	SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)			R20

III B.Tech I Semester MODEL QUESTION PAPER

DESIGN AND ANALYSIS OF ALGORITHMS

(Artificial Intelligence and Machine Learning)

Time: 3 Hrs.			Max. Marks:70M

Answer **ONE Question** from **EACH UNIT**

All questions carry equal marks

Assume suitable data if necessary

			CO	KL	M
		UNIT-I			
1	a).	What are the fundamental steps involved in algorithmic problem solving?	1	2	7
	b).	Analyze Best & Worst-case time complexities for Quick Sort with examples.	1	4	7
		OR			
2	a).	Explain how algorithms performance is analyzed? Describe asymptotic notations?	1	2	7
	b).	What is Stassen's matrix multiplication? Explain its time complexity?	1	3	7
		UNIT-II			
3	a).	Demonstrate Huffman coding with example.	2	3	7
	b).	What is Spanning tree? Describe Algorithms for minimums panning-tree.	2	3	7
		OR			
4	a).	Discuss Union and Find Operations in Disjoint Sets.	2	2	7
	b).	Write algorithm for job sequencing with deadlines and generate solution for job sequence when n=7, (p1,p2…..,p7)=(3,5,20,18,1,6,30) and (d1,d2….d7)=(1,3,4,3,2,1,2).	2	3	7
		UNIT-III			
5	a).	Apply dynamic programming to obtain optimal binary search tree for the identifierset(a1,a2,a3,a4)=(cin,for,int,while)with(p1,p2,p3,p4)=(1,4,2,1), (q0,q1,q2,q3,q4)=(4,2,4,1,1)and also write algorithm for its construction.	3	3	7
	b).	Solve 0/1 knapsack problem for the following data using Dynamic programming n=6 (p1, p2, p3, p4, p5, p6) = (w1, w2, w3, w4, w5, w6) = (100, 50, 20, 10,7, 3) m=165.	3	3	7
		OR			
6	a).	Describe solution for travelling salesman problem using Dynamic programming.	3	3	7
	b).	Generate all pairs shortest paths for the following Graph	3	2	7
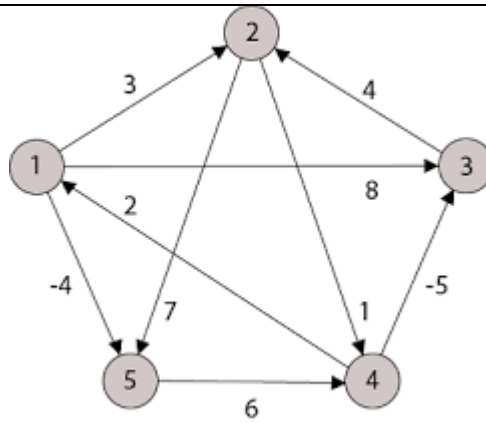
		UNIT-IV			
7	**a).**	Illustrate Graph coloring problem.	**4**	**3**	**7**
	b).	Relate Hamiltonian cycle with travelling sales person problem and also give the backtracking solution vector that finds all Hamiltonian cycles for any directed or undirected graph	**4**	**3**	**7**
		OR			
8	**a).**	Describe Sum of Subsets problem. Draw the portion of state space tree that is generated solution for given data W={5,7,10,12,15,18,20} and M=35.	**4**	**3**	**7**
	b).	Solve 0/1 knapsack problem using least cost branch and bound byConsider the knapsack instance n=4, (p1,p2,p3,p4)=(10,10,12,18),(w1,w2,w3,w4)=(2,4,6,9)andm=15.	**4**	**3**	**7**
		UNIT-V			
9	**a).**	Give the importance of Lower Bound Theory.	**5**	**2**	**7**
	b).	Discuss NP-hard and NP-Complete Classes.	**5**	**2**	**7**
		OR			
10	**a).**	Discuss about Comparison Trees.	**5**	**2**	**7**
	b).	Illustrate Non-Deterministic Algorithms.	**5**	**2**	**7**

CO-COURSE OUTCOME   KL-KNOWLEDGE LEVEL   M-MARKS

NOTE : Questions can be given as A,B splits or as a single Question for 14 marks

	Course Code: B20AM3102	
SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE(A)		**R20**
III B.Tech I Semester MODEL QUESTION PAPER		
OPERATING SYSTEMS		
(Artificial Intelligence and Machine Learning)		

