			Course Code: B20HS4101		
		SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)			**R20**
		IV B.Tech. I Semester MODEL QUESTION PAPER			
		UNIVERSAL HUMAN VALUES-2: UNDERSTANDING HARMONY			
		(Common to AIDS, CSBS, CSE, IT & ME)			
Time: 3 Hrs					**Max. Marks: 70 M**
		Answer **ONE Question** from **EACH UNIT**			
		All questions carry equal marks			
			CO	**KL**	**M**
		UNIT-I			
1.	**a).**	Discuss natural acceptance.	**1**	**2**	**7**
	b).	Differentiate prosperity and deprivation.	**1**	**2**	**7**
		OR			
2.	**a).**	Write a note on physical facilities.	**1**	**2**	**7**
	b).	Deliberate the right understanding in perspective to self-exploration.	**1**	**2**	**7**
		UNIT-II			
3.	**a).**	Illustrate coexistence of "I" and "Body ".	**2**	**2**	**7**
	b).	Explain doer, seer and enjoyer.	**2**	**2**	**7**
		OR			
4.	**a).**	Discuss Characteristic activities of Harmony with "I".	**2**	**2**	**7**
	b).	Explain Sanyam and Health.	**2**	**2**	**7**
		UNIT-III			
5.	**a).**	Write a note on human-human relationship as regarding harmony.	**3**	**2**	**7**
	b).	Differentiate intention and competence.	**3**	**2**	**7**
		OR			
6.	**a).**	Discuss salient values in relationship.	**3**	**2**	**7**
	b).	Illustrate universal Harmonious Society - an Undivided society.	**3**	**2**	**7**
		UNIT-IV			
7		Discuss orders of life in nature and its significance self-regulation of individual.	**4**	**2**	**14**
		OR			
8.		Illustrate existence of human being as coexistence with universe in perspective of space.	**4**	**2**	**14**
		UNIT-V			
9.		Discuss importance of professional competence for augmenting universal human order.	**5**	**3**	**14**

		OR			
10.	**a).**	Case study of typical holistic technologies.	**5**	**3**	**7**
	b).	Role of engineer in promoting harmony in society.	**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

		Course Code: B20IT4101			
		SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)			**R20**
		IV B.Tech. I Semester MODEL QUESTION PAPER			
		CLOUD COMPUTING			
		PROFESSIONAL ELECTIVE-III			
		INFORMATION TECHNOLOGY			
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).**	Explain network centric content and computing	**1**	**3**	**7**
	b).	Identify Desirable Properties of P2P Systems	**1**	**3**	**7**
		OR			
2	**a).**	Define Cloud Computing. List and define the delivery models of Cloud Computing.	**1**	**2**	**7**
	b).	Illustrate the concept of logical clocks with meat diagram	**1**	**3**	**7**
		UNIT -II			
3	**a).**	Define the terms related to AWS: EBS, AMI, Cloud Watch, Auto Scaling.	**2**	**3**	**7**
	b).	Discuss about the energy use by data centres and its economic and ecological impact.	**2**	**3**	**7**
		OR			
4	**a).**	Summarize the components of Azure cloud.	**2**	**2**	**7**
	b).	Discuss about Challenges for cloud, existing cloud applications and new opportunities.	**2**	**3**	**7**
		UNIT -III			
5	**a).**	Virtualization simulates the interface to physical objects of any one of four means. Identify and define	**3**	**3**	**7**
	b).	Explaining Fair Queue.	**3**	**3**	**7**
		OR			
6	**a).**	Differentiate full and para-Virtualization.	**3**	**3**	**7**
	b).	Explain about stability of two-level resource allocation architecture.	**3**	**3**	**7**
		UNIT -IV			
7	**a).**	Differentiate distributed file systems, general parallel file systems. Google file system.	**4**	**2**	**7**
	b).	Explain about Amazon Simple Storage Service.	**4**	**2**	**7**

