

3rd June to 10th June (WEEK 2)

PGENERAL STUDIES-1

INDIAN CULTURE

KAMBALA

Why in news?

The Prevention of Cruelty to Animals (Karnataka Amendment) Bill 2017, legalising kambala was cleared by the Union Ministry of Law and Justice.



What is Kambala?

It is a traditional slush track buffalo race in Dakshina Kannada and Udupi districts of Karnataka.

Backgrounder

The Karnataka Legislative Assembly had cleared the Bill in February 2017. The Governor had referred the Bill to the President for his assent. The Bill seeks to exempt kambala and bullock-cart racing from the ambit of the Prevention of Cruelty to Animals (PCA) Act, 1960.

The issue

In its traditional form, the race is non-competitive with buffalo pairs made to race one after another in paddy fields, which is considered a thanksgiving to the Gods for protecting the animals from diseases.

Over the years, it has however become an organised sport with animal rights activists claiming that the buffaloes run in the race due to fear of being beaten

The organisers dismiss this narrative, saying no violence is involved and that several modifications had been made to ensure that it is an animal friendly event.

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GENERAL STUDIES-2

GOVERNANCE ISSUES AND POLICIES

OXYTOCIN MANUFACTURING

Drug Controller General of India has banned Oxytocin sales in retail markets. It is now contemplating placing restrictions on the manufacturing of the same. Only Public sector undertakings (PSUs) will be allowed to manufacture.

Oxytocin

Oxytocin has also been dubbed the love hormone, hug hormone, cuddle chemical, moral molecule, and the bliss hormone due to its effects on behavior. It also influences female reproductive biological functions

- It is a hormone produced in the brain, in the hypothalamus. It is transported to, and secreted by, the pituitary gland, which is located at the base of the brain.
- It acts both as a hormone and as a brain neurotransmitter.
- The release of oxytocin by the pituitary gland acts to regulate two female reproductive functions: Childbirth and Breast-feeding.

Why restrictions?

The drug is used by dairy owners and farmers to boost milk production and make vegetables look bigger and fresher. But, it has been found that indiscriminate use of Oxytocin in milch animals and by farmers is causing irreversible hormone damage.

NEW DIRECTOR GENERAL FOR NWDA

Dr. Sharad Kumar Jain has been appointed as the Director General of National Water Development Agency (NWDA) under Ministry of Water Resources, River Development and Ganga Rejuvenation.

NWDA

NWDA is an agency under Union Ministry of Water Resources, set up in 1982 as autonomous society under the Societies Registration Act, 1860.

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Functions

- Carry out the water balance and other studies for optimum utilisation of Water Resources of the Peninsular rivers system.
- Prepare feasibility reports and give concrete shape to Peninsular Rivers Development Component
- In 1990, it was also entrusted with the task of Himalayan Rivers Development Component of National Perspectives.
- It has been entrusted to prepare feasibility reports of intra-State links as proposed by the States.

PRASAR BHARATI GETS NEW CEO

Who?: Shashi Shekar Vempati
five years from the date of assumption of office.

Appointment procedure:

On the recommendation of the 3 member committee

1. Headed by the Hon'ble Vice President,
2. Chairman, Press Council of India and
3. The President's nominee i.e. Secretary, Information and Broadcasting.

Prasar Bharati

- It is the Public Service Broadcaster of the country.
- A statutory autonomous body established under the Prasar Bharati Act
- Established: 1997.
- The objectives of public service broadcasting are achieved in terms of Prasar Bharati Act through All India Radio and Doordarshan.

WELFARE SCHEMES AND DEVELOPMENTAL GROUPS

INCLUSIVE INDIA INITIATIVE

Conference organized by: National Trust under Ministry of Social Justice & Empowerment

Theme: Inclusive India Initiative: Towards an Inclusive India

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About the initiative

The initiative caters to persons with intellectual and developmental disabilities to make these people a part of the mainstream in all aspects of social life, namely education, employment and community. 'Inclusive India' is all about changing the attitudes.

- The initiative aims to provide equal opportunities, protection of rights and full participation.
- The three core focus areas of are Inclusive Education (Awareness campaigns, accessible infrastructure etc.), Inclusive Employment and Inclusive Community Life.

National Trust:

It is a statutory body of the Ministry of Social Justice and Empowerment, set up under the "National Trust for the Welfare of Persons with Autism, Cerebral Palsy, Retardation and Multiple Disabilities" Act

The National Trust was envisaged with a core mission of providing opportunities for capacity development of Persons with Disabilities and their families, fulfilling their rights, facilitating and promoting the creation of an enabling environment and an inclusive society.

SKILL FOR LIFE, SAVE A LIFE

Aim

It is an initiative to upscale the quantity and quality of trained professionals in the healthcare system. Under this initiative various courses are planned to be started targeting specific competencies for healthcare professionals as well as for general public.

Significance

- Such courses ensure that the health sector gets the adequate skilled health workers.
- Skilling the youth enhances the employability and skilled India will help the nation reap rich dividends.
- Skill enhances economy of the country, too by reducing the gap between demand and supply of trained and skilled manpower in every field.

Reaping the dividend

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More than 65% youth are below the age of 35 in India and the country should seize this opportunity by providing adequate skills and employability to the youth for a strong foundation for a sustainable growth.

VATSALYA

The 'Vatsalya – Maatri Amrit Kosh' is a National Human Milk Bank and Lactation Counselling Centre was recently inaugurated.

Ministry: Ministry Of Health and Family Welfare, Government of India.

Established: By Norwegian government, Oslo University and Norway India Partnership Initiative (NIPI).

