R20

MCA III SEM

REGULAR EXAMINATIONS

FEBRUARY 2022

Narasaraopeta Engineering College (Autonomous)

Kotappakonda Road, Yellamanda (P.O), Narasaraopet- 522601, Guntur District, AP.

Subject Code: R20MCA301

MCA - III Semester Regular Examinations, February-2022

MACHINE LEARNING WITH PYTHON

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

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

Q.No.		Questions	KL	CO	M
		PART-A			
1	a	Define Inductive and Concept learning?	K1	CO1	2
	b	Define Version space?	K1	CO1	2
	c	Explain decision tree learning algorithm?	K2	CO2	2
	d	Define Perceptrons?	K1	CO2	2
	e	Define Bayes Theorem?	K1	CO3	2
	f	Define Hypothesis Space search?	K1	CO3	2
		PART-B			
2	a	Explain the version space Candidate Elimination with an example.	K2	CO1	6
	b	Explain the following terms a) Inductive Bias b) Inductive Leap c) Bias-Free Learning d) Unbiased Learner	K2	CO1	6
3	a	What is the relationship between the learned decision tree and the version space?	K3	CO1	6
	b	What different type of Issues in Decision tree learning K- Nearest Neighbour Learning	K3	CO1	6
4	a	What are different applications of neural network learning?	K3	CO2	6
	b	Explain the Perceptron training rule	K2	CO2	6
5	a	Give the derivation of Back Propagation rule	K3	CO3	6
	b	Explain how the Back Propagation algorithm used in Face Recognition	K4	CO3	6
6	a	Explain the genetic operators with an example	K4	CO3	6
	b	Explain genetic programming with a suitable example	K4	CO4	6
7	a	Explain the difference between maximum likelihood and least square error hypothesis	K3	CO4	6
	b	Explain the EM algorithm with an example	K4	CO4	6

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M:Marks

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Narasaraopeta Engineering College (Autonomous)

Kotappakonda Road, Yellamanda (P.O), Narasaraopet- 522601, Guntur District, AP.

Subject Code: R20MCA302

MCA - III Semester Regular Examinations, February-2022

WEB TECHNOLOGIES

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

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

Q.No.		Questions	KL	CO	M
		PART-A			
1	a	What are AJAX applications?	K2	CO1	2
	b	How do you make a tabbed pane in Java Swing?	K1	CO2	2
	c	What is session Tracking in servlet?	K3	CO3	2
	d	Is MVC architecture or design pattern?	K2	CO4	2
	e	Why do we need implicit objects in JSP?	K2	CO2	2
	f	Why do we need JDBC driver?	K1	CO4	2
		PART-B			
2	a	Create a simple HTML page which demonstrates the use of the various types of lists.	K1	CO1	6
	b	What is function? Explain how parameters are passed to functions in JavaScript.	K2	CO1	6
3	a	How java swing controls differ from AWT controls.	K2	CO2	6
	b	Develop a home page using applets and swings.	K2	CO1	6
4	a	Create a Servlet that displays the current date and time.	K3	CO2	6
	b	Discuss the structure of HTTP request and HTTP response in Servlets.	K2	CO2	6
5	a	Discuss about the JSP application design with MVC architecture.	K1	CO3	6
	b	Discuss in detail the Anatomy of a JSP page.	K2	CO3	6
6	a	Write about the following: [4+4+4] (a) Bean methods (b) Bean properties (c) Bean events	K3	CO4	12
7	a	Discuss different JDBC drivers with its architectures.	K3	CO1	6
	b	List and explain the steps involved in a basic JDBC program.	K1	CO2	6

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M:Marks

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Subject Code: R20MCA303

MCA - III Semester Regular Examinations, February-2022

NETWORK SECURITY AND CRYPTOGRAPHY

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

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

Q.No.		Questions	KL	CO	M
		PART-A			
1	a	Define an attack	K1	CO1	2
	b	Name the Block cipher modes of operations	K3	CO1	2
	c	How the key distribution will occur in the network	K2	CO2	2
	d	Write about IP security	K2	CO3	2
	e	Define Pretty Good Privacy	K1	CO4	2
	f	What is an intruder	K1	CO5	2
		PART-B			
2	a	Differentiate between Active attacks and Passive Attacks	K3	CO1	6
	b	Explain the operations, requirements, components of Network security model.	K1	CO1	6
3	a	Use Caesar cipher with key =15 to encrypt the message "Hello".	K2	CO2	6
	b	Discuss in detail about Secure Hash Functions and how they are useful for encryption and decryption process	K4	CO2	6
4	a	Perform decryption and encryption using RSA algorithm with p=3, q=11, e=7 and N=5.	K3	CO3	6
	b	Write in detail about the Kerberos with neat diagram.	K2	CO3	6
5	a	Write in detail about IP Security Architecture	K1	CO3	6
	b	Discuss in detail about Authentication Header, Encapsulating Security Payload with example and required diagrams	K4	CO3	6
6	a	Write the methodology involved in computing the keys in SSL/TLS protocol	K3	CO4	6
	b	Explain about Secure Electronic Transaction(SET) in detail with neat diagram	K2	CO4	6
7	a	Define virus and how it can harm the system. How to detect and prevent it	K4	CO5	6
	b	What is Firewall? What are the various Types of Firewalls? Explain each firewall purpose	K3	CO5	6

