple issues like acquisition of land

Comprehensive Integrated Border Management System (CIBMS)

- The Home Ministry is presently working on a Comprehensive Integrated Border Management System (CIBMS) for 24X7 surveillance.
- CIBMS will have multiple components such as smart fence, lasers, motions sensors etc to monitor the international boundary.
- A major component of this system will be the smart fence, which will be a seamless virtual fence, comprising various sensors and laser-based technologies.
- India would lay a network of radars, CCTV cameras, laser fences and motion sensors to plug the existing gaps and secure its international border.

Prelims perspective

Model questions

"Comprehensive Integrated Border Management System", sometimes seen in the news, is related to

- a. Securing India Myanmar border
- b. Leveraging technology for border management

- c. preventing cross border terrorism
- d. All of the above

Mains Perspective

Model questions

Border management is a complex task due to difficult terrain and hostile relations with some countries. Elucidate the challenges and strategies for effective border management. *[UPSC Mains 2016]*

Sources: [The Hindu](#)

Current Events of National and International Importance

Nilambur teak set to enter elite club of products with GI tag

Nilambur teak, internationally known for its superior quality and elegant appearance, will soon be added to the list of Kerala produces with the Geographical Indication (GI) tag.

About Nilambur teak

- Britishers identified the superior quality of teak from Nilambur plantations and forests for the first time.
- Later, the region became the major supplier of quality teak in the world.
- However, fake products with false tags started flooding the wood/ furniture markets as the fame of Nilambur teak increased.
- Understanding the potential risk, various stakeholders along with concerned authorities decided to register the unique product as a Geographical Indication under the GI Act.

What is GI Tag?

- A geographical indication (GI) is a name or sign used on certain products which corresponds to a specific geographical location or origin (e.g. a town, region, or country).
- India, as a member of the World Trade Organization (WTO), enacted the Geographical Indications of Goods (Registration and Protection) Act, 1999
- GIs have been defined under WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement as: "Indications which identify a good as originating in the territory of a member, or a region or a locality in that territory, where a given quality, reputation or characteristic of the good is essentially attributable to its geographic origin.
- The GI tag ensures that none other than those registered as authorised users (or at least those residing inside the geographic territory) are allowed to use the popular product name.
- Darjeeling tea became the first GI tagged product in India, in 2004-05

How does it help?



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- It is beneficial because it confers legal protection to the Geographical Indications in India. This identity helps in preventing misuse of a registered GI, helps boost a country's exports and increase economic prosperity of the producers.
- Registration of the product under the GI facilitates better legal protection and the authorised user can exercise his right to use the tag effectively.
- A registered GI is a **public property** which belongs to the producers of the goods..

Who can apply for GI tag?

- Any established organisation or authority can apply for GI tag under the law.

Prelims perspective

Model questions *[UPSC Prelims 2015]*

Which of the following has/have been accorded 'Geographical Indication' status?

1. Banaras Brocades and Sarees
2. Rajasthani Daal-Bati-Churma
3. Tirupathi Laddu

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Sources: [The Hindu](#) [The Hindu](#) [Wikipedia](#)

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Quick Facts

Indian Navy's Theatre Level Operational Readiness Exercise (Tropex 2017)

TROPEX 2017 is a month long exercise/ war drill, encompassing all dimensions of maritime warfare and is witnessing participation of over 60 ships, 05 submarines and more than 70 naval aircraft. It also includes participation of a large number of assets from the Indian AirForce, Indian Army and Indian Coast Guard.

The area of operations for TROPEX 2017 exercise spans across the vast expanse of the Arabian Sea and North Central Indian Ocean and serves as an opportunity to validate the Indian Navy's Concepts of Operation.

India and Austria Sign a Protocol amending the India-Austria Double Taxation Avoidance Convention

India and Austria signed a Protocol amending the existing Convention between the two countries for Avoidance of Double Taxation and the Prevention of Fiscal Evasion with respect to Taxes on Income here today. The Protocol will broaden the scope of the existing framework of exchange of tax related information which will help curb tax evasion and tax avoidance between the two countries and will also enable mutual assistance in collection of taxes.

China conducts exercise with new DF-16 medium range ballistic missile

China's newly-formed Rocket Force has held an exercise with the advanced DF-16 medium-range ballistic missile with a range of over 1,000 km that could threaten a number countries, including India, Japan and the US. Significantly the People's Liberation Army (PLA), which is secretive about its weapons systems, has released a video of the recent exercise of its troops employing the advanced DF-16 medium-range ballistic missile.

Chillai kalan

Chillai kalan is the harshest 40-day period of winter in Kashmir, which begins on December 21 and lasts up to January 30. Night temperatures in this period drop up to -10 degrees Celsius in the plains, and to -20 degrees in the upper reaches. The 40-day period is considered a blessing. Apart from drawing tourists, the snow helps recharge the state's water-table and is good for its horticulture industry.

Central Board of Direct Taxes (CBDT) signs four more unilateral Advance Pricing Agreements (APAs)

The Central Board of Direct Taxes (CBDT), Department of Revenue, Ministry of Finance has entered into four more unilateral Advance Pricing Agreements (APAs) yesterday.

The APA Scheme was introduced in the Income-tax Act in 2012 and the “Rollback” provisions were introduced in 2014. The scheme endeavours to provide certainty to taxpayers in the domain of transfer pricing by specifying the methods of pricing and determining the prices of international transactions in advance.