		OR			
8	**a).**	Explain about security risks	**4**	**3**	**7**
	b).	Discuss about trust in cloud security.	**4**	**3**	**7**
		UNIT -V			
9	**a).**	Discuss about security rules of transport and application layers protocols in EC2.	**5**	**3**	**7**
	b).	How to use S3 in Java.	**5**	**3**	**7**
		OR			
10	**a).**	Summarize the features of Google web tool kit	**5**	**2**	**7**
	b).	Elaborate on share point services and Exchange Online.	**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

				Course Code: B20IT4102	
SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)					**R20**
IV B.Tech. I Semester MODEL QUESTION PAPER					
ARTIFICIAL NEURAL NETWORKS					
PROFESSIONAL ELECTIVE-III					
INFORMATION TECHNOLOGY					
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 Soft Computing? Explain the advantages, disadvantages, and the applications of it.	**1**	**2**	**7**
	b).	Write a note to differentiate between Hard Computing and Soft Computing.	**1**	**2**	**7**
		OR			
2.	**a).**	Explain uniformed search algorithms with example	**1**	**2**	**7**
	b).	Describe about interference and rules of interference.	**1**	**2**	**7**
		UNIT-II			
3.	**a).**	What is artificial neural network architecture? Explain the benefits of using artificial neural network.	**2**	**2**	**7**
	b).	Write a short note on Supervised and Unsupervised learning with suitable example.	**2**	**3**	**7**
		OR			
4.	**a).**	Explain about Back propagation and the working of a back propagation algorithm.	**2**	**3**	**7**
	b).	Write down the algorithm to demonstrate the Kohnen's self-organizing networks.	**2**	**3**	**7**
		UNIT-III			
5.	**a).**	Explain the architecture of Fuzzy logic with a neat diagram.	**3**	**2**	**7**
	b).	Determine the steps to initiate the fuzzy logic decision making along with the types of decision making.	**3**	**2**	**7**
		OR			
6.	**a).**	Explain the architecture of Fuzzy logic control? And the need to use the fuzzy logic in control systems.	**3**	**2**	**7**
	b).	Write a short note on linguistic variables.	**3**	**2**	**7**
		UNIT-IV			
7.	**a).**	Define genetic algorithm and its types. Also explain about the fitness	**4**	**2**	**7**

		function.			
	b).	Explain the types of cross over.	**4**	**2**	**7**
		OR			
8.	**a).**	Explain the working of genetic programming. Explain it with an example.	**4**	**2**	**7**
	b).	Describe about the ants colony optimization.	**4**	**2**	**7**
		UNIT-V			
9.	**a).**	Define Neuro fuzzy hybrid systems and the characteristics of it.	**5**	**2**	**7**
	b).	Explain about cooperative neuro fuzzy hybrid systems and genetic neuro hybrid systems with a neat diagram.	**5**	**2**	**7**
		OR			
10.	**a).**	What is backpropagation? Explain about genetic algorithm based backpropagation network.	**5**	**2**	**7**
	b).	Write about genetic fuzzy hybrid systems.	**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: B20IT4103		
SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)					**R20**
IV B.Tech. I Semester MODEL QUESTION PAPER					
INTERNET OF THINGS					
PROFESSIONAL ELECTIVE-III					
INFORMATION TECHNOLOGY					
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).**	Briefly explain about Internet of Things Technology?	**1**	**2**	**7**
	b).	Write about the behind IoTs sources of the IoTs.	**1**	**2**	**7**
		OR			
2.	**a).**	Write the design principles for connected devices.	**1**	**2**	**7**
	b).	Explain the Application Layer Protocols.	**1**	**2**	**7**
		UNIT-II			
3.	**a).**	Briefly explain about IoT/M2M systems Layers & designs standardizations.	**2**	**2**	**7**
	b).	Discuss about Modified OSI Stack for the IoT/M2M Systems.	**2**	**2**	**7**
		OR			
4.	**a).**	Explain in brief about Communication Technologies.	**2**	**2**	**7**
	b).	Explain device management gateway ease of designing and affordability.	**2**	**2**	**7**
		UNIT-III			
5.	**a).**	Design Principles for the Web Connectivity for Connected-Devices.	**3**	**2**	**7**
	b).	Discuss about the Web Communication protocols for Connected Devices.	**3**	**2**	**7**
		OR			
6.	**a).**	Discuss about the Message Communication protocols for Connected Devices.	**3**	**2**	**7**
	b).	Explain the Web Connectivity for Connected-Devices.	**3**	**2**	**7**
		UNIT-IV			
7.	**a).**	Write the Data Acquiring, Organizing and Analytics in IoT/M2M, Applications/Services.	**4**	**2**	**7**
	b).	Explain the IOT/M2M Data Acquiring and Storage, Business Models for Business Processes.	**4**	**2**	**7**

