R18

Code No: R18A0530

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

IV B.Tech - II Semester Supplementary Examinations, April 2024

Parallel and Distributed Computing

(CSE)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

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SECTION-I

1	***A***	What is the Scope of parallel computing? Discuss the trends in microprocessor architecture?	**[7M]**
	B	What is co-processing? Illustrate the Control Structure of Parallel Platforms?	**[7M]**
		OR	
2	***A***	Describe the challenges of parallel and distributing computing?	**[7M]**
	B	Discuss Interconnection Networks for Parallel Computers?	**[7M]**
		SECTION-II	
3	***A***	Explain Schemes for Static Mapping with examples?	**[7M]**
	B	Compute API function to allocate memory on parallel computing device?	**[7M]**
		OR	
4	***A***	Explain recursive decomposition with an example?	**[7M]**
	B	Classify the Characteristics of Inter-Task Interactions?	**[7M]**
		SECTION-III	
5	***A***	Predict the Sources of Overhead in Parallel Programs? Explain the effect of granularity on performance of parallel systems?	**[7M]**
	B	Relate the Performance Metrics for Parallel Systems?	**[7M]**
		OR	
6	***A***	Interpret the Minimum Execution Time and Minimum Cost Optimal Execution Time of parallel systems?	**[7M]**
	B	Describe Cost-Optimality and the Isoefficiency Function and A Lower Bound on the Isoefficiency Function?	**[7M]**
		SECTION-IV	
7	***A***	Explain Matrix-Vector Multiplication with an algorithm and an example ?	**[7M]**
	B	Explain the issues in sorting on parallel computers?	**[7M]**
		OR	
8	***A***	Explain the quick sort algorithm with an example?	**[7M]**
	B	What is Odd-Even Transposition, explain with an algorithm?	**[7M]**
		SECTION-V	
9	***A***	Represent sequential search algorithm with an example?	**[7M]**
	B	Demonstrate parallel depth first search algorithm?	**[7M]**
		OR	
10	***A***	Demonstrate Best-first search with the 8-puzzle problem?	**[7M]**
	B	Explain speed up anomalies in parallel search algorithms?	**[7M]**

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Code No: R18A0534

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

IV B.Tech - II Semester Supplementary Examinations, April 2024

Block Chain Technology

(CSE & IT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

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SECTION-I

1	A	What is Blockchain? Explain the methods of Decentralization in detail.	**[7M]**
	B	List the comparisons between centralized and decentralized systems (networks/applications)	**[7M]**
		OR	
2	A	List and explain the benefits and limitations of Blockchain technology.	**[7M]**
	B	Explain in detail about CAP theorem..	**[7M]**
		SECTION-II	
3	A	Explain various services of cryptography in Block chain with neat sketch.	**[7M]**
	B	Explain in detail about cryptographic primitives.	**[7M]**
		OR	
4		What is the need of Consensus Algorithms in Blockchain and discuss in detail about various consensus algorithms.	**[14M]**
		SECTION-III	
5	A	Explain in detail about the structure of a block in Bitcoin and Bitcoin installation	**[7M]**
	B	Summarize Bitcoin network with neat diagrams.	**[7M]**
		OR	
6		Define wallet in Bitcoin? Explain about various types of wallets with example.	**[14M]**
		SECTION-IV	
7	A	Illustrate the Elements of Ethereum Blockchain.	**[7M]**
	B	Discuss in detail about Scalability And Security Issues	**[7M]**
		OR	
8		Briefly explain block and its various components with neat diagram.	**[14M]**
		SECTION-V	
9		What are the projects under the Hyperledger? Explain in detail about Hyperledger Fabric and Hyperledger Sawtooth**?**	**[14M]**
		OR	
10	A	Explain how Smart Contracts are different from Ricardian Contracts.	**[7M]**
	B	Describe in detail about DAO.	**[7M]**

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R18

Code No: R18A0529

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

IV B.Tech - II Semester Supplementary Examinations, April 2024

Big Data Analytics

(CSE)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

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SECTION-I

1	***A***	What is Big Data? Describe the challenges in handling Big Data.	**[7M]**
	B	Identify the various tools used for Big Data. Describe any two tools for Big Data with their features.	**[7M]**
		OR	
2	***A***	Why do we need Big-Data in the field of Business Intelligence and Analytics?	**[7M]**
	B	Demonstrate with an example for each of the following. i) Descriptive Analytics ii) Predictive Analytics	**[7M]**

SECTION-II

3	***A***	What is Hadoop? Explain how it differs from RDBMS.	**[5M]**
	B	What is distributed computing? How Big Data provide solution for distributed computing.	**[9M]**
		OR	
4	***A***	Why do NoSql database is evolve in data analytics? Demonstrate with an example.	**[5M]**
	B	Write about the following components in Hadoop. i) HDFS ii) MapReduce iii) Yarn Framework	**[3M]** **[3M]** **[3M]**

SECTION-III

5	***A***	Identify the various data types supported in MongoDB for document oriented storage.	**[6M]**
	B	Illustrate with an example the CRUD operation in Cassandra.	**[8M]**
		OR	
6	***A***	Why do we use Cassandra? What are the Features and Applications of It.	**[6M]**
	B	How do we query and format data from MongoDB collection? Demonstrate with an example for each.	**[8M]**

SECTION-IV

7	***A***	Demonstrate with a neat sketch Map Reduce Architecture using appropriate use case.	**[9M]**
	B	Write the syntax and example for various forms of Join in HIVE Query language.	**[5M]**
		OR	

8	***A***	What is HIVE? Identify the various data types and file formats supported in this environment.	**[8M]**
	B	How do Bucketing differs from Partitioning? Describe with an example for each.	**[6M]**

SECTION-V

9	***A***	What is Pig? In which mode the Pig commands are executed? List any two HDFS command for it.	**[6M]**
	B	Illustrate with example the following Diagnostic Operators in Pig.	
		i) Dump operator	**[2M]**
		ii) Describe operator	**[2M]**
		iii) Explanation operator	**[2M]**
		iv) Illustration operator	**[2M]**

OR

10	***A***	Explain the working of Pig to describe the word count use case.	**[8M]**
	B	Write about the following relational operators in Pig.	
		i) Flatten	**[2M]**
		ii) Tuple	**[2M]**
		iii) Distinct	**[2M]**

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