India to frame policy on synthetic biology

India is taking its first steps to evolve a policy on synthetic biology, an emerging science through which new life forms can potentially be made in labs and existing life forms, such as bacteria and other microbes, tweaked to produce specific proteins or chemically useful products. Synthetic biology in microbial systems holds promise for production of drugs, vaccines, fuel components and other chemicals. A popular example is the production of artemisinin, a powerful anti-malarial drug, in yeast, at a commercial level. Microorganisms have also been constructed to act as sensors that can detect a toxin in vitro (outside a living organism) or in vivo (inside a living organism).

PM Modi to inaugurate 3-day National Women’s Parliament on Friday

A first-of-its-kind conclave in India, the National Women’s Parliament will be inaugurated by Prime Minister Narendra Modi at Pavitra Sangamam in Andhra Pradesh capital region Amaravati . The vision of NWP is to enable and encourage social, political and economic empowerment of women in all strata of the society. The NWP will come out with the Amaravati Declaration on women empowerment at the end of the three-day deliberations

India raises concern as China blocks US move to get Masood Azhar banned

India has once again raised the issue of banning Jaish-e-Muhammed chief Masood Azhar with the Chinese government, even as the latter has blocked yet another attempt made by the US to get him banned by the United Nations.

This time the US, the UK and France had moved the UN Sanctions Committee 1267 to designate Azhar as a terrorist of a blacklisted organisation. Last year, China had twice blocked India’s attempt to designate Azhar as a terrorist by the UN Security Council by using the method of ‘technical hold’. Had China supported the move then, all of Azhar’s assets would have been frozen and his travel banned. China was the only country out of the 14-member countries that decided not to designate Azhar as a terrorist.

TAMRA Portal and Mobile Application to ensure transparent award of Statutory Clearances for Mining Operations

With an objective to enhance transparency and accountability as a part of the Ease of Doing Business in the Mining sector, Union Minister of State Shri Piyush Goyal launched **TAMRA (Transparency, Auction Monitoring and Resource Augmentation)** portal and Mobile Application. The Ministry of Mines has developed

the TAMRA Portal which will be an interactive platform for all the stakeholders to compress the timelines for statutory and other clearances as it would help minimize the gestation period for commencing production.

RBI to rationalise MDR

The Reserve Bank of India (RBI) plans to rationalise the merchant discount rate (MDR) for debit cards and said there would be different charges for different kinds of merchants. Merchant Discount Rate is the rate which banks charge a merchant when the customer uses a card for a transaction.

Tarini to be Inducted into Indian Navy on 18 February 17

The Indian Navy's second ocean going sailboat *Tarini* will be inducted on 18 February 2017. . The sail boat *Tarini* is being inducted into the Navy and is slated to be the platform for **First Indian All Women Circumnavigation of the Globe** expedition of the Indian Navy.

INSV *Tarini* is almost identical to her illustrious predecessor, the iconic *Mhadei* which has sailed over 115000 nautical miles in the past eight years. The boat draws her origin from the famous *Tara-Tarini* temple of Orissa's Ganjam district. The word *Tarini* means a Boat and is also a Sanskrit word for Saviour. *Tara-Tarini* is a patron deity for sailors and merchants and is worshipped for safety and success at sea.

Cabinet approves the investment proposal for generation component of Arun-3 Hydro Electric Project in Nepal

The Cabinet Committee on Economic Affairs has approved Investment for generation component of Arun-3 HEP. The project is located on Arun River in Sankhuwasabha District of Eastern Nepal. The Run-of-River scheme envisages about 70 mtr. high concrete gravity dam and Head Race Tunnel (HRT) of 11.74 Km. with underground Power House containing four generating units of 225 MW each on Left Bank. The project will provide surplus power to India strengthening power availability in the country and will also strengthening economic linkages with Nepal.

Centre doubles solar park capacity to 40,000 MW

The Cabinet Committee on Economic Affairs, approved the enhancement of capacity from 20,000 MW to 40,000 MW of the Scheme for Development of Solar Parks and Ultra Mega Solar Power Projects. The enhanced capacity would ensure setting up of at least 50 solar parks each with a capacity of 500 MW and above in various parts of the country.

The Solar Parks and Ultra Mega Solar Power Projects will be set up by 2019-20 with Central Government financial support of Rs.8100 crore. All the States and UTs are eligible for benefits under the scheme.

Russian supply ship heads to space station

A Soyuz-U booster rocket, carrying the Progress MS-05 spacecraft, was launched from the Baikonur launch complex in Kazakhstan on a supply mission to the International Space station.

Arctic vault receives new seed deposits

Some 50,000 new samples from seed collections around the world, including India, have been deposited in the world's largest repository built to safeguard against wars or natural disasters wiping out global food crops. The Svalbard Global Seed Vault, a gene bank built underground on the isolated island in a permafrost zone some 1,000 kilometres from the North Pole, was opened in 2008 as a master backup to the world's other seed banks, in case their deposits are lost.

Enormous Lyman-alpha nebula

Astronomers have spotted an enormous, glowing blob of gas in the distant universe, with no obvious source of power for the light it is emitting. Called an "enormous Lyman-alpha nebula" (ELAN), it is the brightest and among the largest of these rare objects, only a handful of which have been observed. The newly discovered ELAN is known as MAMMOTH-1.

India, ADB ink \$375 mn loan pact for industrial corridor

India and ADB have signed USD 375 million pact for loans and grants to develop 800—km Visakhapatnam—Chennai Industrial Corridor, which is the first phase of a planned 2,500-km East Coast Economic Corridor.

City Liveability Index

The urban development ministry has prepared a framework for 'City Liveability Index' for all Indian cities based on 77 parameters under 15 categories. These include level of air pollution, availability of public transport, open space, hospital beds per lakh population, student-teacher ratio, response time to health emergencies and security of citizens, besides addressing public grievances. Centre will share these parameters with state governments next week in its bid to push competition among cities as it is being done for Swachhta or sanitation ranking.

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