AR18

CODE: 18IET331 **SET-2**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

III B.Tech II Semester Regular Examinations, Sep/Oct- 2021

HRD & ORGANIZATIONAL BEHAVIOR

(Interdisciplinary Elective – III)

Time: 3 Hours **Max Marks: 60**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	Define Human resource development. Distinguish between HRM and HRD with its key important concepts.	6 M
	b)	What is training? Explain the various types of training method useful for organization development.	6 M
		(OR)	
2.	a)	Define task analysis. Explain the various steps of task analysis to measure the performance of organization.	7 M
	b)	How to design a HRD programme? Explain.	5 M

UNIT-II

3.	a)	Discuss organizational strategies to improve the effectiveness of human resources.	5 M
	b)	Explain the various characteristics of effective employee counselling.	7 M
		(OR)	
4.	a)	How could we manage the stress levels of employees? Explain.	6 M
	b)	Explain the issues concerned to employee counselling.	6 M

UNIT-III

5.	a)	What is global assignment? Distinguish between expatriation and repatriation.	5 M
	b)	How could we measure the performance of employees? Illustrate the key performance areas.	7 M
		(OR)	
6.	a)	Explain the impact of globalization in human resource development.	5 M
	b)	Explain global staffing. Explain classification of International employee.	7 M

UNIT-IV

7.	a)	What is organization behaviour? Discuss the nature of organization behaviour.	5 M
	b)	Define learning? Explain the process of learning with example. What is concept learning?	7 M
		(OR)	
8.	a)	Define personality. Discuss the factors affecting the personality.	6 M
	b)	How does perception affect the organizational processes? What role does perception play in the field of organization behaviour?	6 M

UNIT-V

9.	a)	Define organization change. Explain the different types of change process.	5 M
	b)	Explain the Kurt Lewin's Change Model on unfreezing, changing and refreezing with suitable examples.	7 M
		(OR)	
10.	a)	How to deal with individual and group resistance? Explain.	6 M
	b)	Discuss the various intervention strategies implementing in organizational change.	6 M

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AR18

CODE: 18IET332 **SET-2**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

III B.Tech II Semester Regular Examinations, Sep/Oct- 2021

ENVIRONMENTAL IMPACT ASSESSMENT

(Interdisciplinary Elective – III)

Time: 3 Hours **Max Marks: 60**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	Determine how Environmental Base maps are prepared.	6M
	b)	List and describe the content of Environmental Impact Assessments.	6M
		(OR)	
2.	a)	Examine how IEE is made for an ideal segregation of projects.	5M
	b)	Categorize the different limitations that arbitrate during impact evaluation and analysis of projects.	7M

UNIT-II

3.	a)	Evaluate for the given four highway alternatives assuming suitable impact areas and data for actions, select the most suitable alternative route using matrix method.	7M
	b)	Determine how cost/benefit analysis is useful for a project.	5M
		(OR)	
4.	a)	Interpret what are the environmental media indices of water quality? Explain in detail.	7M
	b)	Justify the criteria for the selection of EIA methodology.	5M

UNIT-III

5.	a)	Assess the impacts on wildlife and vegetation by coal mining activity.	6M
	b)	What are the harmful effects of air pollution on ecosystems? Determine their mitigation methods.	6M
		(OR)	
6.	a)	Measure the environmental impacts on fauna and suggest mitigation measures.	6M
	b)	Interpret the causes and environmental impacts by deforestation.	6M

UNIT-IV

7.	a)	Develop a detailed audit protocol to a Thermal Power Plant.	5M
	b)	Prepare an environmental audit report to a Paper and Pulp mill.	7M
		(OR)	
8.	a)	Discuss about the evaluation of audit data and post audit activities.	8M
	b)	Explain the advantages of Environmental Audit.	4M

UNIT-V

9.	a)	Determine the major objectives and provisions of MV act.	4M
	b)	Develop a detailed EIS report by stating the environmental impacts for a thermal project.	8M
		(OR)	
10.	a)	Explain the detailed provisions of water act.	4M
	b)	Discuss the planning and management of Environmental Impact Assessment studies of any proposed project.	8M

