Code No.: 50H13

MR15(2016-17-Batch)

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2019

Subject: **MANAGEMENT SCIENCE**

Branch: Common to **EEE,ECE,CSE**

Time: 3 hours **Max. Marks: 60**

Answer ALL questions of the following **5x12 M= 60M**

1. a) Define the importance of management and write the various challenges faced by the manager.
   b) Explain the scientific management theory.

OR

2. Why management needed and write Fayol's principles of management.
3. Discuss in detail Functional Organization structure with diagram.

OR

4. a) What is Matrix organization?
   b) Write the differences between formal and informal organization.
5. Explain the concept of Statistical Quality Control and how you can construct control chat for variables?

OR

6. a)What is the need of classifying inventories?
   b)What do you understand by Acceptance Sampling? Explain the concept of Single and Double sampling plans.
7. Discuss various methods used for performance appraisal, job evaluation and merit rating.

OR

8. a)Explain the Placement Procedure in the Organization.
   b) Write steps in strategy formulation and implementation.
9. a)What is Project Management, explain the nature of cost and time in project.
   b) Explain Just-in-time system.

OR

10. a) Write a short note on MIS.
    b) Discuss six sigma.

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IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2019

Subject: **LINUX PROGRAMMING**

Branch: CSE

Time: 3 hours **Max. Marks: 60**

Answer ALL questions of the following **5x12 M= 60M**

1. a) What is process? Explain in detail about any two process related utilities.
   b) Brief explain about AWK scripts with examples.

   OR
2. a) Explain the architecture of unix Operating System with neat diagram.
   b) Explain security by file permissions and disk utilities.
3. a) Discuss with an example how test command is used in shell scripts.
   b) Discuss how arithmatic operations on intergers and real numbers are performed in shell scripts?

   OR
4. a) Write a shell shift to count the number lines, words and characters in a given file.
   b) Explain about shell looping statements with examples?

5. a) Explain the usage of file locking with an example.
   b) Discuss kernel support for process.

   OR
6. a) Write about File API's.
   b) Write about file types and file descriptors.
7. Discuss in detail about Unix System V APIs for message queues.

   OR
8. a) What is Signal Handler? Explain how to install a Signal Handler.
   b) Elaborate the concept of message queues in IPC.
9. a) What is Semaphore and explain why it is used as an IPC mechanism?
   b) Explain the socket addressing related system calls with examples.

   OR
10. Briefly discuss connection oriented and connectionless protocol with an example.

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IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2019

Subject: **DATA MINING & DATA WAREHOUSING**

Branch: **CSE**

Time: 3 hours **Max. Marks: 60**

Answer ALL questions of the following **5x12M=60 M**

1. a) Explain in brief about the issues in Data Mining Systems?
   b) Why do we need Data Preprocessing? Explain in brief about major tasks in Data Preprocessing

OR

2. a) Suppose that X and Y are the first two term frequency vectors X=(5,0,3,0,2,0,0,2,0,0) and Y=(3,0,2,0,1,1,0,1,0,1) .Compute the similarity between two vectors using Cosine similarity measure.
   b) Describe two ways to normalize the data? How does normalize influence the ranking of data.
3. a) Explain the implementation of Data warehouse.
   b) What are the differences between concept description in large data bases and OLAP?

OR

4. a) Suppose that the data for analysis include the attribute age. The age values for the data tuples are 13,15, 16, 16, 19, 20, 20, 21, 22, 22, 25, 25, 25, 25, 30, 33, 33, 35, 35, 35, 35, 36, 40, 45, 46, 52, 70.
      i) What is the mean of the data and what is median.
      ii) What is the mid range of data?
      iii) Give the five number summary of data.
   b) Suppose that the data for analysis include the attribute age. The age values for the data tuples are 13,15, 16, 16, 19, 20, 20, 21, 22, 22, 25, 25, 25, 25, 30, 33, 33, 35, 35, 35, 35, 36, 40, 45, 46, 52, 70.
      i) Show a box plot of the data.
      ii) How is a quantile-quantile plot different from quantile plot?
5. a) Which algorithm is used for discovering frequent item sets without candidate generation? Explain it with an example?
   b) Discuss in brief about constraint based mining?

