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MIT-WPU
|| विद्यार्थिनिर्ध्वं युग ||

School of Computer science and Engineering
Department of Computer Engineering and Technology
Final Year B.Tech (CSF) (Academic Year 2024-25)
Mid Term Exam- March-25 – Semester-VIII

Course Name:- Blockchain Technology   Course Code:-CET4007B

Maximum Marks: 30   Time: 1 Hrs   Date: 31312025

Instructions:-
1. Attempt any 3 questions from Q. 1 to Q. 4 AND Attempt any 3 questions from Q. 5 to Q. 8
2. Figure to the right indicates full marks.
3. Use of cell phone is prohibited in the examination hall.
4. Neat diagrams must be drawn wherever necessary.
5. Assume suitable data, if necessary and clearly state.
6. Use of scientific calculator is allowed

Attempt any 3 questions from Q. 1 to Q. 4

Q.1 CO1 understanding — What are Cryptographic Hash Functions, and how do they contribute to data security in blockchain technology? **[5 Marks]**

Q.2 CO1 analyzing — What are the key differences between Centralization and Decentralization, do they impact decision-making in systems like blockchain? **[5 Marks]**

Q.3 CO1 applying — How can blockchain technology be applied in supply chain management to improve transparency and traceability? **[5 Marks]**

Q.4 CO1 evaluating, — What is the Byzantine Generals Problem,relate to the challenges of achieving consensus in distributed systems? **[5 Marks]**

Attempt any 3 questions from Q. 5 to Q. 8

Q.5 CO2 remembering/ — How does the Proof of Work (PoW) consensus algorithm in Bitcoin ensure the security and integrity of the blockchain network? **[5 Marks]**

Q.6 CO2 creating — What are the key security principles that underpin Bitcoin's network contribute to the system's overall resilience against attacks? **[5 Marks]**

Q.7   CO2 analyzing   What is Proof of Capacity (PoC), is it differ from other **[5 Marks]** consensus mechanisms like Proof of Work (PoW) and Proof of Stake (PoS)?

Q.8   Co2 evaluating,   What is Proof of Activity (PoA), combine elements of Proof of **[5 Marks]** Work (PoW) and Proof of Stake (PoS) to enhance the security of blockchain networks?