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AR18

CODE: 18IET335 **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

III B.Tech II Semester Regular Examinations, Sep/Oct- 2021

ELEMENTS OF WORKSHOP TECHNOLOGY

(Interdisciplinary Elective – III)

Time: 3 Hours **Max Marks: 60**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	Explanation of manufacturing processes.	4M
	b)	At least four basic workshop processes and their applications.	8M
		(OR)	
2.		Classify the manufacturing process and explain any three manufacturing process.	12M

UNIT-II

3.	a)	Draw and explain at least four cutting Tools in carpentry.	6M
	b)	What is differences between marking gauge and mortise gauge.	6M
		(OR)	
4.	a)	Explanation (i) Boring Tools (ii) Striking tools.	6M
	b)	Draw and explain two types of joints used in carpentry.	6M

UNIT-III

5.	a)	How many types of punches are used in Fitting shop. Describe centre punch with the help of a neat sketch.	8M
	b)	What precautions are to be taken while filing.	4M
		(OR)	
6.	a)	Explanation (i) Drilling (ii) Reaming (iii) Tapping.	6M
	b)	Draw and explain different cutting tools used in fitting.	6M

UNIT-IV

7.	a)	Why heat treatment is necessary for forging.	4M
	b)	Explain with neat sketches of any four tools used in forging.	8M
		(OR)	
8.	a)	Sketch and show the difference between hand hammers and sledge hammers.	6M
	b)	Explain with neat sketch Upsetting and Bending operations.	6M

UNIT-V

9.	a)	Explain the function of (i) Snip (ii) Stake (iii) Hand hammer.	6M
	b)	Describe sheet metal working operations (i) Shearing (ii) Bending.	6M
		(OR)	
10.	a)	What are the common hand tools Used in sheet metal work? Explain briefly.	6M
	b)	State the difference between straight snip and curved snip.	6M

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CODE: 18IET338 **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

III B.Tech II Semester Regular Examinations, Sep/Oct- 2021

SIMULATION AND MODELING

(Interdisciplinary Elective – III)

Time: 3 Hours **Max Marks: 60**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	What do you mean by System Modelling? Write difference between Continuous and Discrete Systems.	6M
	b)	Explain Principles in Modelling.	6M
		(OR)	
2.	a)	Define Simulation? Draw a neat flow chart and Explain various steps in simulation study	6M
	b)	What is the difference between static and Dynamic model? Give examples	6M

UNIT-II

3.	a)	Explain Continuous System Simulation Languages.	6M
	b)	Explain Monte Carlo Method?	6M
		(OR)	
4.	a)	Write the differences between Analog and Hybrid Computers	6M
	b)	What is Distributed Lag Model.	6M

UNIT-III

5.	a)	Explain Generation of a Random number, State Properties of a Random Number	6M
	b)	Explain Continuous Probability Distributions.	6M
		(OR)	
6.	a)	State Exponential Growth and Decay Models.	6M
	b)	Define System Dynamics Diagrams?	6M

UNIT-IV

7.	a)	What is Simulation of a Single server Queue and Two Server Queue?	6M
	b)	State Poisson distribution and Exponential Distribution.	6M
		(OR)	
8.	a)	What is Queuing Model? Explain Normal Distribution Queuing.	6M
	b)	State the following a)Recording Distributions b)Transit times.	6M

UNIT-V

9.	a)	State Program Control statements in GPSS with an Example.	6M
	b)	What is SIMSCRIPT? Explain with an example.	6M
		(OR)	
10.	a)	Explain Succession of events with an example.	6M
	b)	What is GPSS? List Few advantages and Disadvantages of GPSS.	6M

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CODE: 18IET339 **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

III B.Tech II Semester Regular Examinations, Sep/Oct- 2021

FUNDAMENTALS OF IMAGE PROCESSING

(Interdisciplinary Elective – III)

Time: 3 Hours **Max Marks: 60**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	What is image processing? Explain various applications in image processing.	6M
	b)	Explain the components of image processing with neat diagram	6M
		(OR)	
2.	a)	What is pixel? Explain the basic relationships between pixels.	6M
	b)	Explain about image sampling and Quantization	6M