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

Answer **ONE Question** from **EACH UNIT**

All questions carry equal marks

Assume suitable data if necessary

			CO	KL	M
		UNIT-I			
1	**a).**	Explain the abstract view of system components.	1	2	7
	b).	Discuss the Simple Operating System Structure.	1	2	7
		OR			
2	**a).**	Explain different types of Operating Systems.	1	2	7
	b).	Define a System call. Explain the various types of system calls provided by Operating System.	1	2	7
		UNIT-II			
3	**a).**	Differentiate one-to-one, many-to-one multithreading models.	2	2	7
	b).	Explain Dining Philosophers problem? Discuss the solution to Dining Philosopher's problem using monitors.	2	2	7
		OR			
4	**a).**	Explain Primitive Priority Scheduling Algorithms with an Example?	2	2	7
	b).	Discuss the solution to Reader/Writers Problem using semaphores.	2	2	7
		UNIT-III			
5	**a).**	Differentiate paging and segmentation.	3	2	7
	b).	Explain briefly the performance of Demand paging with an example.	3	2	7
		OR			
6	**a).**	Define Page Fault. When doesapagefault occur? Describe the action taken byOS whenpage faultoccurs.	3	2	7
	b).	Apply FIFO and LRU page replacement algorithms for the following string to determine the number of page faults. 7 0 1 2 0 3 0 4 2 3 0 2 1 2 0 1 7 0 1 for a memory with '3' frames.	3	3	7
		UNIT-IV			
7	**a).**	Apply the deadlock detection algorithm to determine deadlock will exist or not for the following system with 5 process and 3 resource types (resource type Ahas 7 instances, B has 2 instances, and C has 6 instances)	4	3	7

Snapshot at time T0

Process	Allocation			Request			Available		
	A	B	C	A	B	C	A	B	C
P0	0	1	0	0	0	0	0	0	0
P1	2	0	0	2	0	2			
P2	3	0	3	0	0	0			
P3	2	1	1	1	0	0			
P4	0	0	2	0	0	2			

	b).	Explain various File access methods with Suitable examples	**4**	**2**	**7**
		OR			
8	**a).**	Explain deadlock avoidance using banker's algorithm with suitable example.	**4**	**2**	**7**
	b).	Apply FCFS, SSTF disk arm scheduling schemes to find total number head movements for the following string 9818337122141246567assume the head pointerat53.	**4**	**3**	**7**
		UNIT-V			
9	**a).**	Explain System and Network Threats	**5**	**2**	**7**
	b).	Describe the System Component of Windows XP architecture	**5**	**2**	**7**
		OR			
10	**a).**	Explain Principles and domain Protections.	**5**	**2**	**7**
	b).	Describe the components of the Linux System.	**5**	**2**	**7**

CO-COURSE OUTCOME   KL-KNOWLEDGE LEVEL   M-MARKS

NOTE : Questions can be given as A,B splits or as a single Question for 14 marks

		SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)			**R20**
		III B.Tech I Semester MODEL QUESTION PAPER			
		MACHINE LEARNING			
		(Common to AIML & CSD)			

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

Answer **ONE Question** from **EACH UNIT**

All questions carry equal marks

Assume suitable data if necessary

			CO	KL	M
		UNIT-I			
1	a).	Illustrate in detail about ingredients of Machine Learning.	1	2	7
	b).	Demonstrate about curse of Dimensionality and Over fitting.	1	2	7
		OR			
2	a).	List out & explain the models in the output of Machine Learning.	1	2	7
	b).	Differentiate between Prior Probability and Conditional Probability.	1	2	7
		UNIT-II			
3	a).	Describe the ordinary least-squares method for linear regression	2	2	7
	b).	Demonstrate Nearest Neighbor Classification with suitable example.	2	3	7
		OR			
4	a).	Develop Decision trees for following set of training examples. See table below.	2	3	7
	b).	Explain how linear SVM is used for classification	2	2	7

Develop Decision trees for following set of training examples.