		OR			
8.	**a).**	Explain Organizing Data, Transactions, Business Processes.	**4**	**2**	**7**
	b).	Explain the Integration and Enterprise Systems.	**4**	**2**	**7**
		UNIT-V			
9.	**a).**	Write about Data Collection, Storage and Computing Using a Cloud Platform for IoT/M2M.	**5**	**2**	**7**
	b).	Discuss about the Cloud Service Models, IOT cloud-based services using the Xively (Pachube/COSM).	**5**	**2**	**7**
		OR			
10.	**a).**	Discuss about Nimbits and other platforms Sensor, Participatory Sensing, Actuator, RFID	**5**	**2**	**7**
	b).	Write about Wireless, Sensor Network Technology, Sensors Technology, Sensing the World.	**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: B20IT4104	
		SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)			**R20**
		IV B.Tech. I Semester MODEL QUESTION PAPER			
		CYBER SECURITY AND FORENSICS			
		PROFESSIONAL ELECTIVE-III			
		INFORMATION TECHNOLOGY			
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 cyber crime and how does it differ from traditional crime?	**1**	**2**	**7**
	b)	What are the main categories of cyber crime? Provide examples of each category.	**1**	**2**	**7**
		OR			
2.	**a)**	Explain various security challenges posed by mobile devices.	**1**	**2**	**14**
		UNIT-II			
3.	**a)**	How does a distributed denial of service (DDoS) attack work, and what are some mitigation strategies?	**2**	**2**	**14**
		OR			
4.	**a)**	Explain the concept of social engineering and provide examples of common social engineering techniques.	**2**	**2**	**14**
		UNIT-III			
5.	**a)**	Explain the concept of digital evidence and its importance in cyber crime investigations.	**3**	**2**	**14**
		OR			
6.	**a)**	What is email tracking and how does it work? Explain the key elements involved in tracking emails.	**3**	**2**	**14**
		UNIT-IV			
7.	**a)**	Explain the terms computer forensics software tools and hardware tools in detail.	**4**	**2**	**14**
		OR			
8.	**a)**	Describe common techniques used to analyze image authenticity and integrity in graphics forensics.	**4**	**2**	**14**
		UNIT-V			
9.	**a)**	Explain the major amendments to the Indian IT Act in ITA 2008.	**5**	**2**	**14**
		OR			
10.	**a)**	What is the importance of cyber crime legislation and punishment in addressing cyber threats?	**5**	**2**	**7**
	b)	Describe the different types of punishments and penalties that can be imposed on individuals convicted of cybercrimes.	**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: B20IT4105
		SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)			**R20**
		IV B.Tech. I Semester MODEL QUESTION PAPER			
		DRONE TECHNOLOGY			
		PROFESSIONAL ELECTIVE-III			
		INFORMATION TECHNOLOGY			
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).**	Describe different types of Drones.	**1**	**2**	**7**
	b).	Explain the classification of UAV's.	**1**	**2**	**7**
		OR			
2.	**a).**	Explain the Application of Drones.	**1**	**2**	**7**
	b).	Illustrate the safety and various operational consideration	**1**	**2**	**7**
		UNIT-II			
3.	**a).**	Describe Voltage, Current, Power, Speed.	**2**	**3**	**7**
	b).	Illustrate the Torque, series and parallel connection sources.	**2**	**2**	**7**
		OR			
4.	**a).**	Explain the Transistors and FET's Concept of Relays, LEDs.	**2**	**3**	**7**
	b).	Describe the Aerodynamics, Flight Performance, Stability and Control.	**2**	**2**	**7**
		UNIT-III			
5.	**a).**	Explain the types and Applications of Microcontrollers.	**3**	**2**	**7**
	b).	Explain the Methods of Communications.	**3**	**2**	**7**
		OR			
6.	**a).**	Describe the Types Selection of Battery, Charge-Discharge states.	**3**	**2**	**7**
	b).	Explain the Diode bridge rectifier (AC-DC)-5V,12V Battery charger.	**3**	**3**	**7**
		UNIT-IV			
7.	**a).**	Describe the Propellers, types of propellers, selection of propellers.	**4**	**2**	**7**
	b).	Explain the BLDC Motors Principles of operation, Construction.	**4**	**3**	**7**
		OR			
8.	**a).**	Explain the ESC Motor Driver.	**4**	**2**	**7**
	b).	Illustrate the PWM, Speed Control.	**4**	**3**	**7**
		UNIT-V			
9.	**a).**	Illustrate the different Payload techniques.	**5**	**2**	**7**