UNIT-II

3.	a)	What is image enhancement and why it is important?	6M
	b)	Explain the point processing techniques in image enhancement?	6M
		(OR)	
4.	a)	What is the histogram? Why histogram equalization is used in image processing?	6M
	b)	What is filtering in image processing? and explain following filter techniques BOX filter, Smoothing Linear Filters, Median filters, Sharpening Filters	6M

UNIT-III

5.	a)	What are the different types of compression techniques?	6M
	b)	What is meant by error free compression? Explain the variable length coding.	6M
		(OR)	
6.	a)	Draw the general compression system model & Explain?	6M
	b)	Explain following error free compression techniques LZW coding and Huffman coding.	6M

UNIT-IV

6.	a)	What is Morphology? And explain convex hull	6M
	b)	Explain the following Morphology operations with example i) Dilation ii) Closing.	6M
		(OR)	
8.	a)	Write about the importance of Hit-or-Miss morphological transformation operation on a digital binary image	6M
	b)	Explain the following Morphology operations with example i) Erosion ii) Opening	6M

UNIT-V

9.	a)	What is image segmentation? What are the applications of image segmentation?	6M
	b)	What are the derivative operators useful in image segmentation? Explain their role in segmentation	6M
		(OR)	
10.		What is segment and explain the following features of Point, Line, Edge segmentation	12M

AR18

CODE: 18IET33A **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

III B.Tech II Semester Regular Examinations, Sep/Oct- 2021

ADVANCED CODING – II

(Interdisciplinary Elective – III)

Time: 3 Hours **Max Marks: 60**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1. a) Define Recursion. How to implement the Recursion and write its applications. 6M
   b) Discuss the Binary Search with Suitable Example and Derive the Time complexity. 6M

(OR)

2. a) Solve the **PEAK ELEMENT** problem. 6M
   A peak element is an element that is strictly greater than its neighbours.
   Given an integer array numbers, find a peak element, and return its index. If the array contains multiple peaks, return the index to any of the peaks.
   Example :
   Input: nums = [1,2,1,3,5,6,4] **Output:** 5
   b) Solve the **GUESS HIGHER OR LOWER** problem. 6M
   We are playing the Guess Game. The game is as follows:
   I pick a number from 1 to n. You have to guess which number I picked.
   Every time you guess wrong, I will tell you whether the number I picked is higher or lower than your guess.
   Example :
   Input: n = 10, pick = 6 **Output:** 6

UNIT-II

3. a) Explain the algorithm for Merge sort and give a suitable example and derive the Time Complexity. 6M
   b) Demonstrate about Open addressing and Separate chaining with suitable Example. 6M

(OR)

4. a) Solve the **Sort Colors** Problem. 6M
   Given an array numbers with n objects colored red, white, or blue, sort them in-place so that objects of the same color are adjacent, with the colors in the order red, white, and blue. We will use the integers 0, 1, and 2 to represent the color red, white, and blue, respectively.
   Example :
   Input: nums = [2,0,2,1,1,0] **Output:** [0,0,1,1,2,2]
   b) Solve the **Largest Number** problem. 6M
   Given a list of non-negative integers nums, arrange them such that they form the largest number. **Note:** The result may be very large, so you need to return a string instead of an integer.
   Example:
   Input: nums = [3,30,34,5,9] **Output:** "9534330"

UNIT-III

5. a) Define Graph. Discuss about Representation of Graph with example. 6M
   b) Define Binary tree. Explain Tree traversal with suitable example. 6M

(OR)

6. a) Develop a binary search tree resulting after inserting the following integer keys 49, 27, 12, 11, 33, 77, 26, 56, 23, 6. 6M
      (i) Check whether the tree is almost complete or not?
      (ii) Determine the height of the tree
      (iii) Write post order and preorder traversals.
   b) Write a pseudo code for **SAME TREE** problem. 6M
   Given the roots of two binary trees p and q, write a function to check if they are the same or not. Two binary trees are considered the same if they are structurally identical, and the nodes have the same value.
   Example:
   Input: p = [1,2,3], q = [1,2,3] **Output:** true

UNIT-IV

7. a) Explain KMP algorithm with Suitable Example. 6M
   b) Discuss Dijkstra's Algorithm with suitable example. 6M