Objective

- It will collect, pasteurize, test and safely store milk that has been donated by lactating mothers and make it available for infants in need.
- This facility will also protect, promote and support breastfeeding of their own healthy mothers by providing dedicated lactation counsellors.

FIRST RURAL LED STREET LIGHTING PROJECT

Where: Andhra Pradesh:

Implementation by: The Energy Efficiency Services Limited (EESL) under the Ministry of Power

The replacement drive in rural areas will help the gram panchayats to save electricity and lead to reduction of 12 crore tonnes of CO₂.

The entire upfront capital cost of this project is being funded by French Development Agency Agence Française de Développement (AFD).

SMARTGRAM

Initiative by: Rashtrapati Bhavan.

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What is a smartgram?

A 'smart gram', according to the project, would have the required basic physical and social infrastructure with a layer of smart information and communication embedded to improve governance and delivery of services, livelihood and economic opportunities.

Details

- Selected villages will see new ventures in agriculture, skill development, energy, education, health, employment generation, and entrepreneurship.
- The model is based on the convergence of resources and effort by the central government, state government, district administration, panchayati raj institutions, public sector, private sector and enlightened villagers to enhance the environment, connectivity and wellbeing of each village.

AADHAAR MADE MANDATORY FOR ATAL PENSION YOJANA

Aadhaar has been made mandatory to get benefits of the Atal Pension Yojana.

Atal pension yojana

Started from: 2015

Beneficiaries: Available to all the citizens of India in the age group of 18-40 years.

Details

- Under the scheme, a subscriber would receive a minimum guaranteed pension of Rs 1,000 to Rs 5,000 per month, depending upon his contribution, from the age of 60 years.
- The same pension would be paid to the spouse of the subscriber
- On the demise of both the subscriber and the spouse, the accumulated pension wealth is returned to the nominee.
- The Central Government would also co-contribute 50% of the total contribution or Rs. 1000 per annum, whichever is lower, to each eligible subscriber account, for a period of 5 years and who are not members of any statutory social security scheme and who are not Income Tax payers.

INDIA AND ITS INTERNATIONAL RELATIONS

INDIA- JAPAN TO COUNTER OBOR WITH PROPOSE ASIA-AFRICA SEA CORRIDOR

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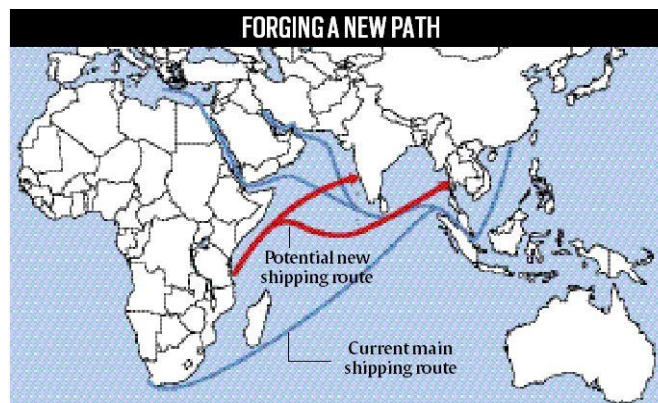
India and Japan released a vision document for developing an Asia-Africa Growth corridor that is meant to propel growth and investment in Africa, by curtailing the ever-increasing presence of the Chinese on the continent.

The project would be cheaper option and have a smaller carbon footprint when compared to China's One Belt, One Road (OBOR) initiative.

What is Asia-Africa Growth Corridor (AAGC)?

The AAGC is an attempt to create a "free and open Indo-Pacific region" by rediscovering ancient sea-routes and creating new sea corridors that will link the African continent with India and countries in South-Asia and South-East Asia. The project stakeholders hope the sea corridors will be "low-cost" and have "less carbon footprint" when compared to a land corridor.

For instance, under the AAGC, there is a plan to connect ports in Jamnagar (Gujarat) with Djibouti in the Gulf of Eden. India is developing ports under the Sagarmala programme specifically for this purpose.



Apart from developing sea corridors, the AAGC also proposes to build robust institutional, industrial and transport infrastructure in growth poles among countries in Asia and Africa. The idea is to enable economies in Asia and Africa to further integrate and collectively emerge as a globally competitive economic bloc.

How will Japan and India contribute to the project?

Japan's contribution to the project will be its state-of-the-art technology and ability to build quality infrastructure, while India will bring in its expertise of working in Africa. The private sector of both countries are expected to play big role by coming together to form joint-ventures and consortiums, to take up infrastructure, power or agribusiness projects in Africa.

Where did the idea of AAGC originate?

The proposal for an AAGC was first mentioned in the joint declaration issued by Indian and Japanese prime ministers in 2016.

Is AAGC a counter to OBOR?

Unlike OBOR which entails development of a land corridor, AAGC will essentially

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be a sea corridor linking Africa with India and other countries of South-East Asia and Oceania.

1. Firstly, this process is more consultative, because this was one objection India came up with when OBOR was presented.
2. Secondly, the centrality of people in Africa is brought up front, rather than excessive emphasis on trade and economic relations alone.
3. Thirdly, Japan's ability to deliver quality infrastructure will play a major role in developing this corridor

Why is Africa lucrative?

In 2015, the five of the fastest growing economies in Africa were non-resource rich, with Ethiopia, Cote d'Ivoire and Rwanda leading the pack. In 2016 many more African nations have all recorded impressive growth.

Chinese presence

The Chinese influence on the African economy can be gauged from the 2017 African Economic Outlook, released at the AfDB summit, which showed that country was still the major consumer of African goods, accounting for 27 per cent of Africa's total global exports.

