



Daily Current Affairs Dated On 12-April-2019

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Electoral Bond:

Why in News?

Refusing the government's advice to steer clear of the electoral bonds scheme of political funding, the [Supreme Court](#) on Friday passed interim directions, directing political parties to provide full information on each and every political donor and contributions made through electoral bonds in sealed cover to the Election Commission of India (ECI).

Details:

- A Bench led by Chief Justice of India Ranjan Gogoi said the issue of electoral bonds and their lack of transparency was a "weighty" one and required in-depth hearing.
- The court ordered the political parties to start providing forthwith the Election Commission of India (ECI) with details of each donor, every electoral bond through which contribution was received and the amount received on each bond till date.
- The parties have been given time to provide all the details before May 30. The information is to be provided to the ECI in sealed covers.
- The poll body would keep them secure.
- The government's position was starkly in contrast to the stand of the ECI.

ECI's Stand:

- The ECI had submitted to the apex court that electoral bonds have legalised anonymity of political donors and the parties receiving contributions.
- The ECI had said the right to vote meant the right to make an informed choice. The Commission said knowing the candidate was only "half the exercise."
- The voters should also know the source of funding of political parties who prop up these candidates.



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About Electoral Bonds:

- The government had notified the Electoral Bond Scheme 2018 on January 2, 2018.
- As per provisions of the scheme, electoral bonds may be purchased by a person, who is a citizen of India or incorporated or established in India.
- A person being an individual can buy electoral bonds, either singly or jointly with other individuals.
- Only political parties registered under Section 29A of the Representation of the People Act, 1951 and which secured not less than one per cent of

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Bacterial Degradation:

Why in News?

Using a unique strain of bacterium isolated from soil contaminated with petroleum products, IIT Bombay researchers can selectively remove from the environment toxic, aromatic pollutants such as benzoate (sodium benzoate is used as a food preservative), benzyl alcohol and naphthalene, to name a few.

What makes the bacterial strain (*Pseudomonas putida CSV86*) unique is its preference for aromatic compounds and organic acid as a food source even when glucose is available. The strain can degrade aromatics and organic acids simultaneously.

Peculiar food choice

- Since breaking down aromatic compounds is difficult, bacteria generally prefer simple carbon sources such as glucose for obtaining energy.



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- Even the bacteria that are known to degrade aromatic compounds tend to first prefer glucose and other simple carbon sources for energy and feed on aromatic compounds only when glucose gets exhausted.
- However, this bacteria strain displays a completely different order of food choices — it first feeds on aromatic compounds and organic acids and only when this gets exhausted does it start feeding on glucose.
- This is the first time a bacteria strain that preferentially utilises aromatic compounds even in the presence of glucose has been ever reported.

Significance:

- The bacterial strain is a very good candidate for bioremediation or waste-water treatment.
- We can increase the metabolic diversity and capacity by genetically engineering the strain.
- The team hopes to engineer the strain so it can be directly applied to the soil to preferentially degrade aromatic pesticides.
- The team is now trying to understand the molecular mechanisms and regulatory components involved in preferential degradation of aromatics over glucose using various molecular biology tools.

Black Hole:

Why in News?

A language professor has given a Hawaiian name — Powehi — to the [black hole depicted](#) in an image produced in a landmark experiment.

What does it mean?

- **The word apparently means “the adorned fathomless dark creation” or “embellished dark source of unending creation”.**



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- The newspaper reports the word meaning “the adorned fathomless dark creation” or “embellished dark source of unending creation” comes from the Kumulipo, an 18th Century Hawaiian creation chant.
- Astronomers say giving it a Hawaiian name was justified because the project included two telescopes in Hawaii.
- Jessica Dempsey, a co-discoverer of the black hole, says the word is an excellent match for the scientific description she provided to Kimura.

Background:

- The world’s first image of a black hole revealed on Wednesday was created using data from eight radio telescopes around the world.

What are Black holes?

- A **black hole** is a region of [spacetime](#) exhibiting such strong [gravitational](#) effects that nothing—not even [particles](#) and [electromagnetic radiation](#) such as [light](#)—can escape from inside it.
- The theory of [general relativity](#) predicts that a sufficiently compact [mass](#) can deform [spacetime](#) to form a black hole.
- The boundary of the region from which no escape is possible is called the [event horizon](#). Although the event horizon has an enormous effect on the fate and circumstances of an object crossing it, no locally detectable features appear to be observed.
- In many ways a black hole acts like an ideal [black body](#), as it reflects no light.
- Moreover, [quantum field theory in curved spacetime](#) predicts that event horizons emit [Hawking radiation](#), with [the same spectrum](#) as a black body of a temperature inversely proportional to its mass. This temperature is on the order of billionths of a kelvin for [black holes of stellar mass](#), making it essentially impossible to observe.



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India's ASAT Test:

Why in News?

India is concerned about the "threats" it faces in space, the Pentagon has said, defending the country for acquiring anti-satellite (ASAT) missile test capabilities.

Background:

- On March 27, India achieved a historic feat by shooting down its own low-orbit satellite with a ground-to-space missile, making the country a space power.
- The test made India the fourth country in the world after the US, Russia and China to have the ASAT capabilities.
- After India's test, NASA termed as a "terrible thing" the country's shooting down of one of its satellites, saying it created about 400 pieces of orbital debris, endangering the the International Space Station (ISS).
- NASA Administrator Jim Bridenstine had said about 60 pieces were tracked and out of which 24 are going above the apogee of the ISS.

About ASAT:

- **Anti-satellite weapons (ASAT)** are [space weapons](#) designed to incapacitate or destroy [satellites](#) for [strategic military](#) purposes.
- Several nations possess operational ASAT systems.
- Although no ASAT system has yet been utilised in [warfare](#), a few nations have shot down their own satellites to demonstrate their ASAT capabilities in a [show of force](#).
- Only the [United States](#), [Russia](#) , [China](#), and [India](#) have demonstrated this capability successfully.