



WEB 5.0

For Prelims: Web 5.0, Blockchain Technology

For Mains: Web 5.0, IT and Computers

Why in News?

Former Twitter CEO Jack Dorsey recently announced his vision for a new **decentralized web platform** that is being called **Web 5.0** and is being built with an aim to return **“ownership of data and identity” to individuals**. It's being developed by former Twitter CEO Bitcoin business unit, **The Block Head**.

- The World Wide Web (WWW) is the primary tool used by billions of people to interact with other people and also read and write information.
- Web is the largest transformable-information construct that its idea was introduced by Tim Berners-Lee in 1989 at first. Much progress has been made about the web and related technologies in the past two decades.

What are the Key Highlights of Various Web Version?

- **Web 1.0**, is the **first generation** of the global digital communications network. It is often referred to as the **“read-only”** Internet made of **static web pages that only allow for passive engagement**.
- **Web 2.0**, The next stage in the evolution of the web was the **“read and write”** Internet. Users could now **communicate with servers and other users leading to the creation of the social web**. This is the world wide web that **we use today**.
- **Web 3.0**, is an **evolving term** that is used to refer to the **next generation of the Internet** - a **“read-write-execute”** web - with **decentralization as its bedrock**.
 - It speaks about a digital world, built by **leveraging blockchain technology**, where people are able to interact with each other **without the need for an intermediary**.
 - It will be **driven by Artificial Intelligence and machine learning where machines can interpret information like humans**.
- **Web 5.0:**
 - It's in an early nascent stage as being developed by Dorsey's Bitcoin business unit, **The Block Head (TBH)**. Web 5.0 is aimed at **“building an extra decentralized web that puts one in control of ones's data and identity”**.
 - Web 5.0 is **Web 2.0 plus Web 3.0** that will **allow users to ‘own their identity on the Internet and ‘control their data’**.
 - Both Web 3.0 and Web 5.0 envision an Internet **without the threat of censorship - from governments or big tech, and without fear of significant outages**.
 - **Significance:** It's about changing the **“control of identity”** of an individual and talks about giving users **control over their own data**, it cites an example that it's totally up to the user whether to save his data anonymously encrypted on the decentralized blockchain or to sell that data to vendors for monetizing and advertising.

WEB 1.0	WEB 2.0	WEB 3.0
1996 – 2004	2004 -2016	2016+
The Hypertext Web	The Social Web	The Semantic Web
Tim Berners Lee	Tim O'Reilly, Dale Dougherty	Tim Berners Lee
Read Only	Read and Write Web	Executable Web
Millions of User	Billions of User	Trillions+ of Users
Echo System	Participation and Interaction	Understanding self
One Directional	Bi-Directional	Multi-user Virtual environment
Companies Publish Content	People Publish Content	People build application though which people interact and publish content.
Static content.	Dynamic content.	Web 3.0 is curiously undefined. AI and 3D, The web learning
Personal Websites	Blog and Social Profile	SemiBlog, Haystack.
Message Board	Community portals	Semantic Forums
Buddy List, Address Book	Online Social networks.	Semantic Social Information

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What are the Challenges Related to Web 5.0?

- There are hardly any implications for this technology in the near future as it's just being an idea at a very early stage, and nobody knows how it would be turned out.
- How the sovereign government would allow this decentralized platform which is free from any government intervention, could lead to **contention between the government and promoters of Web 5.0.**
- There is still **uncertainty**, that how the system will operate, who would control it, and what are **safety scenarios** for vulnerable people like women, children, etc.

Way Forward

- There is a need for a proper **blueprint & policy** from both the government and the promoter side.
- The **efficacy in the real-world** needs to be tested.
- The need for the **safety of personal data and utmost priority should be given to individual privacy.**
- It should not become another tool for venture capitalists to control the platform for their own gains, and further makes a mockery of the political system.
- The **regulation body** should be set up by the government to overlook these types of new and emerging technologies.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. With reference to “Blockchain Technology”, consider the following statements: (2020)

1. It is a public ledger that everyone can inspect, but which no single user controls.
2. The structure and design of blockchain is such that all the data in it are about cryptocurrency only.
3. Applications that depend on basic features of blockchain can be developed without anybody’s permission.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 only
- (d) 1 and 3 only

Ans: (d)

Exp:

- Blockchain is a form of public ledger, which is a series (or chain) of blocks on which transaction details are recorded and stored on a public database after suitable authentication and verification by the designated network participants. A public ledger can be viewed but cannot be controlled by any single user. **Hence, statement 1 is correct.**

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