China is also a leader in greenfield investment in Africa with 24 per cent of total greenfield investment. In comparison, India during the same year, invested just 1.3 percent of total greenfield investments

Initial response of African nations

The African Development Bank has welcomed the AAGC vision document. Infrastructure is costly and has to be particular zones to build infrastructure. AfDB is already working on growth corridors within Africa

What is the way forward for AAGC?

More studies should be undertaken to list the current demands and challenges of economic, socio-cultural and political partnership pertaining to AAGC.

Future AAGC studies should make recommendations to the governments of India and Japan and to governments in Africa, South Asia, Southeast Asia, East Asia and Oceania on the way forward for deepening this partnership

QATAR OSTRACISED

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Arab countries led by cut all diplomatic ties with Qatar in a move to isolate the nation.

Why?

Saudi Arabia claims that Qatar embraces various terrorist and sectarian groups which are destabilising the region, including the Muslim Brotherhood, al-Qaida, Islamic State and groups supported by Iran.



Impact on oil prices

Oil prices are always sensitive to geopolitical tensions and the prospect of any disruption to production.

- Saudi Arabia is the de facto leader of the Organisation of the Petroleum Exporting Countries (OPEC). It is the largest oil producer in the world, while Qatar is one of OPEC's smallest oil producers.
- The group recently agreed to cut oil production to help prop up prices; some investors are concerned that the dispute with Qatar could affect that deal. This plan to boost prices has also been undermined by rising oil output in the US.
- There are also concerns about the liquefied natural gas (LNG) market. Qatar is the world's biggest supplier of LNG. Although Saudi Arabia, the UAE, Egypt and Bahrain have all closed transport links with Qatar, the state can still ship out both LNG and oil to other countries by sea.

Effect on India

Indians are the largest expatriate community in Qatar, Saudi Arabia and the UAE. Worry is the trouble Indians would in terms of their travel.

India also has robust defence and energy ties with Qatar. India is the third largest export destination for Qatar (behind Japan and South Korea) and ranks at 10th position for Qatar's imports. It is the largest supplier of LNG to India

India, Qatar can potentially enjoy a win-win situation with regard to trade, investment. But the crisis involving Saudi poses a complex diplomatic challenge

As Qatari employees are forced out of these countries, and reciprocal action takes place in Qatar, job openings could emerge in Qatar. Indians could fill the jobs vacated

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MAJOR DEFENCE PARTNER STATUS

The U.S. recognises India as a major defence partner partly out of respect for New Delhi's indispensable role in maintaining stability in the Indian Ocean, according to the US defense secretary.

When was India accorded this status?

The US recognised India as a “major defence partner” in 2016

Meaning of “major defence partner”

The US will continue to work toward facilitating technology sharing with India to a level commensurate with that of its closest allies and partners.

INTERNATIONAL AFFAIRS

BRICS MEDIA

China's state-run news agency Xinhua announced \$1 million fund to institutionalise media cooperation among the BRICS countries including awards for journalists from the five member states.

The decision was taken at the BRICS media forum. The theme was Deepening media cooperation among BRICS countries

BRICS:

BRICS brings together five major emerging economies, comprising 43% of the world population, having 30% of the world GDP and 17% share in the world trade.

- The 1st BRIC Summit was held in Yekaterinburg, Russia, in 2009.
- It was agreed to expand BRIC into BRICS with the inclusion of South Africa at the BRIC in New York in 2010. Accordingly, South Africa attended the 3rd BRICS Summit in Sanya, China in April 2011.

Objective

The plan is to promote “balanced reporting”— which would serve as an alternative media narrative, which does not take the cue from Washington or London.

It also focuses on joint development of BRICS digital media, financial information services and promoting people- to-people contacts.

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SAUDI-US-IRAN

Ties between the US and Saudi go back to the end of the Second World War and the relationship has evolved over the decades. The change of guard in the US (from Obama to Trump), has brought about a sea change in the way the US is going to deal with the middle east.

Before Trump

Saudi Arabia, the world's biggest oil exporter, was looking for an opportunity to again claim its space in the Islamic world but it was falling flat whether it was Pakistan, Turkey or Egypt.

So Riyadh was eager to reset relations with the new US administration after feeling isolated by the Obama administration, who crafted the 2015 nuclear deal with their Shiite rival Iran.

Present outlook

The kingdom is embarking on plans to diversify its economy away from oil and better ties with US will provide more opportunities as also to reclaim its regional power status.

- Defence cooperation deals have been signed by the two countries for trade in arms
- The deals would bring hundreds of thousands of jobs to the US.

Change in rhetoric:

The US has now made it clear that it would not prescribe to others regarding the form of government or how they treat their people i.e human rights violations

Iran-US: A U-turn

The US's new administration has been very critical of the nuclear deal Iran reached with the US and five other world powers in 2015. This criticism pleases both Saudi Arabia and Israel.

The message is that the US will re-endorse Saudi Arabia, along with Israel, as a key pillar of America's West Asia policy and ignore criticism of Riyadh's human rights violations at home and interventions abroad.

The US has also urged that the countries in the Middle East should create a coalition to fight terrorism emanating from Iran and also hinting a regime change.

What it means for India?

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Sanctions on Iran by U.S. could be detrimental for India. During the earlier sanctions by the US in 2014, China took the advantage by carrying on the business with Iran while India's trade with Iran went a downhill.

US is giving fighting terror a very religious context. This reference is certainly not helpful particularly for a multi-religious country like India.

Overlooking the Saudi Pakistani role as far as the ideology of terror is concerned and the sectarian dimension being added is disturbing turn of events for India.