Day	Outlook	Temperature	Humidity	Wind	Play Tennis
D1	Sunny	Hot	High	Weak	No
D2	Sunny	Hot	High	Strong	No
D3	Overcast	Hot	High	Weak	Yes
D4	Rain	Mild	High	Weak	Yes
D5	Rain	Cool	Normal	Weak	Yes
D6	Rain	Cool	Normal	Strong	No
D7	Overcast	Cool	Normal	Strong	Yes
D8	Sunny	Mild	High	Weak	No
D9	Sunny	Cool	Normal	Weak	Yes
D10	Rain	Mild	Normal	Weak	Yes
D11	Sunny	Mild	Normal	Strong	Yes
D12	Overcast	Mild	High	Strong	Yes
D13	Overcast	Hot	Normal	Weak	Yes
D14	Rain	Mild	High	Strong	No

		UNIT-III			
5	**a).**	Explain Feature construction and selection.	3	2	7
	b).	Compare Bagging and random forests.	3	2	7
		OR			
6	**a).**	Explain how thresholding and discretization is done in feature transformations	3	2	7
	b).	Demonstrate Gradient Boosting. Algorithm	3	2	7
		UNIT-IV			
7	**a).**	Summarize Principal Component Analysis.	4	2	7
	b).	Illustrate LDA	4	2	7
		OR			
8	**a).**	Compare Model Evaluation Techniques.	4	2	7
	b).	Demonstrate the Regularization Process	4	2	7
		UNIT-V			
9	**a).**	Explain back propagation in Neural Network with suitable Example.	5	2	7
	b).	Explain Markov Decision Process.	5	2	7
		OR			
10	**a).**	Compare multilayer perceptrons with linear perceptron.	5	2	7
	b).	Outline the uses of Reinforcement Learning.	5	2	7

CO-COURSE OUTCOME   KL-KNOWLEDGE LEVEL   M-MARKS

NOTE : Questions can be given as A,B splits or as a single Question for 14 marks

SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)

III B.Tech I Semester MODEL QUESTION PAPER

INTERNET OF THINGS

(Common to AIML & CSD)

Time: 3 Hrs.				Max. Marks: 70		
Answer **ONE Question** from **EACH UNIT**						
All questions carry equal marks						
Assume suitable data if necessary						
			CO	**KL**	**M**	
		UNIT – I				
1.	a)	Explain the Characteristics of Internet of Things.	1	2	7	
	b)	Describe in detail about the IoT levels .	1	2	7	
		OR				
2.	a)	Explain in detail about the drivers behind new network Architectures.	1	2	7	
	b)	Discuss in detail about the logical design of IoT.	1	2	7	
		UNIT – II				
3.	a)	Define in detail about 6LoWPAN technology.	2	2	7	
	b)	Explain the constrained application protocol (CoAP).	2	2	7	
		OR				
4.	a)	Detailed discussion about Bluetooth Low Energy.	2	2	7	
	b)	Explain in detail about MQTT communication technology.	2	2	7	
		UNIT – III				
5.	a)	Explain about Basic building blocks of an IOT device.	3	2	7	
	b)	Describe in detailed about Components of Arduino board.	3	2	7	
		OR				
6.	a)	Explain in details about radio Frequency Identification technology.	3	2	7	
	b)	Write a program for Arduino interface for Temperature dependent Auto cooling system.	3	2	7	
		UNIT – IV				
7.	a)	Explain about Data Acquiring and storage.	4	2	7	
	b)	Describe in detailed about Integration and Enterprise Systems.	4	2	7	
		OR				
8.	a)	Describe about the Transaction and Business Processes.	4	2	7	
	b)	Explain about Managing and Storing Processes.	4	2	7	
		UNIT – V				
9.	a)	Explain the IoT Security Tomography and Layered Attacker model.	5	2	7	

	b)	Illustrate in details about case study of smart irrigation system.	5	2	7
		OR			
10.	a)	Explain about the Access control secure message communication.	5	2	7
	b)	Illustrate about Home intrusion detection.	5	2	7

