To,   Dated-14-10-2021

The Principal/Head of the Institutions affiliated to the CBSE
Sub: Implementation of BlockChain Technology for Board Exam Results Documents

Madam/Sir,

In pursuit to achieve Digital Excellence, CBSE implements yet another "Emerging Technology" i.e. "BlockChain" for its results and academic documents. Recently CBSE also implemented Artificial Intelligence & Machine Learning for its totally digitized Affiliation System called SARAS (School Affiliation Re-Engineered Automation System).

CBSE in technical collaboration with Centre of Excellence for Block Chain Technology of National Informatics Centre under the Ministry of Electronics and Information Technology (MeitY), Govt. of India has developed a system called **"Academic {BlockChain} Documents (ABCD)"** which ensures that academic documents are recorded in a secure and tamper proof manner and can be accessed online through trusted and verifiable means. It has been established using Block Chain Technology to record the certificates in a linked chain structure.

Previously, verification of the authenticity of certificates produced by the candidates for admissions, jobs, loans etc. was a challenge. The genuineness of the certificate with the concerned universities or boards had to be thoroughly checked, and therefore the verification process required considerable effort and processing time. The Academic BlockChain Documents (ABCD) addresses these challenges by recording the data in a distributed ledger with ownership of all participating stakeholders. The data is recorded in the chain based on the consensus among the stakeholders and simultaneously replicated at all the locations in the distributed network of Block Chain nodes. This eliminates the dependency on a third party for verification. The data is linked and stored with cryptographic security so that it is immutable and traceable. The linking of the blocks in the block chain ensures that they cannot be tampered with, and the data is trustable as it can be verified across the participating stakeholders.

CBSE has already made available the digitally signed certificates of Class X and XII for years 2019-2021 and will gradually push the certificates of previous years in the next few months. Upon issuance of new certificates by CBSE, the digitally signed certificates will be sent to the BlockChain based system creating an additional secure link. This network is currently established with nodes at Bangalore, Pune and Jaipur. Presently, the Certificate Chain is managed by NIC at its data centres.