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M:Marks

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Narasaraopeta Engineering College (Autonomous)

Kotappakonda Road, Yellamanda (P.O), Narasaraopet- 522601, Guntur District, AP.

Subject Code: R20MCA307

MCA - III Semester Regular Examinations, February-2022

UNIFIED MODELING LANGUAGE

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

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

Q.No.		Questions	KL	CO	M
		PART-A			
1	a	What is Encapsulation?	K2	CO1	2
	b	Draw Different types of Relationships in UML	K2	CO2	2
	c	Differentiate between Sequence and Collaboration Diagrams	K3	CO3	2
	d	What is Forward and Reverse Engineering?	K2	CO1	2
	e	What are the steps involved in modelling the life time of object	K2	CO1	2
	f	List out the Diagrams involved in Architectural Modelling	K1	CO1	2
		PART-B			
2	a	Explain the principles of Modelling	K3	CO1	6
	b	What are the Software Development life cycle steps? Explain Briefly	K2	CO1	6
3	a	Explain Common Modelling Techniques for Modelling New Building Blocks	K3	CO1	6
	b	Explain How to model a logical Database Schema in Class Diagram	K3	CO1	6
4	a	Draw Sequence Diagram for withdraw money from ATM	K2	CO2	6
	b	Explain Iterated Messages and Use of Self Messages In Collaboration Diagram to Change PIN Number in ATM	K3	CO1	6
5	a	Draw and Explain Use Case Diagram to model the requirements of Online book sale (Amazon) System.	K2	CO2	6
	b	Explain How to Model an Operation in Activity Diagram With an Example	K3	CO1	6
6	a	Explain the Modelling of Interpocess Communication	K1	CO3	6
	b	What is State Chart Diagram? Explain Modelling Reactive Objects?	K2	C04	6
7	a	Explain Client/Server System and Fully Distributed System Modelling Using Deployment Diagrams	K3	CO2	6
	b	Draw and Explain Component Diagram for College online Library System to borrow and return Book	K2	CO2	6

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M: Marks

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Kotappakonda Road, Yellamanda (P.O), Narasaraopet- 522601, Guntur District, AP.

Subject Code: R20MCA308

MCA - III Semester Regular Examinations, February-2022

HUMAN RESOURCE MANAGEMENT

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

Question Paper Consists of **Part-A** and **Part-B.**

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

Q.No.		Questions	KL	CO	M
		PART-A			
1	a	Explain the various roles of HR Manger.	K4	CO1	2
	b	Distinguish between recruitment and selection.	K4	CO2	2
	c	Write any four principles of ergonomics.	K4	CO3	2
	d	Management by objectives.	K5	CO4	2
	e	Perquisites.	K5	CO5	2
	f	Trade unions.	K4	CO6	2
		PART-B			
2	a	Briefly explain the functional areas of Personnel management.	K4	CO1	6
	b	Define HRM. Explain the significance of HRM.	K4	CO1	6
3	a	Summarise the different sources of Recruitment. State its merits and demerits.	K2	CO2	6
	b	Mention the different training and development methods used in India?	K5	CO2	6
4	a	Critically distinguish between job description and job specification	K4	CO3	6
	b	Define job evaluation. What are the steps involved in evaluating a job?	K2	CO3	6
5	a	Analyse various methods of performance appraisal.	K4	CO4	6
	b	What do you mean by performance appraisal of an employee? Explain the essentials of a performance appraisal system in a Software Company.	K6	CO4	6
6	a	Critically evaluate the Statutory and Non-statutory welfare measures available for workforce in India.	K5	CO5	6
	b	Discuss the components of wage structure in Indian industries.	K6	CO5	6
7	a	What is stress? Explain the personal and organisational factors that causes stress.	K4	CO6	6
	b	"Collective bargaining is an effective tool for grievance redressal" - discuss, also explain the process of collective bargaining.	K4	CO6	6

KL: Blooms Taxonomy Knowledge Level CO: Course Outcome M:Marks

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