(OR)

8. a) Solve the **Two City Scheduling** problem. 6M
   A company is planning to interview 2n people. Given the array costs where costs[i] = [aCosti, bCosti], the cost of flying the ith person to city a is aCosti, and the cost of flying the ith person to city b is bCosti.
   Return the minimum cost to fly every person to a city such that exactly n people arrive in each city.
   Example:
   Input: costs = [[10,20],[30,200],[400,50],[30,20]] **Output:** 110
   b) Solve the **Repeated String Match** problem. 6M
   Given two strings a and b, return the minimum number of times you should repeat string a so that string b is a substring of it. If it is impossible for b to be a substring of a after repeating it, return -1.
   Example:
   Input: a = "abcd", b = "cdabcdab" **Output**: 3

UNIT-V

9. a) Write a procedure for solving problem with Dynamic programming and Compare and contrast between Bottom - up DP, Top-Down DP. 6M
   b) Demonstrate 0/1 Knapsack problem with suitable example. 6M

(OR)

10. a) Solve the **Longest common Sub Sequence** problem. 6M
   Given two sequences, find the length of longest subsequence present in both of them. A subsequence is a sequence that appears in the same relative order, but not necessarily contiguous.
   Example:
   Input: text1 = "abcde", text2 = "ace" **Output:** 3
   b) Write a difference between Greedy approach and Dynamic programming. 6M

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AR18

CODE: 18IET33B **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

III B.Tech II Semester Regular Examinations, Sep/Oct- 2021

COMPETITIVE PROGRAMMING - II

(Interdisciplinary Elective – III)

Time: 3 Hours **Max Marks: 60**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	Discuss how to sort elements using merge sort with suitable example. Write an algorithm for merge sort.	6M
	b)	Define searching. Discuss linear search technique with algorithm and suitable example.	6M
		(OR)	
2.	a)	Discuss how to sort elements using quick sort with suitable example. Write an algorithm for quick sort.	6M
	b)	Define searching. Discuss binary search technique with algorithm and suitable example.	6M

UNIT-II

3.	a)	Write an algorithm to delete an element anywhere from singly linked list and also explain applications of singly linked list.	6M
	b)	Explain the operations on simple stack with algorithms. Explain applications of stack.	6M
		(OR)	
4.	a)	Write an algorithm to delete an element anywhere from doubly linked list and also explain applications of doubly linked list.	6M
	b)	Explain the operations performed on queue with algorithms and applications.	6M

UNIT-III

5.	a)	Define a tree. Explain tree terminology and applications.	6M
	b)	Define binary search tree. Show how to insert and delete an element from BST.	6M
		(OR)	
6.	a)	What is a graph? Explain graph representations.	6M
	b)	Explain BFS and DFS with suitable examples.	6M

UNIT-IV

7.	a)	Explain the syntax of SELECT, CREATE, INSERT and DELETE of SQL?	6M
	b)	Explain SQL data types, Operators and functions.	6M
		(OR)	
8.	a)	Design an ER diagram for the Students data system taking in account atleast four entities.	6M
	b)	Present some popular applications of database systems and role of databases.	6M

UNIT-V

9.	a)	What are different types of JOINS? Explain in detail.	6M
	b)	Explain subquery and correlated subquery with suitable example.	6M
		(OR)	
10.	a)	Give a set. Of FDs for the relation schema R(A,B, C,D) with primary key AB under which R is in 1NF but not in 2NF.	6M
	b)	What is Structural query language? Explain its advantages and disadvantages?	6M

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AR16

CODE: 16OE3042 **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

III B.Tech II Semester Regular & Supplementary Examinations, Sep/Oct-2021

NATURAL DISASTER MANAGEMENT

(Open Elective – IV)

Time: 3 Hours **Max Marks: 70**

Answer ONE Question from each Unit
Each Questions Carry 14 Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	Explain what is the disaster and Write the types of the disasters	7M
	b)	Write Disaster characteristics	7M
		(OR)	
2.	a)	Explain causes and efforts of disasters	7M
	b)	Explain briefly disaster profile of India	7M

