R17

Code No: R17A0525

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

IV B.Tech I Semester Supplementary Examinations, April 2023

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*** Give an overview of file permissions in linux. **[7M]**

B Discuss about the backup utilities. **[7M]**

OR

2 ***A*** Write the syntax of „for‟ and „case‟ structures in Bash Shell and illustrate them with an example. **[7M]**

B Develop a shell program for counting the characters and words. **[7M]**

SECTION-II

3 ***A*** Elucidate about the record locking and its functions. **[7M]**

B What is a symbolic link? Give functions for creating and reading symbolic links. **[7M]**

OR

4 ***A*** Explain the following commands associated with directories: **[7M]**
a)mkdir, b) rmdir, c) chdir

B What command is used for translating characters? Also explain its options with examples. **[7M]**

SECTION-III

5 ***A*** What are process identifiers? Explain the commands for getting different IDs of a calling process. **[7M]**

B Define zombie process. Explain its importance. **[7M]**

OR

6 ***A*** Write short notes on unreliable signals. **[7M]**

B Explain the importance of alarm signal. **[7M]**

SECTION-IV

7 ***A*** Compare the IPC functionality provided by message queues and FIFOs. **[9M]**

B Explain the popen and pclose library functions. **[5M]**

OR

8 ***A*** Discuss in detail about the role of message queues in IPC. **[7M]**

B Write short notes on kernel support for semaphores. **[7M]**

SECTION-V

9 With the help of syntax and example, explain any three APIs for shared memory. **[14M]**

OR

10 ***A*** What is a socket? Explain its role in communication between client and server? **[8M]**

B Explain the following socket system calls, **[3M]**

(i) Accept **[3M]**

(ii) Shutdown.

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R17

Code No: R17A0526

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

IV B.Tech I Semester Supplementary Examinations, April 2023

Information Security

(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* Describe briefly about security attacks. **[7M]**

B Explain the five security services as defined by X 800. **[7M]**

OR

2 *A* The ciphertext C=”owteoiaia” was encrypted using the Hill Cipher with the key matrix: **[7M]**

$$\begin{bmatrix} 01 & 16 & 06 \\ 05 & 25 & 18 \\ 22 & 09 & 25 \end{bmatrix}$$

Decrypt the given cipher text C. (show step by step Process).

B Compare the Symmetric with Asymmetric key cryptography. **[7M]**

SECTION-II

3 *A* With a neat diagram, describe the AES encryption /decryption process. **[7M]**

B Differentiate between stream ciphers and block ciphers. **[7M]**

OR

4 *A* Summarize Diffie-Hellman Key exchange algorithm. **[7M]**

B Write RSA key generation algorithm. Perform encryption and decryption using the RSA algorithm, for p = 5; q = 11, e = 13;M = 6 **[7M]**

SECTION-III

5 *A* Explain simplified examples of the use of a hash function for message authentication with diagram. **[7M]**

B What are some threats associated with a direct digital signature scheme? **[7M]**

OR

6 *A* Write a short note on RC4. **[7M]**

B Explain the X.509 authentication procedures used in the applications. **[7M]**

SECTION-IV

7 *A* What are the reasons for wide usage of PGP? Explain the general format of PGP message. **[7M]**

B Why does PGP compress the message? What are the reasons for compressing the signature before encryption? **[7M]**

OR

8 *A* Sketch the IP Security architecture and explain it. **[7M]**

B Discuss in detail encapsulating security payload. **[7M]**

SECTION-V

9 ***A*** What is Intrusion? Discuss Intrusion detection system with neat diagram. **[7M]**

B What are the various virus counter measures? **[7M]**

OR

10 ***A*** Explain secure inter branch payment transactions. **[9M]**

B Write a short note on firewall design principles and types of firewalls. **[5M]**

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R17

Code No: R17A0527

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

IV B.Tech I Semester Supplementary Examinations, April 2023

Cloud Computing

(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*** Explain the cloud computing platform models. **[7M]**

B Write a short note on Performance Metrics and Scalability Analysis of Distributed systems. **[7M]**

OR

2 ***A*** Write a note on Cluster Job scheduling and management. **[7M]**

B Write a short note on Fault-Tolerant Cluster mechanism. **[7M]**

SECTION-II

3 ***A*** Discuss in detail about the OS level virtualization. **[7M]**

B List out the challenges to be faced during virtualization in Multi-Core Processors. **[7M]**