CO-COURSE OUTCOME   KL-KNOWLEDGE LEVEL   M-MARKS

NOTE : Questions can be given as A,B splits or as a single Question for 14 marks

			CO	KL	M
		SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)			**R20**
		III B.Tech I Semester MODEL QUESTION PAPER			
		DATA VISUALIZATION USING TABLEAU			
		(Artificial Intelligence and Machine Learning)			
		Time: 3 Hrs.			Max. Marks:70
		Answer **ONE Question** from **EACH UNIT**			
		All questions carry equal marks			
		Assume suitable data if necessary			
			CO	**KL**	**M**
		UNIT-I			
1	**a).**	What is Tableau and discuss the different features of Tableau.	**1**	**2**	**7**
	b).	Explain about the following filters Context Filter. Dimension Filter. Measure Filter.	**1**	**2**	**7**
		OR			
2	**a).**	Explain about live and extract connections	**1**	**2**	**7**
	b).	Explain how to establish connection to Access databases from Tableau	**1**	**2**	**7**
		UNIT-II			
3	**a).**	Demonstrate how to enhance the view with filters	**2**	**3**	**7**
	b).	Demonstrate groups in Tableau	**2**	**3**	**7**
		OR			
4	**a).**	Explain how to sort data in ascending and descending order in Tableau	**2**	**2**	**7**
	b).	Demonstrate the hierarchies in Tableau	**2**	**2**	**7**
		UNIT-III			
5	**a).**	Explain how to use if-else in the table calculations with example	**3**	**3**	**7**
	b).	Demonstrate the process of using calculation editor to build calculated fields	**3**	**2**	**7**
		OR			
6	**a).**	Explain how to perform Ad Hoc calculations in Tableau	**3**	**2**	**7**
	b).	Explain about the fixed and exclude LOD's	**3**	**2**	**7**
		UNIT-IV			
7	**a).**	Illustrate the process of box plots creation in Tableau	**4**	**3**	**7**
	b).	Explain the process of duel axes charts creation	**4**	**2**	**7**
		OR			
8	**a).**	Demonstrate the process of adding trend lines in Tableau	**4**	**2**	**7**
	b).	Explain the step-by-step process of bivariate chart creation	**4**	**3**	**7**

		UNIT-V			
9	**a).**	Explain Strategic dashboard and operational dashboard	**5**	**3**	**7**
	b).	Explain about how to build exploratory dashboard in detail	**5**	**2**	**7**
		OR			
10	**a).**	Demonstrate each component in floating dashboard	**5**	**2**	**7**
	b).	Explain each component in explanatory dashboard showing the best and worst NYC recyclers	**5**	**3**	**7**

CO-COURSE OUTCOME   **KL-KNOWLEDGE LEVEL**   **M-MARKS**

NOTE : Questions can be given as A,B splits or as a single Question for 14 marks

		SAGI RAMAKRISHNAM RAJU ENGINEERING COLLEGE (A)			**R20**
		III B.Tech I Semester MODEL QUESTION PAPER			
		NETWORK PROGRAMMING			
		(Artificial Intelligence and Machine Learning)			
TIME: 3Hrs.					**Max.Marks:70M**
		Answer **ONE Question** from **EACH UNIT**			
		All questions carry equal marks			
		Assume suitable data if necessary			
			CO	**KL**	**M**
		UNIT-I			
1.	**a)**	Explain the steps involved in creating raw socket	1	2	7
	b)	Explain the fundamental differences between the operation of TCP and UDP protocols.	1	2	7
		OR			
2.	**a)**	Explain SCTP Network architecture	1	2	7
	b)	Explain the differences between IPv4 and IPv6	1	2	7
		UNIT- II			
3.	**a)**	Describe elementary TCP socket functions with an example.	2	2	7
	b)	Illustrate the concept of server host crashes with a suitable example.	2	3	7
		OR			
4.	**a)**	Illustrate Concurrent Servers and write close, read & Write functions	2	3	7
	b)	Explain socket functions for TCP client server model	2	2	7
		UNIT-III			
5.	**a)**	Explain briefly POSIX Signal Handling and Termination of Server Process.	3	2	7
	b)	Explain the functionality provided by select function. List the differences between Poll and Select functions	3	2	7
		OR			
6.		What is I/O Multiplexing? Explain different types of Synchronous and asynchronous I/O models.	3	2	14
		UNIT- IV			
7.	**a)**	Describe the UDP Echo server functions and lost datagram with an example.	4	2	7
	b)	Describe the getaddr info function as applicable to IPV6. Write briefly about IPV4 socket options.	4	2	7
		OR			
8.		Discuss briefly about lack of flow control with UDP. List the	4	2	14