Conclusion

The major cause of instability in West Asia is not just Iran, but the cold war between Iran and Saudi Arabia. If US wants to be peacemaker and make West Asia a more secure place, the US has to reach out to both sides and appeal to them to bring down the tensions that have already spilled into Syria, Lebanon, Yemen and Iraq.

BIMSTEC'S 20TH ANNIVERSARY

Celebration at: Dhaka

BIMSTEC or the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation is a regional organisation which comprises of seven member states which lie near the Bay of Bengal.

- This sub-regional organisation was started in 1997 through a Bangkok Declaration.
- Member countries: India, Nepal, Bangladesh, Bhutan, and Sri Lanka; and 2 come from Southeast Asia- Myanmar and Thailand.
- Headquarters: Dhaka, Bangladesh.

Objectives

- Unlike many other regional groupings, BIMSTEC is a sector-driven cooperative organization: agriculture, public health, poverty alleviation, counter-terrorism, environment, culture, people to people contact and climate change.



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- Among the 14 priority areas in BIMSTEC (in each of which a Member Country takes lead), India is the Lead Country for Counter-Terrorism and Transnational Crime; Transport & Communication; Tourism; and Environment and Disaster Management. Sri Lanka is the lead country for Technology.

The whole region which constitutes the BIMSTEC is home to over 1.5 billion people. These countries have a combined GDP of \$2.7 trillion.

INDIA'S POOR KIDS

Report by: Oxford Poverty and Human Development Initiative (OPHI), an economic research centre at the Oxford University and the study is based on a survey conducted among 103 countries.

What it says? About 31% of the world's "multidimensionally poor" children live in India, followed by Nigeria (8%), Ethiopia (7%) and Pakistan (6%).

A multidimensionally poor child

Lacks at least in one-third of ten indicators, grouped into three dimensions of poverty: health, education and standard of living.

- The health dimension comprises indicators such as nutrition, child mortality
- Education.
- Standard of living- access to cooking fuel, improved sanitation, safe drinking water, electricity, flooring, and asset ownership.

- In terms of proportion of the total population, India stood 37th among 103 countries.
- In terms of absolute numbers, India accounts for both the highest and a staggering number of multi-dimensionally poor people.
- Globally, nearly 50% of the children in 103 countries were multidimensionally poor.
- In terms of intensity of poverty, Sub-Saharan Africa was followed by the region described as the Arab States (53%). South Asia occupied the third spot, with children deprived in 49% of the MPI indicators.

This is a wake-up call to the international community, which has adopted the global Sustainable Development Goals, of which Goal 1, the eradication of poverty in all its forms and dimensions, to devise strategies in this regard.

2ND MISSION INNOVATION AND 8TH CLEAN ENERGY MINISTERIALS

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World Leaders gathered in **Beijing** for the two ministerials. The Indian delegation was led by Minister for Science & Technology, Earth Sciences and Environment, Forest & Climate Change.

Mission Innovation:

Initiation: Announced in by the leaders of 20 countries that have a shared desire to accelerate global clean energy innovation during Conference Of Parties 21(COP21) in Paris.

Objectives: It aims to accelerate public and private global clean energy innovation, as also encourages the participating countries to double their respective clean energy research and development investment.

India is Founding Member of the Steering Committee

Clean Energy Ministerial:

Initiation: By USA in 2010. Presently it has 23 members.

Objectives: It is a high-level global forum to share lessons learnt and best practices, and to encourage the transition to a global clean energy economy.

- Initiatives are based on areas of common interest among participating Governments and other stakeholders.

GENERAL STUDIES-3

INDIAN ECONOMY

GDP DATA SHOCK

Sub-par growth and overachievement in meeting inflation targets may put the Reserve Bank under pressure to deliver a more than normal repo rate cut

The economy looked to be on the mend, with real GVA growth registering steady improvement from 5.4% in 2012-13 and 6.2% in 2013-14 to 6.9% in 2014-15 and 7.9% in 2015-16.

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However, the CSO's latest estimates reveals the Indian economy to have recorded a sharp slide in gross value added (GVA, which is basically GDP net of taxes on goods and services) growth from 7.9% in 2015-16 to 6.6% in 2016-17. Moreover, the year-on-year growth rate has fallen in successive quarters in 2016-17.

With agriculture rebounding on the back of a decent monsoon (after two consecutive drought years) and exports, too, posting increase (after two successive years of decline), the 2016-17 numbers should, if at all, have been better.

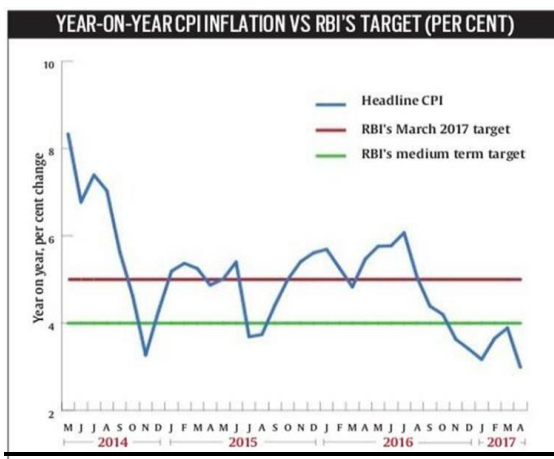
Reasons behind the dip

The last quarter's big dip can be put down to demonetisation

There had been deceleration preceding the November 8 decision to invalidate all existing Rs 500 and Rs 1,000 currency notes. Demonetisation merely exacerbated it. There are 4 other reasons to explain this

1. The unresolved non-performing assets problem of banks which hampered credit growth .
2. One-time stimulus to private consumption from softening global oil prices petering out by around mid-2016.
3. Gross fixed capital formation (GFCF) grew by only 2.4% last fiscal. GFCF growth has been lagging overall GVA/GDP growth, when it ought to be more, as was the case during the economic boom period from 2003-04 to 2011-12.
4. Even as the private sector isn't investing, neither the Centre nor states appear in a position to take up the slack.