OR

6. Strong association rules are not necessarily interesting: Justify.
7. Write the issues regarding classification and prediction.

OR

8. a) Explain the concept of Support Vector Machine.
   b) Explain Fuzzy set approach.
9. What is K-means algorithm? Suppose that the data mining task is to cluster the following eight points in to three clusters. $A_1(2,10)$ $A_2(2,5)$ $A_3(8,4)$ $B_1(5,8)$ $B_2(7,5)$ $B_3(6,4)$ $C_1(1,2)$ $C_2(4,9)$ .The distance function is Euclidean distance Suppose initially A_1, B_1,C_1 are assigned as the center of each cluster ,respectively .Use K means algorithms to show only
      (i) The Three cluster centers after the first round of execution and
      (ii) The final Three clusters

OR

10. Write about partitioning methods.

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IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2019

Subject: **ADVANCED COMPUTER ARCHITECTURE**

Branch: **CSE**

Time: 3 hours **Max. Marks: 60**

Answer ALL questions of the following **5x12M=60 M**

1. a) Define GPU and list the benefits of GPU.
   b) Explain CPU-GPU synchronization.

OR

2. Explain the following with respect to shared memory.
   a) Uniform Memory Access
   b) Non-uniform Memory Access
3. Explain any three functions related to cuBLAS.

OR

4. a) Summarize the significance features of cuRAND libraries.
   b) List the steps to accelerate the CUDA applications.
5. a) Explain the step-by-step procedure of installing CUDA toolkit on Windows. [7M]
   b) Write about shared memory usage in CUDA. [5M]

OR

6. Write a CUDA program to add two numbers.
7. How does constant memory works in GPU?

OR

8. "A kernel scales across any number of parallel processors" – Justify with an example.
9. Write about overlapping of CPU and GPU tasks.

OR

10. Explain the atomic add operation with an example program.

Code No.: 50541 **MR15**

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IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2019

Subject: **CLOUD COMPUTING**

Branch: **CSE**

Time: 3 hours **Max. Marks: 60**

Answer ALL questions of the following **5x12 M= 60M**

1. Why Cloud Computing Matters?

OR

2. a) What are the key characteristics of cloud computing?
   b) Write the advantages of cloud computing.

3. Explain various Cloud Services Development Services and Tools in detail.

OR

4. a) Give the features of IBM Cloud.
   b) Write about Data center virtualization.

5. Draw and explain the cloud computing security architecture with neat sketch.

OR

6. Explain about trusted cloud computing.

7. Explain in detail the concept of Cloud Computing for the Corporation.

OR

8. Explain how cloud computing is useful in preparation of collaboration on schedules.

9. Describe the architectural design of Google app engine.

OR

10. Briefly explain case study of Salesforce.com CRM.

Code No.: 50551 **MR15**

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IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2019

Subject: **DATABASE SECURITY**

Branch: CSE

Time: 3 hours **Max. Marks: 60**

Answer ALL questions of the following **5x12 M= 60M**

1. Explain the role of Database Auditing in database access and user activity.

OR

2. a) Identify and discuss on Database Security Problems.
   b) Explain briefly on Database Inference.

3. a) Demonstrate the Biba Integrity Model and its features.
   b) Explain the importance of Sea View formal security policy model for a multilevel secure relational database system.

OR

4. a) Explain the Security functionalities of Some Operating System.
   b) Recognize and discuss briefly on Trusted Computer System Evaluation Criteria (TCSEC) in Database Security.

5. Explain about DBMS design security package.

OR

6. Outline the Security Concerns on OS design level.

7. Explain the RETISS System application in human motion system.

OR

8. Explain the fundamentals of Statistical DB Protection.

9. Discuss about the core concepts of SORION model for the protection of Object Oriented Database.

OR

10. With a neat sketch explain the basic concepts of ORION authorization model and elaborate its components and architecture.