UNIT-II

3.	a)	Write the distribution pattern of Natural Disasters	7M
	b)	Explain Manmade Disaster	7M
		(OR)	
4.		Write consequences and mitigation measures for Earthquakes, Tsunami, Cyclone	14 M

UNIT-III

5.		Write about disaster preparedness and its concept and nature	14M
		(OR)	
6.		Explain disaster preparedness plan for people and infrastructure	14M

UNIT-IV

7.	a)	Write about disaster mitigation and concept	7M
	b)	Explain Disaster Mitigation Strategies	7M
		(OR)	
8.		Write Emerging Trends in Disaster Mitigation	14M

UNIT-V

9.	a)	Write the Rehabilitation and Reconstruction for development	7M
	b)	Explain Damage Assessment	7M
		(OR)	
10.		Write about long term Counter disaster planning	14M

AR16

CODE: 16OE3043 **SET-2**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

III B.Tech. II Semester Supplementary Examinations, Sep/Oct, 2021

SPECIAL MACHINES

(Open Elective – IV)

Time: 3 Hours **Max Marks: 70**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	Explain different power converter configurations for switched reluctance motor?	CO1-K1(**7M**)
	b)	What are the advantages and disadvantages of Switched reluctance motors	CO1-K1(**7M**)
		(OR)	
2.	a)	Explain the principle of operation of Switched Reluctance Motors	CO1-K1(**10M**)
	b)	What are the applications of Switched reluctance motors	CO1-K1(**4M**)

UNIT-II

3.	a)	Explain the operation of stepper motor.	CO2-K1(**10M**)
	b)	List out areas of applications and suitability of stepper motors?	CO2-K1(**4M**)
		(OR)	
4.	a)	Describe hybrid stepper motor?	CO2-K2(**10M**)
	b)	Explain Open loop control of stepper motor.	CO2-K2(**4M**)

UNIT-III

5.	a)	Explain the construction details of BLDC motor?	CO3-K2(**10M**)
	b)	What are the advantages and disadvantages of Brushless DC machines	CO3-K1(**4M**)
		(OR)	
6.		Explain operation of brushless dc motor as variable speed synchronous motor	CO3-K2(**14M**)

UNIT-IV

7.	a)	Explain the principle of operation of a linear induction motor?	CO4-K2(**7M**)
	b)	What are the applications of Linear Induction Motor?	CO4-K1(**7M**)
		(OR)	
8.	a)	What is hysteresis loop? How permanent magnets can be selected for dc motor.	CO4-K2(**8M**)
	b)	What are the advantages and disadvantages of permanent magnets dc motor	CO4-K1(**6M**)

UNIT-V

9.	a)	Compare AC and DC traction systems and what are merits and demerits	CO5-K1(**7M**)
	b)	Explain clearly single sided linear induction motor for the application of traction drive?	CO5-K2(**7M**)
		(OR)	
10.	a)	Compare AC and DC traction systems.	CO5-K1(**7M**)
	b)	What is the selection criterion of motors for electric traction application? Explain.	CO5-K3(**7M**)

AR16

CODE: 16OE3044 **SET-2**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

III B.Tech. II Semester Supplementary Examinations, Sep/Oct, 2021

INTRODUCTION TO AUTOMOBILE ENGINEERING

(Open Elective – IV)

Time: 3 Hours **Max Marks: 70**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	Explain briefly the components of four-wheeler automobile	7M
	b)	Explain splash lubrication system with neat sketch	7M
		(OR)	
2.	a)	Compare the merits of front wheel drive vehicle with rear engine wheel drive vehicles.	4M
	b)	Explain pressure lubrication system with neat sketch	10M

UNIT-II

3.	a)	How can the starting difficulty with simple carburettor to be overcome	7M
	b)	Explain pressure fuel feed system in petrol engine with neat sketch	7M
		(OR)	
4.	a)	What is the function of fuel injection system?	4M
	b)	Explain the mechanism of jerk type of fuel injection pump with detail sketch	10M

UNIT-III

5.	a)	Explain the reasons for cooling of an engine	4M
	b)	Explain electronic ignition system with a neat diagram.	10M
		(OR)	
6.	a)	What are the functions of ignition system in automobile?	7M
	b)	Describe with a neat sketch the working of air-cooled system	7M