Bi-monthly review: Rate cut required. But RBI plays it safe



The Monetary Policy Committee could not afford to ignore the latest CSO "shock" data. And they were certainly under pressure to slash the RBI's policy interest rates.

However, the Reserve Bank of India, kept the short-term lending rate, called repo rate, unchanged at 6.25 per cent after its second

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bimonthly review of this financial year. It cut Statutory liquidity ratio (SLR) by 50 basis points to 20 per cent.

This decision of status quo was based on awaiting for more clarity on the monsoon outcome, impact of GST rollout and some of the key economic indicators.

In its February policy review, the central bank had changed its stance to 'neutral' from 'accommodative' in view of the uncertainty over sticky core inflation.

NEW SAFE HARBOUR REGIME

Notified by: Central Board of Direct Taxes (CBDT)

Objectives

- To reduce transfer pricing disputes
- To provide certainty to taxpayers
- To align safe harbour margins with industry standards
- To enlarge the scope of safe harbour transactions

A **transfer price** is the **price** at which divisions of a company transact with each other, such as the trade of supplies or labor between departments. **Transfer prices** are used when individual entities of a larger multi-entity firm are treated and measured as separately run entities.

The safe harbour regime is optional to taxpayers.

CBDT

It is a statutory authority functioning under the Central Board of Revenue Act, 1963.

- The officials of the Board in their ex-officio capacity also function as a Division of the Ministry of Finance dealing with matters relating to levy and collection of direct taxes.
- It is a part of the Department of Revenue in the Ministry of Finance, Government of India.
- It provides essential inputs for policy and planning of direct taxes in India and is also responsible for administration of the direct tax laws through Income Tax Department.
- It is India's official Financial Action Task Force unit.

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- Initially the Board was in charge of both direct and indirect taxes. However, when the administration of taxes became too unwieldy for one Board to handle, the Board was split up into two, namely the Central Board of Direct Taxes and Central Board of Excise and Customs in 1964.

INDUSTRY, INFRASTRUCTURE AND INVESTMENT

DIGITAL EXPERIENCE WITH DIGIYATRA

Initiative by: Industry-led initiative co-ordinated by the Ministry of Civil Aviation

Aim: To bring together entire industry to develop a digital ecosystem that will deliver Indian customers a seamless, consistent and paperless service experience at every touch point of their journey.

4 pillars of the Digiyatra platform

1. Connected Passengers
2. Connected Airports
3. Connected Flying
4. Connected Systems

Significance

- Efficient planning of trips with the knowledge of price trends during ticket booking
- NO paper work to ensure faster airport entry and automated check-ins
- Advanced biometric security solutions to enable swifter walk through at security checks
- Receive relevant information pertaining to various facilities, protocols, airline timings, queue lengths at airports etc.,
- Real time notifications about congestion and delays to have greater visibility on the next step of journey
- Convenient navigation through the airport using digital guidance systems
- Can stay connected during flights
- Can submit grievances, share experiences and provide feedback.

INVESTMENT PACT ENVIRONMENT NEEDS SOME REFURBISHING

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Why review and reforms are needed?

The International Investment Agreement system currently has a pro-investor bias providing protection only to capital and not labor or other stake holders who have linkages with investment.

Also, the current ISDS mechanism is ad hoc, unpredictable and often arbitrary, proving expensive for the host countries.

Backgrounder:

The pitch for reforming the IIA system assumes significance as India, along with few other countries, had opposed efforts by nations including China, Brazil, Australia and South Korea to begin discussions on a proposal for an investment facilitation agreement at the World Trade Organisation (WTO)-level that seeks to incorporate provisions including the controversial ISDS mechanism.

SCIENCE AND TECHNOLOGY

INDIA'S HEAVIEST ROCKET LAUNCHED

Rocket: Geosynchronous Satellite Launch Vehicle-Mark III (GSLV-Mk III) D1

Satellite on board: GSAT-19 communications satellite, heaviest to be lifted by an Indian rocket till date

Details

It is a three-stage vehicle with indigenous cryogenic upper stage engine designed to carry heavier communication satellites into the Geosynchronous Transfer Orbit (GTO).

About IIA

An International Investment Agreement (IIA) is a kind of treaty between countries that addresses issues related to cross-border investments for their protection, promotion and liberalization. Almost all IIAs cover foreign direct investment (FDI) and portfolio investment, but some exclude the latter.

Salient features

- They set specific standards for treatment of investments in host country and provide procedures for dispute resolution.
- Bilateral Investment Treaties (BITs), Preferential Trade and Investment Agreements (PTIAs), International Taxation Agreements and Double Taxation Treaties (DTTs) are all considered as IIAs.
- They provide security and certainty under international law for those who set up a business in other countries. The risk reduction engenders companies and individuals to invest in the country that concluded the IIA.

GSAT 19:

The GSAT-19, with a lifespan of 10 years, is a multi-beam satellite with a Geostationary Radiation Spectrometer (GRASP) payload to monitor and study the nature of the charged particles and influence of space radiation on spacecraft and electronic components.