		differences between TCP and UDP.			
		UNIT– V			
9.	**a)**	Explain in detail how the IPC functionality is provided by message queues.	5	2	7
	b)	What are the advantages of shared memory over pipes, FIFO and message queues? Explain the process of Copying file data from server to client using shared memory	5	2	7
		OR			
10.	**a)**	Write a short notes on a) FTP b) SMTP C) TELNET	5	2	7
	b)	Explain the differences among the exec family of functions of Unix.	5	2	7

CO-COURSE OUTCOME   KL-KNOWLEDGE LEVEL   M-MARKS

NOTE : Questions can be given as A,B splits or as a single Question for 14 marks

	Course Code: B20AM3201

SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)	**R20**

III B.Tech II Semester MODEL QUESTION PAPER

COMPUTER NETWORKS

(Artificial Intelligence and Machine Learning)

Time: 3 Hrs.	Max.Marks:70M

Answer **ONE Question** from **EACH UNIT**

All questions carry equal marks

Assume suitable data if necessary

			CO	KL	M
		UNIT-I			
1	**a)**	Define computer network and describe various network topologies.	**1**	**3**	**7**
	b)	Sketch layered Architecture of TCP/IP and discuss functions of each layer.	**1**	**2**	**7**
		OR			
2	**a)**	Elaborate various Digital-to-Digital data transmission techniques	**1**	**3**	**7**
	b)	Discuss about various Guided media	**1**	**2**	**7**
		UNIT-II			
3	**a)**	Solve the following. A bit stream 1101011011 is transmitted using the standard CRC method. The generator polynomial is x^4+x+1. What is the actual bit string transmitted?	**2**	**3**	**7**
	b)	Describe Sliding window flow control Algorithm	**2**	**3**	**7**
		OR			
4	**a)**	Illustrate various ARQ mechanisms	**2**	**3**	**7**
	b)	Discuss about HDLC protocol.	**2**	**2**	**7**
		UNIT-III			
5	**a)**	Discuss CSMA/CD protocol	**3**	**2**	**7**
	b)	Compare Fast Ethernet and Gigabit Ethernet	**3**	**3**	**7**
		OR			
6	**a)**	Demonstrate Architecture of Bluetooth.	**3**	**3**	**7**
	b)	Discuss services at MAC sub layer of IEEE 802.11	**3**	**2**	**7**
		UNIT-IV			
7	**a)**	Discuss IPV4 addressing and importance of Subnetting.	**4**	**2**	**7**
	b)	Describe Internet Protocol (IP) header.	**4**	**2**	**7**
		OR			
8	**a)**	Explain Link state Routing Algorithm.	**4**	**3**	**7**
	b)	What is NAT? Explain how address translation is done using NAT?	**4**	**2**	**7**

			UNIT-V			
9	**a)**	Define UDP Datagram and Explain the UDP frame format?	**5**	**3**	**7**
	b)	Explain slow start algorithm and briefly discuss Reno TCP?	**5**	**3**	**7**
			OR			
10	**a)**	Describe SMTP, POP protocols.	**5**	**2**	**7**

	b)	Discuss about Following Application layers protocols
		   a) DNS
		   b) b)HTTP
			5	**2**	**7**

CO-COURSE OUTCOME   KL-KNOWLEDGE LEVEL   M-MARKS

NOTE : Questions can be given as A,B splits or as a single Question for 14 marks

			Course Code: B20AM3202	
SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)				**R20**
III B.Tech II Semester MODEL QUESTION PAPER				
DEEP LEARNING				
(Artificial Intelligence and Machine Learning)				
Time: 3 Hrs.			**Max. Marks:70**	
Answer **ONE Question** from **EACH UNIT**				
All questions carry equal marks				
Assume suitable data if necessary				