	b).	Describe the Impact of Payloads in drone technology.	**5**	**2**	**7**
		OR			
10.	**a).**	Explain the Types of Payloads and give detail operations of payload.	**5**	**2**	**7**
	b).	Explain various payload application sensors.	**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: B20IT4106		
SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)					**R20**
IV B.Tech. I Semester MODEL QUESTION PAPER					
CRYPTOGRAPHY AND NETWORK SECURITY					
PROFESSIONAL ELECTIVE-IV					
INFORMATION TECHNOLOGY					
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).**	Outline the principles of security for information protection.	**1**	**2**	**7**
	b).	What are the substitution techniques used in cryptography?	**1**	**2**	**7**
		OR			
2.	**a).**	How does the Playfair Cipher work? Provide an example.	**1**	**2**	**6**
	b).	Explain the workings of the RC-4 Algorithm.	**1**	**3**	**8**
		UNIT-II			
3.	**a).**	Calculate the Cipher Text using RSA given P=17, Q=31, E=7, and PT=2.	**2**	**3**	**7**
	b).	Elaborate on the differences between Symmetric and Asymmetric Cryptography.	**2**	**3**	**7**
		OR			
4.	**a).**	Describe the MD-5 Algorithm and its purpose.	**2**	**2**	**7**
	b).	How does the Digital Signature ensure message authenticity?	**2**	**2**	**7**
		UNIT-III			
5.	**a).**	What is an Authentication Token Mechanism and how is it used?	**3**	**3**	**8**
	b).	Explain the role of Kerberos in network security.	**3**	**2**	**6**
		OR			
6.	**a).**	Provide an explanation of Digital Certificates and their usage.	**3**	**2**	**7**
	b).	What is the PKIX Model for managing digital certificates?	**3**	**2**	**7**
		UNIT-IV			
7.	**a).**	How does IP Security (IPsec) protect data during transmission?	**4**	**3**	**7**
	b).	Detail the security mechanisms employed in GSM networks.	**4**	**3**	**7**
		OR			
8.	**a).**	Explain the purpose of a Secure Socket Layer (SSL) in online communication.	**4**	**2**	**7**
	b).	What is the SET Protocol and how does it secure online transactions?	**4**	**2**	**7**