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PSLV	GSLV
POLAR SATELLITE LAUNCH VEHICLE	GEOSYNCHRONOUS SATELLITE LAUNCH VEHICLE
Height: 44 m	Height: 49.13 m
Diameter: 2.8 m	Diameter: 2.8 m
Number of stages: 4	Number of stages: 3
Lift Off Mass: 320 tonnes (XL)	Lift Off Mass: 414.75 tonnes
First Flight: September 20, 1993	First Flight: April 18, 2001
<ul style="list-style-type: none"> PSLV delivers 'earth-observation' or 'remote-sensing' satellites of up to 1,750 kg of payload to Sun-Synchronous Polar Orbits of 600-900 km altitude The remote sensing satellites orbit the earth from pole-to-pole PSLV is a 4-staged launch vehicle with 1st & 3rd stage using solid rocket motors and 2nd & 4th stages using liquid rocket engines 	<ul style="list-style-type: none"> GSLV delivers the communication satellites to the highly elliptical (typically 250 x 36000 Km) Geosynchronous Transfer Orbit (GTO) The satellites in these orbits appear to remain permanently fixed in same position in the sky GSLV is a 3-staged vehicle with 1st stage using solid rocket motor, 2nd stage using Liquid fuel and the 3rd stage using cryogenic engine

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Significance:

- India can get a greater share of the multi-billion dollar global space market and reduce dependency on international launching vehicles.
- Enable ISRO to launch heavier communications spacecraft to geostationary orbits of 36,000 km.

E-CIGARETTES

The import, distribution and sale of e-cigarettes has been growing in India's unregulated markets for a decade, despite several studies pointing towards the harmful effects they pose.

What exactly is an e-cigarette?

An e-cigarette or Electronic Nicotine Delivery System (ENDS) is a battery-operated smoking device that creates an aerosol by heating a mix of liquid nicotine, propylene glycol, water, glycerine and flavour, which, when inhaled, gives the feel of smoking a real cigarette.

Manufacturers claim the aerosol is just water vapour, but tests have detected the presence of toxic chemicals in it. Smoking an e-cigarette is referred to as "vaping".

Specific concerns

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- E-cigarette vapour, although less toxic than smoke from normal cigarettes, is harmful for children, adolescents, and for foetuses in pregnant women.
- Studies claim that nicotine poisoning has caused deaths in few cases and also recorded harmful effects such as respiratory ailments and gastrointestinal problems.
- It was claimed the device would help people quit smoking. But studies show it has, in fact, encouraged more people to start smoking because it's marketed as a product with no harmful effects
- e-cigarettes are acting as the gateway for adolescents to start smoking.

Market for e-cigarettes in India

Between 30% and 50% of the Indian e-cigarette market is online, and China is the biggest supplier. India does not regulate e-cigarette sales, making it easy for children and adolescents to buy vapes online.

Efforts so far

The Union Health Ministry has formed a working group to assess the effect of e-cigarettes on the Indian population, and whether it presents a need for prohibition.

Punjab has declared e-cigarettes illegal, saying they contained liquid nicotine, which is currently an unregistered drug in India. Nicotine gum and lozenges are regulated under the Drugs and Cosmetics Act.

The Act states that any change in the form of the same substance will establish it as a new drug. That makes liquid nicotine, which is used in e-cigarettes, technically a new drug, requiring DCGI approval before it can be launched in Indian markets

What is the way forward for authorities in India now?

- There should be “strong means to stop illegal import of ENDS”, record the minutes of the meeting. Nothing much happened, however.
- Drug Controller General of India has to take steps to regulate the business of e-cigarettes

PRITHVI-II

Prithvi-II missile was successfully test-fired in Odisha.

Details

3rd June to 10th June (WEEK 2)

India's first indigenously-built ballistic missile. It is one of the five missiles being developed under the country's Integrated Guided Missile Development Programme.

- Nuclear-capable surface-to-surface missile
- Can carry warheads weighing 500 kg to 1,000 kg.
- Strike range of 350 km
- Powered by twin-engines which use liquid propulsion.
- Has advanced inertial guidance system with manoeuvring trajectory to hit its target.

NANOPARTICLES TO TREAT FUNGAL KERATITIS

Invented by: Hyderabad-based CSIR-Centre for Cellular and Molecular Biology (CSIR-CCMB)

Why treating keratitis was problematic?

Treating keratitis infection is currently a challenge because it is difficult to maintain a therapeutic dose at the corneal surface for long periods as blinking and tear formation washes off the drug.

To address this challenge, scientists have developed protein-based nanoparticles that encapsulate the drug.

What is Keratitis?

It is the inflammation of the eye, which starts with redness and itching and might eventually lead to blindness.

- Can be caused by both bacteria and fungi. Fungi attach themselves to the cornea and release enzymes that break down the corneal proteins for their nutritional requirements.

GRAVITATIONAL WAVE

MERGER

Why in news?

The Laser Interferometer Gravitational-wave Observatory (LIGO) detectors in the U.S. have detected the third merger of two black holes.

About the discovery

What are brown dwarfs?

Brown dwarfs are objects which have a size between that of a giant planet like Jupiter and that of a small star. In fact, most astronomers would classify any object with between 15 times the mass of Jupiter and 75 times the mass of Jupiter to be a brown

dwarf. Given that range of masses, the object would not have been able to sustain the fusion of hydrogen like a regular star; thus, many scientists have dubbed brown dwarfs as "failed stars".

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- It is named GW170104.
- It was only after the first detection of gravitational waves by LIGO in 2015 (GW150914) it was not known that such massive black holes could exist.
- This detection reveals not just a black-hole merger but also the alignment of the spins of the black holes. This can shed light on the way the black holes might have formed.
- This supports the theory which says that black holes form independently in a star cluster, then sink to the centre of the cluster and eventually merge.
- This signal also supports Einstein's General Theory of Relativity. According to this theory, gravitational waves, unlike light waves, will not disperse as they travel through space.

