Code No: **R18A0523**

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
IV B.Tech I Semester Supplementary Examinations, April 2024
Cloud 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** List the different layers and types of clouds in Cloud Computing, ensuring accurate categorization. **[7M]**

   B Explain the significance of Cloud Computing in modern IT landscapes. How does it differ from traditional on-premises computing? **[7M]**

   OR

2. **A** Name two prominent Platform as a Service (PaaS) and Infrastructure as a Service(Iaas) providers and provide a brief overview of the services they offer. **[7M]**

   B Explain what Cloud Infrastructure Management entails and its significance in the context of Cloud Computing. **[7M]**

SECTION-II

3. **A** List and provide a brief explanation of the two broad approaches organizations commonly use when migrating their operations into the cloud. **[7M]**

   B Describe the components and steps involved in the Seven-Step Model of Migration into a Cloud, highlighting their order and purpose. **[7M]**

   OR

4. **A** Explain the concept of 'Integration as a Service' in the context of cloud computing. How does this paradigm evolve to meet the demands of the cloud era? **[7M]**

   B Discuss the transition from the Information Era to the Knowledge Era and its impact on Software as a Service (SaaS) offerings. How has SaaS evolved to cater to the knowledge-centric environment? **[7M]**

SECTION-III

5. **A** Provide an overview of Google App Engine and its significance in cloud computing. What are its primary features and capabilities? **[7M]**

   B Define Software as a Service (SAAS) and explain its fundamental concept. What role does SAAS play in modern cloud computing? **[7M]**

   OR

6. **A** Describe various web-based communication tools commonly used for collaboration in a cloud environment. How do these tools enhance teamwork and productivity? **[7M]**

   B Discuss the advantages and potential challenges associated with adopting Software as a Service (SAAS) in an organization. How does SAAS impact IT infrastructure and software delivery? **[7M]**

SECTION-IV

7   **A**   Explain the concept of data security in cloud computing. What are some common threats to data security, and why is it important to address them in cloud-based environments? **[7M]**

       B   Define Software as a Service (SAAS) and provide a brief explanation of its role in cloud computing. What is the fundamental concept behind SAAS? **[7M]**

<div align="center">OR</div>

8   **A**   Discuss the benefits and challenges of collaborating through web-based communication tools. How do these tools facilitate remote collaboration, and what considerations should organizations consider when adopting them? **[7M]**

       B   Explain the different aspects of data security in the cloud, such as encryption, access control, and compliance. How do these measures contribute to safeguarding data in a cloud environment? **[7M]**

SECTION-V

9   **A**   Define SLA (Service Level Agreement) and briefly explain its significance in cloud computing. **[7M]**

       B   Describe the challenges that organizations may face at various stages of the SLA life cycle. How can these challenges be addressed to ensure successful SLA management in a cloud environment? **[7M]**

<div align="center">OR</div>

10   **A**   Describe the traditional approaches organizations have used for managing Service Level Objectives (SLOs) before the advent of cloud computing. **[7M]**

       B   Compare and contrast the traditional approaches to SLO management with the modern approaches used in cloud computing. How has the cloud changed the landscape of SLA management? **[7M]**

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Code No: **R18A0524**

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
IV B.Tech I Semester Supplementary Examinations, April 2024
Data Warehousing and Data Mining
(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 Data Warehouse? Explain the three-tier architecture of Data Ware house?   **[7M]**

     B   Explain how Measures are computed on a Data Cube and their types.   **[7M]**

OR

2   **A**   What are the different schemas for multidimensional model? How will you construct the schemas?   **[7M]**

     B   Differentiate ROLAP, MOLAP, and HOLAP servers.   **[7M]**

SECTION-II

3   **A**   Explain the various primitives to specify the Data Mining Task   **[7M]**

     B   Briefly explain about Data Smoothing techniques.   **[7M]**

OR

4   **A**   Briefly discuss about Data Integration techniques with examples.   **[7M]**

     B   Explain about Data mining Functionalities?   **[7M]**

SECTION-III

5   **A**   How to improve the efficiency of Apriori Algorithm?   **[7M]**

     B   Explain about frequent item sets, closed item sets and Association rules?   **[7M]**

OR

6   **A**   Explain FP-Growth algorithm with example?   **[10M]**

     B   Write short note on support and confidence measures.   **[4M]**

SECTION-IV

7   **A**   Explain about Attribute selection process by using Information Gain and give an example.   **[7M]**

     B   What are the characteristics of k-nearest neighbor classification algorithm?   **[7M]**

OR

8   **A**   Explain Navie-Bayesian classification algorithm by using Byes theorem.   **[9M]**

| | **B** | Explain about Evaluation of Classifiers. | **[5M]** |

SECTION-V

9	**A**	Define clustering? Explain various partitioning methods?	**[7M]**
	B	What are the Key issues of hierarchal clustering?	**[7M]**

OR

10	**A**	Explain about outlier detection techniques with examples.	**[7M]**
	B	Explain about Agglomerative Hierarchical Clustering Algorithm in detail	**[7M]**

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Code No: **R18A0525**
MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
IV B.Tech I Semester Supplementary Examinations, April 2024
Linux Programming
(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**	Explain in detail about disk utilities	**[7M]**
	B	Demonstrate by writing a shell script to find the factorial of a number	**[7M]**

OR

2	**A**	Explain various patterns and actions in awk.	**[7M]**
	B	Write about the types of shells? Explain the shell commands?	**[7M]**