			CO	KL	M
		UNIT-I			
1	a)	Distinguish supervised and unsupervised learning	1	2	7
	b)	Explain about cross-validation	1	2	7
		OR			
2	a)	What is Dimensionality reduction? Explain	1	2	7
	b)	Explain about overfitting and under fitting	1	2	7
		UNIT-II			
3	a)	Illustrate Deep feed forward networks	2	2	7
	b)	Explain about early stopping	2	2	7
		OR			
4	a)	Explain about Various Activation Functions with an example	2	3	7
	b)	What is Regularization for Deep learning? Explain Drop out	2	2	7
		UNIT-III			
5	a)	Illustrate Convolutional Network	3	2	7
	b)	What is max pooling? Explain	3	2	7
		OR			
6	a)	Illustrate Recurrent Neural Networks	3	2	7
	b)	Explain about Long Short-Term Memory	3	2	7
		UNIT-IV			
7	a)	What are Auto encoders? Explain	4	2	7
	b)	Explain about stochastic gradient descent	4	2	7
		OR			
8	a)	What is denoising auto encoder? Explain	4	2	7
	b)	What is Optimization for Deep Learning? Explain Adam optimization algorithm	4	2	7
		UNIT-V			

9	a)	Illustrate Alexnet architecture	5	2	7
	b)	Explain how to improve the performance of a model with Transfer learning	5	2	7
		OR			
10	a)	Illustrate Res Net architecture	5	2	7
	b)	Explain Deep Generative Models	5	2	7

CO-COURSE OUTCOME   KL-KNOWLEDGE LEVEL   M-MARKS

NOTE : Questions can be given as A,B splits or as a single Question for 14 marks

	SAGI RAMAKRISHNAM RAJU ENGINEERING COLLEGE (A)			R20

III B.Tech II Semester MODEL QUESTION PAPER

SOFTWARE ENGINEERING

(Common to AIML & CSD)

Time:3Hrs.   Max.Marks:70

Answer **ONE Question** from **EACH UNIT**

All questions carry equal marks

Assume suitable data if necessary

			CO	KL	M
		UNIT-I			
1	a)	Explain about Nature of the software.	1	2	7
	b)	Explain about Evolutionary process models.	1	2	7
		OR			
2	a)	Explain about Software Myths.	1	2	7
	b)	Explain about Agile Process.	1	2	7
		UNIT-II			
3	a)	Explain the concept of use cases with the help of an example.	2	2	7
	b)	Explain the process of requirements engineering.	2	2	7
		OR			
4	a)	State and explain various aspects in the requirements validation process.	2	2	7
	b)	Elaborate the main focus of requirement analysis.	2	2	7
		UNIT-III			
5	a)	Explain about UML models that supplement use cases.	3	2	7
	b)	What is Class based Modeling? Explain Elements of Class based Modeling.	3	2	7
		OR			
6	a)	Explain the steps to create a behavior model for a System.	3	2	7
	b)	Explain about the requirements patterns with an example.	3	2	7
		UNIT-IV			
7	a)	Explain about different architecture Styles.	4	2	8
	b)	Explain WebApps Interface Design.	4	2	6
		OR			
8	a)	Explain the process of Designing Class-Based Components for WebApps	4	2	8
	b)	Explain the Golden Rules for User Interface Design	4	2	6

		UNIT-V			
9	**a)**	Explain the testing strategies for conventional software.	5	2	7
	b)	What is Debugging? Explain about the art of Debugging.	5	2	7
		OR			
10	**a)**	Explain the testing strategies for Object Oriented software.	5	2	7
	b)	Explain basic path testing with one example	5	2	7

CO-COURSE OUTCOME   KL-KNOWLEDGE LEVEL   M-MARKS

NOTE : Questions can be given as A,B splits or as a single Question for 14 marks

			Course Code: B20AM3204		

SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)	**R20**	

III B.Tech. II Semester MODEL QUESTION PAPER

DevOps

(Artificial Intelligence and Machine Learning)