		UNIT-V			
9.	**a).**	Define a virus and discuss countermeasures to mitigate its impact.	**5**	**2**	**7**
	b).	Enumerate different types of threats affecting digital security	**5**	**2**	**7**
		OR			
10.	**a).**	Define different types of Denial-of-service attacks.	**5**	**2**	**7**
	b).	What are honey pots and how are they handled.	**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: B20IT4107	
SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)					**R20**
IV B.Tech. I Semester MODEL QUESTION PAPER					
DEEP LEARNING TECHNIQUES					
PROFESSIONAL ELECTIVE-IV					
INFORMATION TECHNOLOGY					
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 deep learning how it is different from traditional machine learning	**1**	**2**	**7**
	b).	Illustrate about following machine learning techniques. a) Random forest b) Decision tree	**1**	**3**	**7**
		OR			
2.	**a).**	How will we Evaluate performance of Machine Learning Model?	**1**	**2**	**7**
	b).	What is overfitting in Machine Learning and how it can be prevented?	**1**	**2**	**7**
		UNIT - II			
3.	**a).**	Explain about Artificial Neural Networks?	**2**	**2**	**7**
	b).	Explain the concept of batch Normalization and how it can help improve the training of deep neural networks	**2**	**2**	**7**
		OR			
4.	**a).**	Analyze optimization techniques in Deep Learning.	**2**	**3**	**7**
	b).	Identify the difficulty of training the Deep Neural Networks.	**2**	**3**	**7**
		UNIT - III			
5.	**a).**	What is Theano and how does it relate to deep learning?	**3**	**2**	**7**
	b).	Explain the concept of distributed training in CNTK?	**3**	**2**	**7**
		OR			
6.	**a).**	Brief about setting up Deep Learning Workstation?	**3**	**2**	**7**
	b).	Why tensor flow is most preferred library in Deep Learning?	**3**	**2**	**7**
		UNIT - IV			
7.	**a).**	What is the difference between convolutional neural network and recurrent neural network?	**4**	**2**	**7**
	b).	What are the different layers in CNN? What is pooling in CNN and how does it work?	**4**	**2**	**7**
		OR			
8.	**a).**	How do we perform deep learning and CNN in PyTorch?	**4**	**2**	**7**
	b).	What is multichannel convolution operation?	**4**	**2**	**7**
		UNIT - V			

9.	**a).**	What are autoencoders? Explain different types of autoencoders.	**5**	**2**	**7**
	b).	What are Restricted Boltzmann Machines and compare Autoencoders & RBMs	**5**	**2**	**7**
		OR			
10.	**a).**	Explain object recognition with real time example.	**5**	**2**	**7**
	b).	List the applications of deep learning in Natural language processing?	**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: B20IT4108		
SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)					**R20**
IV B.Tech. I Semester MODEL QUESTION PAPER					
SOCIAL NETWORKS ANALYSIS					
PROFESSIONAL ELECTIVE-IV					
INFORMATION TECHNOLOGY					
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).**	Explain about Centrality measures. Define three measures of centrality?	**1**	**2**	**7**
	b).	Explain Erdos Number Project.	**1**	**2**	**7**
		OR			
2.	**a).**	Elaborate on various challenges for decentralized online social networks.	**1**	**2**	**7**
	b).	Discuss problems of causality in social network analysis.	**1**	**2**	**7**
		UNIT-II			
3.	**a).**	What are the key terms associated with social network analysis?	**2**	**2**	**7**
	b).	What are the approaches for finding cohesive subgroups?	**2**	**2**	**7**
		OR			
4.	**a).**	Briefly explain multidimensional scaling.	**2**	**2**	**7**
	b).	What is Random graph models of social networks?	**2**	**2**	**7**
		UNIT-III			
5.	**a).**	Distinguish between structural and algorithmic aspects of navigation.	**3**	**2**	**7**
	b).	what is percolation effect Describe the basic models of information percolation?	**3**	**2**	**7**
		OR			
6.	**a).**	What factors can make a contagion complex?	**3**	**2**	**7**
	b).	What are the two aspects of Navigation. Explain about the Kleinberg's Model?	**3**	**2**	**7**
		UNIT-IV			
7.	**a).**	What is the connectivity distribution of Erdos-Renyi random graphs?	**4**	**2**	**7**
	b).	Explain the significance of small-world effect in social network analysis?	**4**	**2**	**7**
		OR			

8.	**a).**	What are the different clustering models?	**4**	**2**	**7**
	b).	Write short notes on clustering of connectivity?	**4**	**2**	**7**
		UNIT-V			
9.	**a).**	Illustrate PageRank algorithm for weighted graph.	**5**	**2**	**7**
	b).	What is spatial agent-based model?	**5**	**2**	**7**
		OR			
10.	**a).**	Define game theory. what are the four elements of Game Theory?	**5**	**2**	**7**
	b).	Illustrate how social networks can be used to bias votes.	**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: B20IT4109

