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## Important Facts For Prelims (12th April 2019)

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### New Genetic Method To Empower Conservation

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- A team of scientists at **Stanford University and the National Centre for Biological Sciences at India's Tata Institute of Fundamental Research** have developed a method for extracting genetic information.
- The new method is **faster and cheap and collects information from degraded and left-behind materials**, such as **feces, skin or saliva, and from food products** suspected of containing endangered animals.
- This is significant as it will **help wildlife conservationists aiming to protect endangered species**, but they were unable to collect the DNA samples from rare and elusive animals.
- The new method relies on **identifying multiple, short portions of DNA segments in a single experiment (a multiplex PCR), followed by 'next-generation sequencing', in which multiple fragments of DNA can be decoded simultaneously, and several times, in an automated process.**
- The team tested their method on Caribbean queen conches and tigers.

### Multiplex polymerase chain reaction (Multiplex PCR)

Multiplex polymerase chain reaction refers to the use of polymerase chain reaction to amplify several different DNA sequences simultaneously.

### Three-Person Baby

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- A team of Greek and Spanish doctors has produced a baby (in Greece) using **genetic material from two women and a man.**
- The technique used is called as **'Maternal Spindle transfer'** in which maternal DNA is put into the egg of a donor woman, which is then fertilized using the father's sperm.
- The procedure was developed to **help existing IVF treatments in which mothers have mitochondrial diseases.**
- The technique is considered controversial by some doctors.

- **Mitochondrial diseases are long-term, genetic, often inherited disorders** that occur when mitochondria fail to produce enough energy for the body to function properly.
- **In Vitro Fertilization (IVF)** is a medical procedure in which **mature egg cells are removed from a woman, fertilized with male sperm outside the body, and inserted into the uterus** of the same or another woman for normal gestation.

## Bold Kurukshetra

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- The **12th edition** of joint military exercise between **India and Singapore**, BOLD KURUKSHETRA 2019 came to an end on 11th April 2019.
- A closing ceremony for the same was held at the **Babina Military Station, Jhansi, Uttar Pradesh**.
- The four-day long joint training focused on developing interoperability and conduct of joint tactical operations in mechanized warfare.
- India and Singapore had signed a cooperation agreement in November 2017 to strengthen the defense ties between the Indian Military and Singapore Armed Forces. As per the agreement, the Singapore military would undergo training and participate in firing exercise with Indian counterpart.