Gravitational Waves

Gravitational waves are the ripples in the pond of spacetime. The gravity of large objects warps space and time, or "spacetime", the way a bowling ball changes the shape of a trampoline as it rolls around on it. Smaller objects will move differently as a result – like marbles spiraling toward a bowling-ball-sized dent in a trampoline instead of sitting on a flat surface.

Significance

- Useful for studying black holes (the existence of which was first implied by Einstein's theory) and other dark objects, because they'll assist scientists to search for these dark objects even when objects don't emit actual light.
- Mapping the presence of black holes and frequency of their mergers could be done.
- Since they pass through matter without interacting with it, gravitational waves would come to Earth carrying undistorted information about their origin.
- They could also improve methods for estimating the distances to other galaxies.

Difficulty in detection

The effects of these waves are too tiny to be detected. Even when detected, scientists struggle to remove enough background noise to confirm them.

COLD NEW WORLD

3rd June to 10th June (WEEK 2)

A brown dwarf over which is 100 light years away from the Sun has been discovered outside our solar system. These sightings were made by the Backyard Worlds volunteers.

Backyard Worlds project

It lets anyone with a computer and an Internet connection flip through images taken by NASA's Wide Field Infrared Survey Explorer (WISE) spacecraft.

- If an object is close enough to Earth, it will appear to “jump” when multiple images taken of the same spot in the sky a few years apart are compared.
- The goal for Backyard Worlds volunteers is to flag the moving objects they see in these digital flipbooks for further investigation by the science team.

WHO'S ANTIBIOTICS PROTOCOL REVISION

To curb antibiotic resistance, the World Health Organization (WHO) has divided the drugs into three categories — access, watch and reserve. This revision of antibiotics list is the most extensive one in the 40-year history of the essential medicines list (EML).

1. Access category: Commonly used antibiotics. Will be available at all times as treatment for a wide range of common infections.
2. Watch category: Slightly more potent than the first. Recommended as first or second choice treatment. Prescription of these drugs should be dramatically reduced to avoid further development of resistance.
3. Reserve category: Use only as a “last resort” Eg: colistin and some cephalosporins. Use only in the most severe circumstances when the ailments are due to multidrug-resistant bacteria.

Significance

- Helps health system planners and prescribers to ensure that people access to and they get the right antibiotics.

THAAD MISSILE

South Korea has rejected further deployment of a controversial US missile defence system until an environmental impact assessment is completed.

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Details of THAAD

The Terminal High Altitude Area Defense is a missile defence system designed to intercept and destroy short and medium-range ballistic missiles. THAAD cannot be used as a form of attack against an enemy. It uses powerful radar to track and destroy missiles before they are launched.

HOTTEST PLANET

Name: KELT-9b, a Jupiter like planet

Details

- It is the hottest planet ever discovered
- It orbits a massive star KELT-9 every day and a half
- Located 650 light years away
- the planet is hotter than most stars but cooler than sun
- The ultraviolet radiation from the star it orbits is so brutal that the planet may be evaporating away under the intense glare, producing a glowing gas tail

The planet is so hot that molecules such as water, carbon dioxide and methane cannot form there.

ENVIRONMENT

GANGA AND YAMUNA ARE LIVING PERSONS

Why in news?

Uttarakhand High Court declared that the rivers Ganga and Yamuna would be legally treated as “living people,” and would enjoy “all corresponding rights, duties and liabilities of a living person.”

Backgrounder

Earlier, for the first time in the world, a river in New Zealand, the Whanganui, was granted legal rights as a human being. It was a culmination of over a decade-

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long effort by the local Maori tribe. The reason was that the river was considered an ancestor

Reasons behind the HC decision

While adjudicating on a land acquisition case, the HC observed that apart from a spiritual connect that Hindus share with the two rivers, the Ganga and Yamuna are central to the existence of half of the Indian population, since time immemorial.

What does this status mean?

For judicial purposes, living persons are “juristic persons” — any subject matter other than a human being — to which the law attributes personality for good and sufficient reasons. In other words, “for a bigger thrust of socio-political-scientific development, evolution of a fictional personality to be a juristic person becomes inevitable.”

Articles cited

The bench cited Articles 48 (A) — the state’s responsibility with respect to environment protection — and Article 51 A (g) – the fundamental duties of every citizen to protect and improve the natural environment — as grounds to pass such a judgment.

A bench constituted

The bench appointed three custodians who are government authorities: the chief secretary of the state of Uttarakhand, the advocate general of the state of Uttarakhand and the director of the National Mission for Clean Ganga (NMCG).

These three will serve as “the human face to protect, conserve and preserve the rivers and their tributaries” and the advocate general will represent all legal proceedings to protect the interest of the rivers.

WORLD ENVIRONMENT DAY

Date: June 5th every year

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The World Environment Day is a part of the United Nations Environmental Program (UNEP) for creating awareness and action worldwide for the environment.

- The first World Environment Day was celebrated in 1973.
- The theme for 2017: 'Connecting People to Nature'.
- Every World Environment Day has a different global host country, where the official celebrations take place. This year it is Canada.

US TO JETTISON PARIS DEAL

President Donald Trump announced that the United States will be withdrawing from the Paris climate agreement to protect American and its citizens. The US is the second-largest emitter of greenhouse gases in the world, behind China.

When will US formally quit?

The withdrawal process takes four years

Who else are out?

Just two other countries — Syria and Nicaragua — haven't signed the nonbinding agreement.