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

IV B.Tech. I Semester MODEL QUESTION PAPER

ADVANCED DATABASE

PROFESSIONAL ELECTIVE-IV

INFORMATION TECHNOLOGY

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).**	Explain briefly shared disk and shared nothing multiprocessor architectures in detail.	**1**	**2**	**8**
	b).	Briefly discuss about various forms of transparencies present in distributed systems.	**1**	**2**	**6**
		OR			
2.	**a).**	Explain different architectural alternatives possible to model a distributed DBMS with respect to autonomy, distribution, and heterogeneity.	**1**	**2**	**8**
	b).	Explain in detail about Client/Server reference architecture.	**1**	**2**	**6**
		UNIT-II			
3.	**a).**	What is fragmentation? Consider an example of your choice and apply fragmentation both horizontally and vertically.	**2**	**3**	**6**
	b).	What are the three criteria for checking the correctness of a fragmentation? Explain with an example fragmentation.	**2**	**3**	**8**
		OR			
4.	**a).**	What is the purpose of computing contribution? Apply the bond energy algorithm for the following example and compute the contribution of moving attribute A4 between A1 and A2.	**2**	**3**	**7**
	b).	Explain various types of information required to perform effective allocation of fragments across multiple sites.	**2**	**2**	**7**
		UNIT-III			
5.	**a).**	Explain various characteristics of query processors.	**3**	**2**	**7**
	b).	Explain briefly about the layers of query processing.	**3**	**2**	**7**

	A1	A2	A3	A4
A1	45	0	45	0
A2	0	80	5	75
A3	45	5	53	3
A4	0	75	3	78

		OR			
6.	**a).**	Consider an example query of your choice and remove redundancy in the query by applying idempotency rules.	**3**	**3**	**7**
	b).	Explain in detail, normalization of an input query.	**3**	**3**	**7**
		UNIT-IV			
7.	**a).**	Explain how cardinalities of various relational algebra operators are computed using database statistics.	**4**	**2**	**7**
	b).	Explain the dynamic query optimization algorithm used by INGRES.	**4**	**2**	**7**
		OR			
8.	**a).**	Explain semi join based algorithm to order joins in fragment queries.	**4**	**2**	**7**
	b).	Explain in detail, the four join strategies used by R^* algorithm.	**4**	**2**	**7**
		UNIT-V			
9.	**a).**	Explain about concurrency control using multiversion TO algorithm.	**5**	**2**	**7**
	b).	Explain about concurrency control using Optimistic Concurrency control algorithms.	**5**	**2**	**7**
		OR			
10.	**a).**	Explain about various database threats and types of security mechanisms.	**5**	**2**	**7**
	b).	Explain briefly about Role Based Access Control.	**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: B20IT4111	
SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)					**R20**
IV B.Tech. I Semester MODEL QUESTION PAPER					
WIRELESS ADHOC AND SENSOR NETWORKS					
PROFESSIONAL ELECTIVE-V					
INFORMATION TECHNOLOGY					
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).**	Explain in detail about the design challenges in Ad hoc and Sensor Networks	**1**	**2**	**7**
	b).	Describe the characteristics, requirements and applications of Ad Hoc and Sensor Networks.	**1**	**2**	**7**
		OR			
2.	**a).**	Illustrate the operation of Multichannel MAC Protocol.	**1**	**3**	**7**
	b).	Explain in detail the design issues in routing and transport layer protocol.	**1**	**2**	**7**
		UNIT-II			
3.	**a).**	Explain the design issues in Ad-hoc Networks	**2**	**2**	**7**
	b).	Explain Qos Parameters and challenges.	**2**	**3**	**7**
		OR			
4.	**a).**	Why does TCP not work well in Ad hoc network?	**2**	**2**	**7**
	b).	Demonstrate Qos Model in Ad-hoc networks?	**2**	**3**	**7**
		UNIT-III			
5.	**a).**	Explain MAC Protocol for wireless sensor networks?	**3**	**3**	**7**
	b).	Explain in detail about IEEE 802.15.4?	**3**	**2**	**7**
		OR			
6.	**a).**	Explain Sensor network architecture?	**3**	**2**	**7**
	b).	Illustrate low duty cycle protocols and wakeup concepts?	**3**	**3**	**7**
		UNIT-IV			
7.	**a).**	Write short notes on QOS in WSN?	**4**	**2**	**7**
	b).	Discuss the various types of sensors?	**4**	**3**	**7**
		OR			
8.	**a).**	Explain Data aggregation strategies in WSNs	**4**	**2**	**7**
	b).	Discuss in detail on sensor network absolute and relative localization.	**4**	**2**	**7**

