Practical Plan

B.E. (Comp B) (Semester VII)

Subject: *Blockchain Technology (Practical)*

Teacher-in-charge: Prof. Monica Khanore

Subject code: CSDL7022

Academic Term: July – October 2022

Course Outcomes:

Upon completion of this course students will be able to:

    CSDL7022.1 Create cryptographic hash using Merkle tree.
    CSDL7022.2 Design smart contract using solidity.
    CSDL7022.3 Implement Ethereum blockchain.
    CSDL7022.4 Explore Hyperledger Fabric and its working.
    CSDL7022.5 Demonstrate the concepts of blockchain in real world applications.

Relationship of course outcomes with program outcomes:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO 11	PO 12	PSO1	PSO2
CSDL7022.1	2	2			2								1	
CSDL7022.2	2	1			1									
CSDL7022.3	2				1									
CSDL7022.4	2													
CSDL7022.5	2	2	3	1	1	1		1	3	3		1		

CO Assessment Tools:

Course Outcomes	*Indirect Method (20%)*				
	Attendance	Lab Performance	Journal Assessment	End Sem Exam	Course exit survey
CSDL7022.1	10%	20%	20%	50%	100%
CSDL7022.2	10%	20%	20%	50%	100%
CSDL7022.3	10%	20%	20%	50%	100%
CSDL7022.4	10%	20%	20%	50%	100%
CSDL7022.5	10%	20%	20%	50%	100%

CO calculation= (0.8 *Direct method + 0.2*Indirect method)

Rubrics for assessing Course Outcome with each assessment tool:

Laboratory:

Rubrics	Exceed Expectation (EE)	Meet Expectation (ME)	Below Expectation (BE)
On time submission Or completion (2)	Early or on time (2)	One session late (1)	More than one session late (0)
Preparedness (2)	Awareness about experiment to be performed, Knows the basic theory related to the experiment very well. (2)	Managed to explain the theory related to the experiment. (1)	Not aware of the theory to the point. (0)
Skill (4)	Structured and optimum performance (4)	Few steps are not appropriate (2)	Just managed (1)
Output (2)	Got proper output in the Lab turn (2)	Got partial output (1)	Failed to get the output (0)

Practical Session Plan

CLASS	**BE Computer Engineering, Semester VII**
Academic Term	**July – October 2022**
Subject	**Blockchain Technology (CSDL7022)**

Evaluation System			*Hours*	*Marks*
		Practical Examination	--	--
		Oral Examination	--	25
		Term work	--	25
		Total	--	50
Time Table	*Day*	*Batch*	*Time*	
	Monday	*C*	*8.45-10.45am*	
	Monday	*D*	*11.00am-1.00 pm*	
	Tuesday	*B*	*11.00am-1.00 pm*	
	Wednesday	*A*	*11.00am-1.00 pm*	

Title of Experiments

Sr.	Title	Attained COs
1	Transferring Ethers using Metamask	CSDL7022.2
2	Generation of Merkle tree and verification ofvalid transaction.	CSDL7022.1
3	Transactions using Solidity	CSDL7022.2
4	Implementation of Auction for Fundraising for a Social Cause in Solidity	CSDL7022.2
5	Implementation of voting application in Solidity	CSDL7022.2
6	Create a Smart Contract in Ethereum with Ganache and Remix IDE	CSDL7022.3
7	Case study of Hyperledger	CSDL7022.4
8	Implementation of PAXOS Algorithm	CSDL7022.3
9	Mini project	CSDL7022.5

Newly added experiments

1	All experiments are new

Practical Session Plan

Batch	*Dates*		*Remarks*
	Planned	*Actual*	
Experiment No. 1 Transferring Ethers using Metamask			
A	03/08/2022	03/08/2022	

B	02/08/2022	02/08/2022	
C	01/08/2022	01/08/2022	
D	01/08/2022	01/08/2022	

Experiment No. 2
Generation of Merkle tree and verification ofvalid transaction

A	10/08/2022	10/08/2022	
B	23/08/2022	20/09/2022	
C	08/08/2022	08/08/2022	
D	08/08/2022	08/08/2022	

Experiment No. 3
Transactions using Solidity

A	24/08/2022	17/08/2022	
B	30/08/2022	17/08/2022	
C	22/08/2022	22/08/2022	
D	22/08/2022	22/08/2022	

Experiment No. 4
Implementation of Auction for Fundraising for a Social Cause in Solidity

A	31/08/2022	24/08/2022	
B	13/09/2022	30/08/2022	
C	29/08/2022	29/08/2022	
D	29/08/2022	29/08/2022	

Experiment No.5
Implementation of voting application in Solidity

A	14/09/2022	07/09/2022	
B	20/09/2022	06/09/2022	
C	12/09/2022	19/09/2022	
D	12/09/2022	19/09/2022	

Experiment No. 6
Create a Smart Contract in Ethereum with Ganache and Remix IDE

A	21/09/2022	21/09/2022	
B	27/09/2022	27/09/2022	
C	19/09/2022	12/09/2022	
D	19/09/2022	12/09/2022	

Experiment No. 7
Case study of Hyperledger

A	21/09/2022	12/10/2022	
B	27/09/2022	27/09/2022	
C	26/09/2022	26/09/2022	
D	26/09/2022	26/09/2022	

Experiment No. 8
Implementation of PAXOS Algorithm

A	28/09/2022	12/10/2022	
B	04/09/2022	04/10/2022	
C	03/10/2022	03/10/2022	
D	03/10/2022	03/10/2022	

Experiment No. 9 Mini Project			
A	12/10/2022	12/10/2022	
B	11/10/2022	11/10/2022	
C	10/10/2022	10/10/2022	
D	10/10/2022	10/10/2022	

Submitted By	Approved By
Prof. Monica Khanore	i) Dr. Sujata Deshmukh Sign:
Sign:	ii) Dr. B. S. Daga Sign:
	iii) Prof. Merly Thomas Sign:
	iv) Prof. Monica Khanore Sign:
	v) Prof. Roshni Padate Sign:
	vi) Prof. Kalpana Deorukhkar Sign:
Date of Submission:	Date of Approval:
Remarks by DQAC (if any)	