Student Name: Printed Pages:

University Roll No.:

School of Engineering

Second Theory Sessional Examination

Even Semester (AS: 2024-25)

B. Tech: CSE (IOTBC3) [Year: 3rd] [Semester :6th]

Course Title: Blockchain & Distributed ledger Technology Max Marks: 30

Course Code: GE34011 Time: 1*hrs*

Instructions: 1-Mention any assumptions made.

2-Notations have usual meaning.

SECTION 'A' Q.N.1. Attempt all parts of the following:		Course Objective	Marks
a)	What is cryptocurrency, and how is it related to blockchain?	CO3	1
b)	What are the philosophical and ideological roots of Bitcoin?	CO3	1
c)	What is Nakamoto consensus?	CO2	1
d)	How can blockchain-based IoT systems ensure data integrity and security?	CO4	1
e)	What is the GHOST protocol, and how does it work?	CO3	1

SECTION 'B' Q.N.2. Attempt any two parts of the following:		Course Objective	Marks
a)	What is a Sybil attack? How can blockchain networks prevent Sybil attacks?	CO2	7.5
b)	What are the challenges and limitations of regulating black markets that use blockchain technology?	CO4	7.5
c)	What is Proof of Stake, and how does it differ from Proof of Work?	CO2	7.5

SECTION 'C' Q.N.3. Attempt any one parts of the following:		Course Objective	Marks
a)	How do different consensus algorithms impact the decentralization and security of blockchain networks?	CO2	10
b)	How can blockchain technology be used to provide decentralized domain name services?	CO4	10
c)	What is a smart contract, and how does it work on a blockchain network?	CO3	10

Table 1: Mapping between COs and questions

COs	Questions Numbers	Total Marks
CO2	1(c), 2(a), 2(c), 3(a)	26
CO3	1(a), 1(b), 1(e), 3(c)	13
CO4	1(d), 2(b), 3(b)	18.5

06.05.2025