UNIT-IV

7.	a)	What is the function of clutch?	4M
	b)	Explain the construction and operation of a Constant mesh gear box with the help of a neat sketch	10M
		(OR)	
8.	a)	What is the function of gear box?	4M
	b)	Explain the construction and operation of a sliding mesh gear box with the help of a neat sketch	10M

UNIT-V

9.	a)	What is the role of steering in automobile?	4M
	b)	Explain with a neat sketch Davis steering gear mechanism	10M
		(OR)	
10.	a)	What are the objectives of suspension system?	7M
	b)	Explain with a neat sketch the working of hydraulic braking system	7M

AR16

CODE: 16OE3046 **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

III B.Tech II Semester Regular & Supplementary Examinations, Sep/Oct-2021

SIMULATION AND MODELING

(Open Elective – IV)

Time: 3 Hours **Max Marks: 70**

Answer ONE Question from each Unit
Each Questions Carry 14 Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	Find the Advantages, Disadvantages and Pitfalls of Simulation	7M
	b)	Explain about Static and Dynamic physical models with suitable examples	7M
		(OR)	
2.	a)	Explain about static Mathematical model	7M
	b)	Elaborate to write the Nature of Simulation of a system	7M

UNIT-II

3.	a)	Contrast between Analytical and Simulation methods	5M
	b)	Extend the Monte-Carlo Method with advantages and Disadvantages	9M
		(OR)	
4.	a)	Give the detailed theory about Cobweb model	9M
	b)	Explain about the Distributed Lag Model of a system	5M

UNIT-III

5.	a)	Construct exponential Decay model for population system	7M
	b)	Develop System Dynamic Diagrams for a system model	7M
		(OR)	
6.	a)	Explain about the Discrete probability functions with neat tables	7M
	b)	Construct the Logistic curves of the system model	7M

UNIT-IV

7.	a)	Demonstrate the Poisson Arrival Patterns with a suitable examples	9M
	b)	Elaborate the Service times and Queuing disciplines	5M
		(OR)	
8.	a)	Describe the Exponential distribution	10M
	b)	Define the Queuing theory	4M

UNIT-V

9.	a)	Explain names, labels and SIMSCRIPT statements	7M
	b)	Give the details of Estimation methods of SIMSCRIPT	7M
		(OR)	
10.	a)	Elaborate the simulation software GPSS	7M
	b)	Demonstrate the organization of SIMSCRIPT program	7M

AR16

CODE: 16OE3047 **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

III B.Tech II Semester Regular & Supplementary Examinations, Sep/Oct-2021

SOFT COMPUTING

Time: 3 Hours **Max Marks: 70**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	What is Soft computing. How does it differ from Hard Computing?	(7M)
	b)	Write the applications of soft computing.	(7M)
		(OR)	
2.	a)	Explain differences between Fuzzy set and Crisp set?	(7M)
	b)	Write about applications of fuzzy control.	(7M)

UNIT-II

3.	a)	What is Fuzzy rule? Explain in detail.	(7M)
	b)	Explain different Fuzzy relations.	(7M)
		(OR)	
4.	a)	Explain if then rules with real time example.	(7M)
	b)	Write short notes on fuzzy reasoning.	(7M)

UNIT-III

5.	a)	Explain the Genetic algorithm using back propagation.	(7M)
	b)	Explain various Genetic Algorithms?	(7M)
		(OR)	
6.	a)	Explain simulated Annealing.	(7M)
	b)	Explain the architecture of genetic algorithm.	(7M)

UNIT-IV

7.	a)	Compare biological neuron vs artificial neuron system.	(7M)
	b)	Describe the functioning of Radial Basis function networks.	(7M)
		(OR)	
8.	a)	Explain Adaline model in detail.	(7M)
	b)	Explain about Back propagation using multilayer perceptron.	(7M)

UNIT-V

9.	a)	Write short notes on Competitive Learning Networks.	(7M)
	b)	Distinguish Supervised and Unsupervised Learning Neural Networks?	(7M)
		(OR)	
10.	a)	Explain Kohonen Self organizing Networks with architecture.	(7M)
	b)	Define PCA and explain various stages in PCA.	(7M)