Signed: 2015

Number of parties: 195 countries

Details and targets

- Global goal of keeping global average temperatures from rising beyond 2°C (compared to temperatures pre-Industrial Revolution) by the end of the century.
- A nonbinding agreement for countries to reach peak greenhouse gas emissions "as soon as possible."
- A framework for countries to become more aggressive in reaching those goals.
- In 2020, delegates are supposed to reconvene and provide updates about their emission pledges, and report on how they're becoming more aggressive on accomplishing the 2 degree goal.

Is climate change real?

The temperature of Earth's air and the quantity of heat trapped in its oceans continue to grow, with 2016 declared the hottest year on record.

- Climate change could lead to political instability, increased societal tensions and could place new burdens on economies and governments. Large numbers of people are likely be displaced due to famine and drought.
- A NASA-funded study said that global industrial civilisation is headed for a collapse in the coming decades, blaming unsustainable resource use and increasing wealth inequality.

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- It asks richer countries to help poorer countries in terms of capital to invest in green technologies.

What is US's problem?

Trump says the Paris deal unfairly puts constraints on the United States coal industry, and allows some countries to continue to pollute at a greater rate.

Possible Repercussions

- The US departure represents a willful abdication of America's leadership role in the world. This could lead to a domino effect, where other countries follow suit.
- The decision means the U.S. will miss out on some the \$1.4 trillion global business opportunity that the global low-carbon economy could offer.

ORANG RESERVE TOPS IN DENSITY

Orang tiger reserve in Assam has the smallest core area but has emerged as a host to 28 tigers, thus having the highest density nationally.

Survey: Phase IV of the all-India tiger estimation programme of the National Tiger Conservation Authority (NTCA).

Orang tiger reserve:

Notified in 2016, Orang Tiger Reserve is the 49th in the country. It has the smallest core. It is also known as the mini Kaziranga National Park (IUCN site) since the two parks have a similar landscape made up of marshes, streams and grasslands.

Location: North bank of the Brahmaputra River, Assam

Other fauna: It is the only stronghold of Great Indian one-horned rhinoceros on the north bank, pigmy hog, elephants, wild buffalo and tigers.

NTCA:

A statutory body under the Ministry of Environment, Forests and Climate Change

- Constituted under the Wildlife (Protection) Act, 1972
- It aims to strengthen tiger conservation by retaining an oversight through advisories/normative guidelines, based on appraisal of tiger status, ongoing conservation initiatives and recommendations of specially constituted Committees.

499 NEW SPECIES DISCOVERED

3rd June to 10th June (WEEK 2)

Latest reports by ZSI and BSI, claim that 499 new species have been discovered in last one year in the country.

- Of these, 313 species are animal species and 186 are plants species.
- Most of the new species were from the four biological hotspots of the country — the Himalayas, the northeast, the Western Ghats and the Andaman and Nicobar Islands.
- For the first time, the number of animal species in the country, including protozoa, has crossed one lakh
- India is one of the 17 megadiversity countries

SECURITY CHALLENGES

BACK TO 'NO WAR, NO PEACE'

The hotline between the Indian and Pakistani Director Generals of Military Operations gets activated regularly, but out-of-turn calls only occur when there are incidents along the Line of Control (LoC).

In the recent months, there has been heavy exchange of fire on the LoC. In a departure from the past, the Indian Army has officially said it is proactively targeting Pakistani posts on the LoC. Earlier, it used to assert that its firing was only in response to Pakistani violations of the ceasefire.

What is Line of Control?

The LoC came into existence 45 years ago, following the Shimla Agreement, 1972. Prior to that, it was called the Ceasefire Line, which had been delineated when hostilities ceased in the 1948 Kashmir War.

Activation of LoC

Until the 1999 Kargil War, the Pakistanis never questioned the legitimacy of the LoC. Prior to the Kashmir unrest of 1989-90, there were infrequent clashes, which were invariably discussed and resolved in flag meetings between the two sides.

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The situation worsened after 1990, when a large number of Kashmiri youth began moving to Pakistan Occupied Kashmir for training, and Pakistani militants began infiltrating from across the LoC. The LoC became active with heavy exchanges of fire.

The Pakistan Army fired to provide cover to infiltrating groups of militants. The Indians responded with equal vigour, both to avenge the Pakistani firing as well as to prevent easy movement of militants.

On both sides, bunkers were constructed, destroyed and reconstructed in an unending cycle. Soldiers on the frontline as well as those deployed a few kilometres behind the LoC, bore the brunt. Civilians in villages close to the LoC had no protective bunkers, and all economic activity came to a halt.

2003 ceasefire

In 2003 — when Eid and Diwali fell on the same day — ceasefire was declared, which brought solace to the locals as well as served a larger strategic purpose: it allowed India to erect fencing on the LoC.

In the meantime, counterinsurgency operations achieved results in the Kashmir Valley. Also, the reduced influx of militants brought militancy to an all-time low by 2009.

Reactivation

The relative calm along the LoC for a dozen years was broken in 2015, but the quantum and intensity of firing by both sides remained low. But after last year's Uri terror attack, and India's surgical strikes, the frequency, intensity and volume of ceasefire violations have reached pre-2003 levels.

By being proactive on the LoC, the Army seeks to not only prevent infiltration, but to also counter Pakistan's role in Kashmir.

India's proactive action on the LoC does address the domestic clamour for punitive action against Pakistan. The challenge, however, is to control the aggression in a manner so that Pakistan does not escalate the conflict.

Regression

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With channels of communication between India and Pakistan seemingly shut, and the situation in Kashmir showing no signs of improvement, the situation will continue to be what was described before 2003 as one of “No War No Peace” — the grey zone between war and peace.