Student Name:

ID:

TOTAL MARKS

Learning Outcomes	**Questions**
1. Explain blockchain concepts and architecture (C2, PLO1)	Exam
2. Examine the computing issues of blockchain design and developments (C4, PLO2)	Assignment - Documentation
3. Demonstrate the capability of developing blockchain solution with available platform and toolset (A3, PLO6)	Assignment - Implementation

PERFORMANCE CRITERIA – Part 1 [Total: 25%]:

PROPOSAL	Very Poor	Poor	Adequate	Good	Excellent
Define blockchain use case and solution **(10 %)** **[CLO2-PLO2]**	**0-3**	**4**	**5-6**	**7**	**8 - 10**
	Background of business attempted. No or hardly any studies given.	Simple proposal about background of business created but information was poorly organized. Weak explanations given about the business operations in the proposal.	Report created satisfactory but background could be better organised. Reasonable studies of the business operations given in the proposal.	Good proposal created with well-organized information. Good explanations given about the business in the proposal.	Excellent proposal created with well-organized information. Excellent explanations given about the business in the proposal.
	0-5	**6-7**	**8-10**	**11**	**12-15**
Detail of findings **(15%)** **[CLO2-PLO2]**	Poorly presented, not even satisfy 30% of the findings; Poorly designed, unable to demonstrate the blockchain concept into solution; Poorly discussion. Unable to explain the benefits of the blockchain solution.	Average findings. 30 to 50% of the findings/studies performed; Average solution design with many rooms of improvements and misunderstanding the basic of blockchain concepts; Average discussion. Able to explain the fundamentals of blockchain and solution being design.	Satisfactory findings. 51 to 70% of the findings/studies performed; Satisfactory solution model. Blockchain concept presented in the model; Satisfactory discussion. Able to explain the great benefits as a value added to the business.	Good findings, above 70% of the studies conducted; Good design presenting the blockchain use cases and well explained; Good discussion. Able to explain the solution and benefits in detail.	Excellent findings. Almost all the studies are conducted presenting detail level of understanding; Excellent solution model with critical data/operation analysed; Excellent discussion. Able to explain the blockchain solution contributing to the business relevantly.

PERFORMANCE CRITERIA – Part 2 [Total: 35%]:

SOLUTION DEVELOPEMNT	Very Poor	Poor	Adequate	Good	Excellent
Block concept and chain (10%) [A3, PLO6]	**0-3**	**4**	**5-6**	**7**	**8 - 10**
	Blockchain and ledger implementation is attempted inappropriately. No code snippets presented.	Simple blockchain and ledger but implementation was poorly demonstrated. Code snippets found incomplete.	Satisfactory blockchain and ledger implemented into block. Code snippets included.	Good blockchain and ledger implemented into block. Ledger outcome presented. Code snippets included and explained.	Excellent blockchain and ledger implemented into block. Ledger outcome presented. Code snippets included and explained comprehensively.
Hashing algorithm, Merkle tree (10 %) [A3, PLO6]	**0-3**	**4**	**5-6**	**7**	**8 - 10**
	Hashing implementation is attempted inappropriately. No code snippets presented.	Simple hashing algorithm created but implementation was poorly demonstrated. Code snippets found incomplete.	Satisfactory hashing algorithm created and implemented into block and data structure. Code snippets included.	Good hashing algorithm created and implemented into block and data structure. Code snippets included and explained.	Excellent hashing algorithm created and implemented into block and data structure. Code snippets included and explained comprehensively.
Cryptography Algorithm (5%) [A3, PLO6]	**0-1**	**2**	**3**	**4**	**5**
	Cryptography implementation is attempted inappropriately. No code snippets presented.	Simple cryptography algorithm used but implementation was poorly demonstrated. Code snippets found incomplete.	Satisfactory cryptography algorithm used and implemented into block and data structure. Code snippets included.	Good cryptography algorithm used and implemented into block and data structure. Code snippets included and explained.	Excellent cryptography algorithm used and implemented into block and data structure. Code snippets included and explained comprehensively.
Digital signature (5%) [A3, PLO6]	**0-1**	**2**	**3**	**4**	**5**
	Digital signature implementation is attempted inappropriately. No code snippets presented.	Simple digital signature algorithm used but implementation was poorly demonstrated. Code snippets found incomplete.	Satisfactory digital signature algorithm used and implemented into block. Code snippets included.	Good digital signature algorithm used and implemented into block. Code snippets included and explained.	Excellent digital signature algorithm used and implemented into block. Code snippets included and explained comprehensively.
Immutability technique (5%) [A3, PLO6]	**0-1**	**2**	**3**	**4**	**5**
	Implementation of immutability for transaction is attempted inappropriately. No code snippets presented.	Immutability for transaction is discussed but implementation was poorly demonstrated. Code snippets found incomplete.	Satisfactory immutability implementation used and implemented into block. Code snippets included.	Good immutability for transaction implementation and implemented into block. Code snippets included and explained.	Excellent immutability for transaction implementation and implemented into block. Code snippets included and explained comprehensively.