		UNIT-V			
9.	**a).**	Demonstrate Key Distribution and Management in security attacks?	**5**	**2**	**7**
	b).	Outline the issues and challenges in security provisioning for wireless sensor networks.	**5**	**3**	**7**
		OR			
10.	**a).**	Present an outline of SPINS, security protocol for sensor networks.	**5**	**3**	**7**
	b).	Explain about software based Anti tamper techniques?	**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: B20IT4112		
SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)					**R20**
IV B.Tech. I Semester MODEL QUESTION PAPER					
BLOCKCHAIN TECHNOLOGIES					
PROFESSIONAL ELECTIVE-V					
INFORMATION TECHNOLOGY					
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 Blockchain Technology? How Does It Work?	**1**	**2**	**7**
	b).	Briefly explain block chain changing the digital marketing landscape?	**1**	**2**	**7**
		OR			
2.	**a).**	Briefly explain distributed trust in blockchain?	**1**	**2**	**7**
	b).	What is cryptocurrency and how does it work?	**1**	**2**	**7**
		UNIT-II			
3.	**a).**	What is public key cryptography in Blockchain?	**2**	**2**	**7**
	b).	What are the Key Concepts of Blockchain Development?	**2**	**2**	**7**
		OR			
4.	**a).**	What is digital identity verification? How is blockchain used in digital identity management?	**2**	**2**	**7**
	b).	What Is Crypto Art and How Does It Affect the Art World?	**2**	**2**	**7**
		UNIT-III			
5.	**a).**	Explain bitcoin scripts?	**3**	**2**	**7**
	b).	Explain how Bit coin mining works along with the downside of Bitcoin mining?	**3**	**2**	**7**
		OR			
6.	**a).**	Explain about blockchain Genomics?	**3**	**2**	**7**
	b).	What are micropayments? Explain how blockchain is improving micropayment capabilities?	**3**	**2**	**7**
		UNIT-IV			
7.	**a).**	Explain how Ethereum is different from bitcoin along with the real-world use cases of Ethereum?	**4**	**2**	**7**
	b).	Explain about consensus problem in blockchain?	**4**	**2**	**7**

		OR			
8.	**a).**	Briefly explain about Hyperledger in blockchain?	**4**	**2**	**7**
	b).	Explain about Demurrage currency in blockchain?	**4**	**2**	**7**
		UNIT-V			
9.	**a).**	Explain about the Technical challenges in blockchain?	**5**	**2**	**7**
	b).	Explain business model challenges in blockchain?	**5**	**2**	**7**
		OR			
10.	**a).**	Write a short note on Scandals and Public Perception?	**5**	**2**	**7**
	b).	Explain how blockchain can be used in e-governance?	**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: B20IT4113		
SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)					**R20**
IV B.Tech. I Semester MODEL QUESTION PAPER					
E-COMMERCE					
PROFESSIONAL ELECTIVE-V					
INFORMATION TECHNOLOGY					
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).**	Analyze and apply the available communication apparatus in E-commerce environment?	**1**	**3**	**7**
	b).	Explain about the Electronic Marketplace Technologies	**1**	**2**	**7**
		OR			
2.	**a).**	Apply e-commerce concepts to distinguish between the EDI and Open EDI?	**1**	**3**	**7**
	b).	Explain briefly about internet and www tools.	**1**	**3**	**7**
		UNIT-II			
3.	**a).**	Identify the Secure File Transfer requirements and distinguish between S-HTTP and SSL Protocols.	**2**	**3**	**7**
	b).	Identify the secure payment requirements and Apply the SEPP architecture?	**2**	**3**	**7**
		OR			
4.	**a).**	Explain about security on enterprise networks.	**2**	**3**	**7**
	b).	Explain secure electronic transaction (SET).	**2**	**2**	**7**
		UNIT-III			
5.	**a).**	Explain the internet monitory payment and security requirements in electronic commerce.	**3**	**2**	**7**
	b).	Analyze and simplify the Payment & Purchase Order process in a secured manner?	**3**	**3**	**7**
		OR			
6.	**a).**	What is E-cash? How to defend/prevent double spending in E-Cash? Elaborate with an algorithm?	**3**	**3**	**7**
	b).	How does e-mail work? State its advantages with regard to e-commerce.	**3**	**3**	**7**
		UNIT-IV			