Code No.: **50543**

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IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2019

Subject: **MOBILE COMPUTING**

Branch: **CSE**

Time: 3 hours **Max. Marks: 60**

Answer ALL questions of the following **5x12M=60 M**

1. a) Discuss novel applications of mobile computing.

   b) If a normal GSM time slot consists of six trailing bits, 8.25 guard bits, 26 training bits and two traffic bursts of 58 bits of data. Find the frame efficiency.

OR

2. a) Explain localization and handover techniques/mechanisms in GSM.

   b) Discuss the protocol architecture of GSM.

3. What is multiple access? Describe TDMA frame structure in detail.

OR

4. a) Discuss in detail the multiple access with collision avoidance techniques.

   b) What are the motivations for a specialized MAC?

5. a) Compare Mobile IP and Cellular IP.

   b) Draw the architecture of DHCP? Explain.

OR

6. a) Explain the basic requirements of mobile IP.

   b) Discuss tunneling and encapsulation process in mobile IP.

7. a) Explain snooping TCP. What are its advantages and disadvantages?

   b) What are the strengths and weakness of classical solutions for TCP?

OR

8. Compare several enhancements to TCP for mobility giving their relative advantages and disadvantages.

9. a) Distinguish between Push based and Pull based data delivery mechanisms.

   b) Describe hybrid data dissemination mechanisms. List its advantages.

OR

10. Explain web cache maintenance in mobile environment.

Code No.: **50564**

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IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2019

Subject: **ARTIFICIAL INTELLIGENCE**

Branch: **CSE**

Time: 3 hours **Max. Marks: 60**

Answer ALL questions of the following **5x12M=60 M**

1. Consider trying to solve the 8-puzzle using hill climbing. Can you find a heuristic function that makes this work? Make sure it works on the following example:

Start

1	2	3
8	5	6
4	7	

Goal

1	2	3
4	5	6
7	8	

OR

2. Explain production system characteristics.
3. Translate these sentences into formulas in predicate logic.

   John likes all kinds of food.
   Apples are food.
   Chicken is food.
   Anything anyone eats and isn't killed-by is food.
   Bill eats peanuts and is still alive.
   Sue eats everything Bill eats.

   Convert the translated formulas into clauses. Prove that John likes peanuts using resolution.

OR

4. Represent the following sentences in first-order logic, using a consistent vocabulary (which you must define):
   i. Not all students take both History and Biology.
   ii. Only one student failed History.
   iii. Only one student failed both History and Biology.
   iv. The best score in History was better than the best score in Biology.
   v. Every person who dislikes all vegetarians is smart.
   vi. No person likes a smart vegetarian.
5. Explain Bayesian Network with an example.

OR

6. Write in detail about the rule based systems. Give examples.
7. Illustrate the goal stack planning process with an example.

OR

8. a) Differentiate forward planning and backward planning with an example.
   b) Compare search and planning.
9. a) Explain about Robot architecture.
   b) Explain about expert system shells.

OR

10. Write about a) Learning by chunking b) Learning with macro operators.

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IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2019

Subject: **MACHINE LEARNING**

Branch: **CSE**

Time: 3 hours **Max. Marks: 60**

Answer ALL questions of the following **5x12M=60 M**

1. a) Discuss the issues in machine learning.
   b) Illustrate general-to-specific ordering of hypothesis in concept learning.

OR

2. a) Explain Candidate-elimination learning algorithm using version spaces.
   b) Briefly explain Find-S algorithm.
3. Present the basic ID3 algorithm for learning decision trees and illustrates its operations in detail.

OR

4. a) What is case-based reasoning?
   b) What is mistake bound model learning?
5. a) Illustrate k-nearest neighbor algorithm for classification.
   b) Discuss the significance of locally weighted regression.

OR

6. a) How do you use prior knowledge to initialize hypothesis?
   b) Explain Gibbs algorithm.
7. Explain the Prolog-EBG remarks on explanation-based learning.

OR

8. a) Explain general to specific beam search.
   b) Explain inverting resolution.
9. a) What are the inductive-analytical approaches to learning with hypothesis space search?
   b) Brief on Q learning.

OR

10. Explain briefly EBNN algorithm.