OR

4 ***A*** Give the details about the VMM Design Requirements and Providers. **[7M]**

B Outline the CPU virtualization and Memory virtualization with neat sketch. **[7M]**

SECTION-III

5 ***A*** List out the seven step migration model in Cloud. **[7M]**

B Classify the cloud computing services. **[7M]**

OR

6 ***A*** Design the architecture of Aneka framework and describe Aneka integration of private and public cloud. **[7M]**

B What are the features of a cloud? **[7M]**

SECTION-IV

7 Discover the various VM migration techniques and explain in detail. **[14M]**

OR

8 ***A*** Explain the scenario of ConVirt deployment. **[7M]**

B Describe the Regular/Cold Migration of VM. **[7M]**

SECTION-V

9 ***A*** Discuss about the Google APP Engine. Find the features of APP engine. **[7M]**

B Explain the Centralizing email Communications in SaaS. **[7M]**

OR

10 ***A*** Discuss about data security risks in cloud. **[7M]**

B Explain how digital identity can overcome these risks. **[7M]**

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R17

Code No: R17A0524

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

IV B.Tech I Semester Supplementary Examinations, April 2023

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***	Differentiate operational database systems and data warehousing	**[7M]**
	B	With a neat sketch, Explain three tier architecture of data ware housing.	**[7M]**
		OR	
2	***A***	Discuss the various data warehousing models.	**[7M]**
	B	Explain about ROLAP and MOLAP.	**[7M]**

SECTION-II

3	***A***	With the help of architecture diagram explain different components involved in typical data mining system.	**[7M]**
	B	How to classify data mining systems?	**[7M]**
		OR	
4	***A***	Why do we pre-process the data?	**[7M]**
	B	Describe the data reduction and its strategies.	**[7M]**

SECTION-III

5	***A***	Write about basic concept in Association Rule Mining.	**[7M]**
	B	Discuss about basic concepts of frequent item set mining.	**[7M]**
		OR	
6		Write and explain the algorithm for mining frequent item sets without candidate generation. Give relevant example	**[14M]**

SECTION-IV

7	***A***	Differentiate classification and prediction.	**[7M]**
	B	How does the Naive Bayesian classification works?	**[7M]**
		OR	
8	***A***	Write an algorithm for k-nearest neighbor classification given k, the nearest number of neighbors, and n, the number of attributes describing each tuple.	**[7M]**
	B	Explain different parameters called in Decision Tree Induction algorithm	**[7M]**

SECTION-V

9	***A***	How to access the cluster quality?	**[7M]**
	B	Write k-medoids algorithm for partitioning based on medoid or central objects.	**[7M]**
		OR	
10	***A***	Identify the key issue in hierarchical clustering algorithm.	**[7M]**
	B	What are outliers? Discuss the any one methods adopted for outlier detection.	**[7M]**

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R17

Code No: R17A1204

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

IV B.Tech I Semester Supplementary Examinations, April 2023

Artificial Intelligence

(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*** Explicate the different views of Artificial Intelligence in the following approaches: i. Acting humanly ii. Acting rationally. **[7M]**

B Sketch the Agents and Environments in Artificial Intelligence and explain it. **[7M]**

OR

2 ***A*** Enumerate Classical “Water jug Problem”. Describe the state space for this problem and also give the solution. **[7M]**

B Discuss the Depth First search Technique with the help of an example. **[7M]**

SECTION-II

3 ***A*** What is AND graph and OR graph? Explain A* algorithm with example. **[7M]**

B Outline the effectiveness of alpha-beta pruning. **[7M]**

OR

4 ***A*** Explain in detail about logical agents with example. **[7M]**

B Explain in detail about backward chaining algorithm with example. **[7M]**

SECTION-III

5 Describe the knowledge representation techniques. **[14M]**

OR

6 Discuss briefly about Bayesian probability. **[14M]**

SECTION-IV

7 ***A*** Illustrate the learning in problem solving. **[7M]**

B Elucidate the Rote learning. **[7M]**

OR

8 How the performance of a learning algorithm is assessed? Draw a learning curve for the decision tree algorithm. **[14M]**

SECTION-V

9 ***A*** Write short notes on Expert systems. **[7M]**

B Explain Advantages and limitations of Expert systems. **[7M]**

OR

10 ***A*** Explain the rule based knowledge system. **[7M]**

B Design an expert system for travel recommendation and discuss its roles. **[7M]**

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