7.	**a).**	Explain about master card / visa secure electronic transaction.	**4**	**3**	**7**
	b).	Analyze the following terms in E-Commerce: 1) Blind Digital Signature 2) Electronic Payment Schemes 3) Difference between Credit card and Debit card.	**4**	**3**	**7**
		OR			
8.	**a).**	Identify and explain model for Message Handling Systems (ITU-T Model)?	**4**	**3**	**7**
	b).	Write short notes on UUEncode/UUDecode.	**4**	**3**	**7**
		UNIT-V			
9.	**a).**	Identify and explain various mechanisms for information search and retrieval from the Internet?	**4**	**3**	**7**
	b).	Explain about the Internet Applications for E-commerce?	**4**	**3**	**7**
		OR			
10.	**a).**	Develop an Internet Architecture for E-Commerce for access the internet?	**4**	**3**	**7**
	b).	Describe Technologies for Web Servers in E-commerce.	**4**	**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: B20IT4114		
SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (A)					**R20**
IV B.Tech. I Semester MODEL QUESTION PAPER					
ETHICAL HACKING					
PROFESSIONAL ELECTIVE-V					
INFORMATION TECHNOLOGY					
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).**	Interpret types and phases of hacking.	**1**	**3**	**7**
	b).	Define protocol. Explain different types of protocols	**1**	**2**	**7**
		OR			
2.	**a).**	Sketch and explain about the structure of penetration testing report?	**1**	**3**	**7**
	b).	Investigate the similarities between penetration and vulnerability testing?	**1**	**2**	**7**
		UNIT-II			
3.	**a).**	Interpret basic techniques of scanning.	**2**	**3**	**7**
	b).	Explain types of "foot printing".	**2**	**2**	**7**
		OR			
4.	**a).**	Interpret DNS enumeration.	**2**	**3**	**7**
	b).	Interpret performing flag scan using hping3.	**2**	**3**	**7**
		UNIT-III			
5.	**a).**	Explain about default password databases.	**3**	**2**	**7**
	b).	Differentiate between manual and automated password cracking.	**3**	**3**	**7**
		OR			
6.	**a).**	Interpret working of trojan.	**3**	**3**	**7**
	b).	Categorize infection techniques.	**3**	**2**	**7**
		UNIT-IV			
7.	**a).**	Explain active and passive sniffing techniques.	**4**	**2**	**7**
	b).	Interpret Session Hijacking.	**4**	**3**	**7**
		OR			
8.	**a).**	Explain types of phishing attacks.	**4**	**3**	**7**
	b).	Interpret social engineering toolkit (SET)	**4**	**3**	**7**
		UNIT-V			
9.	**a).**	Categorize Steganography Methods.	**5**	**3**	**7**

	b).	Explain Hash Functions.	**5**	**2**	**7**
		OR			
10.	**a).**	Explain about the open web application security project (OWASP)	**5**	**2**	**7**
	b).	Interpret damn vulnerable web application (DVWA)	**5**	**3**	**7**

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

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