**C.A Dated On 29th June 2018**

## General Studies-2

## Women Transforming India Awards

NITI Aayog, in partnership with United Nations and DICE Districts invites nominations for the Third Edition of the Women Transforming India Awards (WTI Awards).

The WTI Awards 2018 was announced on the occasion of the International Womens' Day in March this year.

An annual event, the Awards seek to recognise and applaud the work done by exemplary women towards nation-building.

## About the Awards:

This year, the WTI Awards focus on '**Women and Entrepreneurship**', a concept concomitant with the launch of NITI Aayog's Women Entrepreneurship Platform (WEP).

The winners will receive support and mentoring offered under the aegis of WEP, an online platform managed by NITI Aayog to enable women realize their entrepreneurial aspirations.

The Women Transforming India Awards 2018 invites stories of exceptional women entrepreneurs who are breaking the glass-ceiling and challenging stereotypes through businesses, enterprises and initiatives that:

- Provide innovative solutions to address key developmental challenges and/or
- Impact communities within a sector

The Awards will recognize exceptional women who are flag-bearers of the next wave of innovation and connect them with potential business opportunities to help them grow; to empower them and to empower a New India.

Women entrepreneurs from across the country, engaged in any economic activity across all walks of life, are encouraged to apply.

## General Studies-3

## Blockchain Technology

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## Why in News?

The Centre is considering a proposal to set up a Centre of Excellence for blockchain technology in Hyderabad to drive innovation.

The proposal has been submitted by C-DAC Hyderabad, along with the Institute for Development and Research in Banking Technology (IDRBT) and Veermata Jijabai Technological Institute (VJTI), Mumbai.

"The Centre of Excellence, proposed to come up at C-DAC's Hyderabad unit, will be the first one by the government for blockchain technology.

The plan is to use blockchain to digitise and secure land records for Telangana.

Once we successfully deploy it, we can then think of scaling it.

## About Blockchain:

A blockchain, originally block chain, is a continuously growing list of records, called *blocks*, which are linked and secured using cryptography.

Each block typically contains a cryptographic hash of the previous blocka timestamp, and transaction data By design, a blockchain is resistant to modification of the data. It is "an open, distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way".

## How does it Work?

For use as a distributed ledger, a blockchain is typically managed by a peer-to-peer network collectively adhering to a protocol for inter-node communication and validating new blocks.

Once recorded, the data in any given block cannot be altered retroactively without alteration of all subsequent blocks, which requires consensus of the network majority.

## Benefits of Blockchain:

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Blockchains are secure by design and exemplify a distributed computing system with high Byzantine fault tolerance. Decentralized consensus has therefore been achieved with a blockchain.

This makes blockchains potentially suitable for the recording of events, medical records, and other records management activities, such as identity management, transaction processing, documenting provenance, food traceability, and voting.

## Global Environment Facility (GEF)

## Why in News?

India has announced it will increase for the next four years the money it pays to the Global Environment Facility (GEF), a mechanism to provide grants for environment projects. India will increase its commitments from $12 million to $15 million to the GEF's new four-year investment cycle, known as GEF-7.

*About GEF:*

- The Global Environment Facility was established on the eve of *the 1992 Rio Earth Summit* to help tackle our planet's most pressing environmental problems.
- It is *an international partnership of 183 countries, international institutions, civil society organizations and the private sector* that addresses global environmental issues.
- GEF funds are *available to developing countries and countries with economies in transition* to meet the objectives of the international environmental conventions and agreements.
- *The World Bank serves as the GEF Trustee*, administering the GEF Trust Fund.

*It is a FINANCIAL MECHANISM for five major international environmental conventions:* the Minamata Convention on Mercury, the Stockholm Convention on Persistent Organic Pollutants (POPs), the United Nations Convention on

Biological Diversity (UNCBD), the United Nations Convention to Combat Desertification (UNCCD) and the United Nations Framework Convention on Climate Change (UNFCCC).

## New evidence of Life on Mars:

The crust that encases rocky planets and makes possible the emergence of life took shape on Mars earlier than thought and at least 100 million years sooner than on Earth, researchers said on June 27.

Analysing grains of the mineral zircon extracted from a Martian meteorite known as Black Beauty, they determined that the Red Planet's outer layer hardened 4.547 billion years ago, only 20 million years after the birth of the Sun.

"Mars's primary crust formation — which is the end product of planet formation — happened much faster than previously thought.

## About Red planet:

Water is considered to be an essential precursor for life, at least as we know it.

Mars was once much more Earth-like, with a thick atmosphere, abundant water and global oceans.

Mars is thought to have a dense metallic core with a radius of about 1,800 km, consisting primarily of iron, nickel and sulphur. The core is surrounded by a largely dormant mantle — some 1,500 km thick — made mainly of silicon, oxygen, iron and magnesium.

Finally, the crust averages about 50 km in depth, with a maximum of about 125 km. Earth's crust averages 40 km, but is one-third the thickness of the Martian crust once planet size is taken into account.

Up to now, mathematical models have suggested that the solidification of the Red Planet took up to 100 million years.

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The new study tackles the question by examining a chunk of Mars that streaked into the Saharan Desert and was discovered in 2011.

## How Planets Formed?

There are two main models for the formation of planets.

In one, it occurs in stages, with small dust particles coalescing into "planetesimals" — rock fragments ten to 100 km in diameter — that collide to form planetary embryos, and then planets, over a time scale of 50 to 100 million years.

According to a more recent model, planetary growth unfolds more quickly and is fuelled by so-called "pebble accretion", the layered accumulation of particles measured in centimetres and metres that are loosely bound with gases.

The new timeline suggests that something similar may have happened on our planet, but only after Earth was "reset" by the giant impact that formed the Moon about 4.4 billion years ago.