Time: 3 Hrs.	Max. Marks:70

Answer **ONE Question** from **EACH UNIT**

All questions carry equal marks

Assume suitable data if necessary

			CO	KL	M
		UNIT – I			
1.	a).	Contrast the Four Values of Agile Software Development.	1	2	7
	b).	Explain the Phases of Software Development Life Cycle.	1	2	7
		OR			
2.	a).	Differentiate the waterfall model and Lean SDLC Model.	1	2	7
	b).	Explainthe Principles of Agile Manifesto.	1	2	7
		UNIT – II			
3.	a).	What is DevOps Workflow and Explain it with an Example.	2	3	7
	b).	Explain How the DevOps Different from Traditional IT.	2	2	7
		OR			
4.	a).	Explain the DevOps Architecture with a neat sketch diagram.	2	2	7
	b).	Explain the Phases of DevOps Pipeline.	2	2	7
		UNIT – III			
5.	a).	Describe the Technology aspects for adopting the DevOps in projects.	3	3	7
	b).	Discuss the Approach for Tool stack implementation in DevOps Adaption.	3	2	7
		OR			
6.	a).	Explain the CD Automation.	3	2	7
	b).	Describe the Ops Teams Perspective in detail.	3	2	7
		UNIT – IV			
7.	a).	Describe the Automation of CICD with each step.	4	2	7
	b).	Discussthe benefits of CICD in detail.	4	2	7
		OR			
8.	a).	Discussindetail aboutAgile CICD pipeline.	4	2	7
	b).	Explain the CICD pipeline.	4	2	7
		UNIT – V			
9.	a).	Explain the Key factors of DevOps maturity model.	5	2	7
	b).	ExplainaboutBusiness Benefits of DevOps Maturity.	5	2	7
		OR			

10.	a).	Explain the stages of DevOps maturity model.	5	2	7
	b).	Describe how maturity Assessment is used in DevOps.	5	2	7

CO-COURSE OUTCOME   KL-KNOWLEDGE LEVEL   M-MARKS

NOTE : Questions can be given as A,B splits or as a single Question for 14 marks

			Course Code: B20AM3205	
SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)				**R20**
III B.Tech II Semester MODEL QUESTION PAPER				
SOFTWARE PROJECT MANAGEMENT				
(Artificial Intelligence and Machine Learning)				

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

Answer **ONE Question** from **EACH UNIT**

All questions carry equal marks

Assume suitable data if necessary

			CO	KL	M
		UNIT-I			
1	**a).**	Explain in detail various activities of software management	1	2	7
	b).	Explain few problems associated with software projects	1	2	7
		OR			
2	**a).**	Explain in detail the five basic parameters of the Software Cost Model?	1	2	7
	b).	Explain detail about the effort estimation models.	1	2	7
		UNIT-II			
3	**a).**	Define Artifact? Write short notes on Engineering Artifacts.	2	2	7
	b).	Illustrate the principles of modern software management	2	3	7
		OR			
4	**a).**	Explain the typical minor milestones in the lifecycle of iteration	2	2	7
	b).	Explain the first two phases of the life-cycle process.	2	2	7
		UNIT-III			
5	**a).**	Illustrate in detail different models of COCOMO with an example	3	3	7
	b).	Illustrate periodic status assessments	3	3	7
		OR			
6	**a).**	Write a short note on software process workflow & iteration workflow	3	2	7
	b).	Sketch and explain in detail various steps in Project Monitoring Cycle	3	3	7
		UNIT-IV			
7	**a).**	Discuss Cost monitoring with suitable example.	4	2	7
	b).	List and explain seven categories of resources	4	2	7
		OR			
8	**a).**	Briefly explain about the earned values	4	2	7
	b).	Explain the risk assessment	4	2	7
		UNIT-V			
9	**a).**	What is capability maturity model? Explain.	5	2	7

	b).	With neat diagram explain product and process metrics.	5	2	7
		OR			
10		What is Software Quality Metrics? Explain in detail various Categories of Software Quality Metrics with suitable example each.	5	2	14