SECTION-II

3	**A**	Explain about hard and symbolic links with examples	**[7M]**
	B	Explain the kernel support for file system.	**[7M]**

OR

4	**A**	Describe the system calls for file I/O operations- open, create, read, write, close with an example for each	**[7M]**
	B	What does directory file in LINUX contain? Explore the following commands with examples. i)mkdir ii)rmdir iii)chdir iv) getcwd.	**[7M]**

SECTION-III

5	**A**	Illustrate about child process creation using fork(), vfork() and Exec()	**[6M]**
	B	How a process will run in background? How it can be bring into foreground and how to kill that process?	**[8M]**

OR

6	**A**	Explain about process states. Describe and illustrate any one process system call	**[6M]**
	B	Explain the below system calls with the help of syntax and examples: a) kill b) raise c) alarm d) pause e) abort	**[8M]**

SECTION-IV

7	**A**	Explain about IPC using named pipes and unnamed pipes	**[8M]**
	B	Write the syntax for semop(), semget(), semcntl() system calls?Give example	**[6M]**

OR

8	**A**	List some APIs used for message queues and construct a sample code for Client – Server application using messages.	**[10M]**
	B	What is pipe? How to create a pipe?	**[4M]**

SECTION-V

9	**A**	Describe about API for shared memory with example	**[7M]**
	B	Explain the following socket APIs with syntax:i)socket()ii)bind() iii) listen()	**[7M]**

OR

10	A	Describe about kernel support for shared memory with example	[7M]
	B	What is socket address structure and compare various socket address structures?	[7M]

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Code No: **R18A0526**

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
IV B.Tech I Semester Supplementary Examinations, April 2024
Machine Learning
(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**	Discuss the concepts of Grouping and Grading in machine learning	**[7M]**
	B	Explain the concept of Bayesian Decision theory classification with example	**[7M]**

OR

2	**A**	What's the difference between Type I and Type II error?	**[7M]**
	B	List and explain methods for model selection and generalization.	**[7M]**

SECTION-II

3	**A**	Analyze the features of perception and multilayer perception	**[7M]**
	B	Express at least 5 differences between KNN and K-means Clustering?	**[7M]**

OR

4	**A**	What are some common Machine Learning problems that Unsupervised Learning can help with?	**[7M]**
	B	Elucidate the concept of Support Vector Machines in detail	**[7M]**

SECTION-III

5	**A**	Examine in detail about the variants of the AdaBoost Algorithm with an example	**[7M]**
	B	Discuss the concept of Efficient Distance Computations of KD-Tree features and practices	**[7M]**

OR

6	**A**	Illustrate the algorithm Expectation-Maximization (EM) in machine learning	**[7M]**
	B	What are the similarities and differences between Bagging, Boosting, Stacking?	**[7M]**

SECTION-IV

7	**A**	Demonstrate with an example on the concept of Convergence, and Updating Sequence in reinforcement learning	**[7M]**
	B	What are the key components of the PAC learning framework, such as sample complexity and error bounds?	**[7M]**

OR

8	**A**	What strategies can be employed to experiment with and fine-tune the Q Learning algorithm for different applications? how can they be optimized through experimentation?	**[7M]**
	B	How are Version Spaces used to represent uncertainty and ambiguity in the learning process, and how do they evolve as new data points are observed?	**[7M]**

SECTION-V

9 **A** What is the significance of population size in genetic algorithms? How does the choice of population size influence the exploration-exploitation trade-off during the evolutionary process? **[7M]**

   B Discuss the concept of Representing Hypotheses and the Genetic Operator usage in genetic algorithms **[7M]**

<div align="center">OR</div>

10 **A** Provide at least 3 examples of real-world applications where the combination of the Baldwin Effect, and write about Baldwin effect **[7M]**

   B What are the advantages and disadvantages of parallel processing in terms of achieving faster convergence and improved solution quality? **[7M]**

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
IV B.Tech I Semester Supplementary Examinations, April 2024
Software Testing Methodologies
(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	Define testing and explain the purpose of testing.	**[7M]**
	B	Illustrate consequences of Bug.	**[7M]**

OR

2	A	Explain the Model of testing with neat sketch.	**[7M]**
	B	Discuss in detail about Taxonomy of Bugs	**[7M]**

SECTION-II

3	A	Describe notational evolution of control flow graph with example.	**[7M]**
	B	What is meant by transaction flow testing? Discuss its significance with an example.	**[7M]**

OR

4	A	Define data flow model. Explain various components of data flow model.	**[7M]**
	B	State and explain various path selection rules	**[7M]**

SECTION-III

5	A	Differentiate domain and interface testing in detail.	**[7M]**
	B	Demonstrate the predicates of domain testing with examples	**[7M]**

OR

6	A	Compare the nice domains and ugly domains with suitable examples.	**[7M]**
	B	Explain clearly how one-dimensional domains are tested.	**[7M]**

SECTION-IV

7	A	Briefly explain about regular expressions and flow-anomaly detection	**[7M]**
	B	What is decision table and how is it useful in testing? Explain in detail.	**[7M]**

OR

8		Describe about path expression and KV charts in detail.	**[14M]**

SECTION-V

9	A	List and explain the principles of state testing. Explain its advantages and disadvantages.	**[7M]**
	B	Demonstrate the power of a matrix with an example	**[7M]**

OR

10	A	Differentiate the good state graphs and bad state graphs in detail.	**[7M]**
	B	Write in detail about graph matrices and their applications.	**[7M]**

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