



C.A Dated On 18-07-2018

General Studies- 1

Indian Meteorological Department

Why in News?

The Government is taking various steps to further improve the accuracy of predictions made by the Indian Meteorological Department (IMD).

Forecast Performance:

The absolute error of the IMD's monsoon forecast for seasonal rainfall has shown a significant decrease compared to previous years after the implementation of the new Statistical Ensemble Forecasting System in 2007.

The IMD was able to predict the deficient monsoon rainfall experienced during 2014 and 2015 accurately, as various measures have been taken to upgrade the IMD forecast system to "further improve prediction accuracy".

Under the Monsoon Mission, a new dynamical prediction system for long range forecasting of Indian monsoon has been implemented by the IMD.

The IMD is working to improve the skill of this dynamical prediction system in collaboration with Indian and foreign academic institutions.

General Studies- 2

Committee set up to synergise NCC and NSS

Government has decided to set up a committee under the Chairmanship of Shri Anil Swarup, former Secretary, School Education, with suitable representations from NCC, M/o Youth Affairs and Ministry of HRD to suggest measures to strengthen National Cadet Corps (NCC) and National Service Scheme (NSS).

Mandate of Committee:



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The Committee will deal with on issues like expansion, strengthening training infrastructure, rationalizing resources, reducing manpower deficiency affecting NCC and NSS.

The Committee will also submit recommend for building synergies between these two institutions viz. NCC and NSS and further strengthen them for empowering the youth.

About NCC:

At present, there are 13.5 lakh cadets in NCC in the age group of 12 to 26 years with pan India presence in about 703 out of 716 districts.

There are a large number of educational institutions in the country including as much as 8600 on waitlist in which NCC is yet to be extended.

There is also an existing shortage in the NCC manpower across the categories ranging from 5% to 36%.

The NCC has an annual budget allocation of about Rs.2200 crore with Central Government share of about Rs.1600 crore.

Challenges:

NCC, with this meagre resources, is not able to expand itself and to cover all the districts of the country and cater to the needs of waitlisted educational institutions.

NSS has been playing a very active role in the service of the nation, particularly in the Government's Programme such as Swachh Bharat Mission.

Child marriages

Why in News?

The Women and Child Development (WCD) Ministry is set to move the cabinet to make all child marriages invalid.

The proposal of the ministry, if approved, would amend the law that allows child marriages to continue, despite an [October 2017 Supreme Court ruling](#) that



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“sexual intercourse with a minor wife amounts to rape, as under no circumstance can a child below 18 years give consent, express or implied, for sexual intercourse”.

Present Scenario:

Currently, child marriages are valid in India, but can be annulled if a case is filed in a district court by either of the two contracting parties within two years of becoming an adult, or through a guardian in case of minors.

Proposed Amendment:

The ministry seeks to amend section 3 of the Prohibition of Child Marriage Act, under which a child marriage is only voidable at the option of the contracting parties.

The legal age for marriage in India is 18 for a woman and 21 for a man.

According to a study based on Census 2011, there are 2.3 crore child brides in the country.

Statistics of Child Marriage:

The National Family Health Survey (NFHS) 2015-16 also showed that 26.8 per cent women were married off before they turned 18.

According to the NFHS 2015-16, nearly eight per cent girls in the 15-19 age group had already become mothers or pregnant at the time of the survey.

Issues Associated:

The World Health Organisation, in a report dealing with the issue of child brides, found that though 11 per cent of the births worldwide are among adolescents, they account for 23 per cent of the overall burden of diseases.

Therefore, a child bride is more than doubly prone to health problems than a grown up woman,” the apex court had said last year, expressing dismay over the alarming number of child brides in the country.

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Petcoke

Why in News?

The Petroleum Ministry has told the Supreme Court that it is in favour of a ban on the import of petroleum coke. However, the environment ministry is yet to take the final call and will consult with all stakeholders before arriving upon a decision.

Background:

The apex Court had, in December last year, refused to lift the ban on the use of pet coke and furnace oil in many industrial units in Rajasthan, Uttar Pradesh and Haryana keeping in view the increasing level of pollution. It had also refused to give any relief to industrial units like the National Thermal Power Corporation Limited (NTPC) and Hindalco.

What is petcoke?

Petroleum coke, the bottom-of-the-barrel leftover from refining Canadian tar sands crude and other heavy oils, is cheaper and burns hotter than coal. But it also contains more planet-warming carbon and far more heart- and lung-damaging sulphur.

Concerns:

The petcoke burned in factories and plants is contributing to dangerously filthy air in India, which already has many of the world's most polluted cities. It contains 17 times more sulfur than the limit set for coal, and a staggering 1,380 times more than for diesel.

Need for regulation:



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The country has seen a dramatic increase in sulfur dioxide and nitrogen dioxide emissions in recent years, concentrated in areas where power plants and steel factories are clustered. Those pollutants are converted into microscopic particles that lodge deep in the lungs and enter the bloodstream, causing breathing and heart problems.

Petcoke, critics say, is making a bad situation worse across India. About 1.1 million Indians die prematurely as a result of outdoor air pollution every year, according to the Health Effects Institute, a nonprofit funded by the U.S. Environmental Protection Agency and industry.

Big Bang Theory

Why in News?

On Tuesday, Google celebrated the 124th birth anniversary of Belgian astronomer Georges Lemaitre with a doodle.

Lemaitre is credited with what is popularly known as the Big Bang Theory, which says that the universe originated from a single atom, which he referred to as the Cosmic Egg.

He is also believed to be the first to have come up with the theory that the universe is expanding.

The doodle website depicts Lemaitre "within the constantly expanding universe that he first envisioned, surrounded by galaxies expanding outward just as he said they would."

What is the Theory?



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The **Big Bang** theory is the prevailing cosmological model for the universe from the earliest known periods through its subsequent large-scale evolution.

The model describes how the universe expanded from a very high-density and high-temperature state, and offers a comprehensive explanation for a broad range of phenomena, including the abundance of light elements, the cosmic microwave background (CMB), large scale structure and Hubble's law.