CO-COURSE OUTCOME   KL-KNOWLEDGE LEVEL   M-MARKS

NOTE : Questions can be given as A,B splits or as a single Question for 14 marks

			Course Code: B20AM3206		
		SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)			**R20**
		III B.Tech II Semester MODEL QUESTION PAPER			
		DISTRIBUTED SYSTEMS			
		(Common to AIML & CSD)			
Time: 3 Hrs.				**Max. Marks:70**	
		Answer **ONE Question** from **EACH UNIT**			
		All questions carry equal marks			
		Assume suitable data if necessary			
			CO	**KL**	**M**
		UNIT-I			
1	**a).**	Describe the characteristics of Parallel Systems	1	2	7
	b).	Explain Different Primitives for Distributed Communication	1	2	7
		OR			
2	**a).**	Distinguish between Message Passing Systems versus Shared Memory Systems.	1	2	7
	b).	Explain different design issues in Distributed Systems.	1	2	7
		UNIT-II			
3	**a).**	Discuss about different Message ordering Paradigms	2	3	7
	b).	Explain the Chandy–Lamport algorithm for FIFO channels.	2	2	7
		OR			
4	**a).**	Explain about Group Communication.	2	2	7
	b).	Explain the Issues in recording a global state.	2	3	7
		UNIT-III			
5	**a).**	Explain about the LAMPORT'S ALGORITHM.	3	2	7
	b).	Explain different Issues in Deadlock Detection.	3	2	7
		OR			
6	**a).**	Explain the three basic approaches for implementing distributed mutual exclusion	3	2	7
	b).	Explain the SUZUKI-KASAMI'S BROADCAST ALGORITHM	3	2	7
		UNIT-IV			
7	**a).**	Explain about Communication-induced Check pointing rollback-recovery technique.	4	2	7
	b).	Explain CONSENSUS PROBLEM IN ASYNCHRONOUS SYSTEMS.	4	2	7
		OR			
8	**a).**	Why is rollback recovery of distributed systems complicated?	4	3	7
	b).	Explain the NONBLOCKING UNIVERSAL ALGORITHM.	4	2	7

		UNIT-V			
9	**a).**	Explain the Content Addressable Network (CAN).	**5**	**2**	**7**
	b).	Explain Napster P2P System.	**5**	**2**	**7**
		OR			
10	**a).**	Distinguish between Structured vs. unstructured overlays	**5**	**3**	**7**
	b).	Explain Extended Barabasi-Albert Model.	**5**	**2**	**7**

CO-COURSE OUTCOME   KL-KNOWLEDGE LEVEL   M-MARKS

NOTE : Questions can be given as A,B splits or as a single Question for 14 marks

SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)	R20

III B.Tech. II Semester MODEL QUESTION PAPER

COMPUTER VISION

(Artificial Intelligence and Machine Learning)

Time: 3 Hrs.	Max. Marks: 70 M

Answer **ONE Question** from **EACH UNIT**

All questions carry equal marks

Assume suitable data if necessary

			CO	KL	M
		UNIT-I			
1.	a).	What is a Feature? Explain about handcrafted extraction of features	1	2	7
	b).	Describe Gray Level Co-occurrence matrices	1	2	7
		OR			
2.	a).	Explain about color histogram feature extraction process	1	2	7
	b).	Discuss in detail about automatic extraction of features	1	2	7
		UNIT-II			
3.	a).	Illustrate SVM for image classification	2	3	7
	b).	Illustrate LeNet-5 architecture	2	2	7
		OR			
4.	a).	Illustrate Google Net architecture	2	2	7
	b).	Illustrate Decision tree for image classification	2	3	7
		UNIT-III			
5.	a).	What is transfer learning? Explain	3	2	7
	b).	How to use pretrained network as a feature extractor? Explain	3	3	7
		OR			
6.	a).	How to use a pretrained network as a classifier? Explain	3	3	7
	b).	Discuss different open source datasets	3	2	7
		UNIT-IV			
7.	a).	Illustrate R-CNNs	4	2	7
	b).	What is object detection? Explain	4	2	7
		OR			
8.	a).	Illustrate SSD	4	2	7
	b).	Illustrate YOLO	4	2	7
		UNIT-V			
9.	a).	Illustrate GAN architecture	5	2	7

b).	How to Evaluate GAN model? Explain	**5**	**2**	**7**
		OR			
10.	**a).**	Discuss different applications of GAN	**5**	**2**	**7**
	b).	Discuss in detailed about visual embeddings?	**5**	**2**	**7**

CO-COURSE OUTCOME   KL-KNOWLEDGE LEVEL   M-MARKS

NOTE : Questions can be given as A,B splits or as a single Question for 14 marks