



Subject Code: R20MCA301

MCA - III Semester Regular & Supple Examinations, December-2023 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 bias	K1	1	2
	b	How Case based reasoning works and what are applications of it?	K3	2	2
	c	What is Artificial Neural networks	K1	3	2
	d	What is Multilayer networks?	K1	4	2
	e	List Models of evaluation in Machine learning	K2	5	2
	f	Why do we use Maximum likelihood probabilities?	K3	6	2
PART-B					
2	a	Illustrate Machine learning and Concept learning	K4	1	6
	b	Discuss Version Spaces and Candidate Eliminations	K4	1	6
3	a	Determine differences between supervised and unsupervised learning	K2	2	6
	b	Why do we need a K- Nearest Neighbor Learning? How does K- Nearest Neighbor works?	K2	2	6
4	a	How do you represent Neural Networks in Machine learning	K3	3	6
	b	Illustrate Perceptrons	K4	3	6
5	a	Explain Back Propagation Algorithm with any one example	K4	4	6
	b	Discuss any three applications on face recognition in real time scenario	K4	4	6
6	a	Briefly discuss about Genetic algorithm and why do we use them?	K3	5	6
	b	Explain Parallelizing Genetic algorithm	K4	5	6
7	a	Explain Naïve Bayes Classifier algorithm with an example	K4	6	6
	b	Briefly discuss about EM algorithm	K4	6	6

KL: Blooms Taxonomy Knowledge Level

CO: Course Outcome

M: Marks

Subject Code: R20MCA302

MCA - III Semester Regular & Supple Examinations, December-2023

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	Describe any two types of list in HTML?	2	CO1	2
	b	Life cycle of applet?	2	CO2	2
	c	Explain types of servlet?	2	CO2	2
	d	Differentiate Servlets and JSP?	2	CO2	2
	e	Define a Java bean and explain advantages?	1	CO3	2
	f	Explain Prepared statement?	2	CO4	2
PART-B					
2	a	How to insert a image in webpage explain with example?	1	CO1	6
	b	How to validate form in JavaScript explain?	1	CO1	6
3	a	Give in detail explanation about Layout Managers?	2	CO2	6
	b	Write the similarities and dissimilarities between swing and AWT	2	CO2	6
4	a	Illustrate the Servlet Life Cycle methods.	4	CO2	6
	b	What is session management? Is what way session is managed in servlets? Explain.	2	CO2	6
5	a	Write in very brief about JSP processing	1	CO2	6
	b	Explain the various tags of a JSP.	2	CO2	6
6	a	List out the steps that involved creating a new bean. Explain each step in detail?	6	CO3	6
	b	What are the implicit objects of JSP?	2	CO2	6
7	a	Explain JDBC Drivers.	5	CO4	6
	b	Write a simple Java program connect to a database from a JSP using JDBC.	5	CO4	6

KL: Blooms Taxonomy Knowledge Level

CO: Course Outcome M: Marks



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MCA - III Semester Regular & Supple Examinations, December-2023

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 fabrication	1	1	2
	b	Write the limitations of block ciphers	1	2	2
	c	What is digital signature	1	3	2
	d	What is security association	1	3	2
	e	Write the PGP services	1	4	2
	f	What is intruder	1	5	2
PART-B					
2	a	Explain the Security Services	2	1	6
	b	Explain the model for internetwork Security	2	1	6
3	a	Explain the Cipher Block modes of operation	2	2	12
4	a	Explain the Conventional Encryption principles	2	3	6
	b	Discuss the X.509 authentication service	2	3	6
5	a	Explain the ISAKMP protocol	2	3	6
	b	Explain the IPSec architecture	2	3	6
6	a	Elaborate the Secure Electronic Transaction	2	4	12
7	a	Explain the Firewall Design principles	2	5	6
	b	Discuss about viruses	2	5	6

KL: Blooms Taxonomy Knowledge Level

CO: Course Outcome M: Marks



Narasaraopeta Engineering College (Autonomous)

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

Subject Code: R20MCA307

MCA - III Semester Regular & Supple Examinations, December-2023

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 Polymorphism?	1	1	2
	b	Distinguish between Association and Dependency relationships.	1	2	2
	c	What is flow of control in sequence diagram?	1	3	2
	d	What is the role of Actor in use case diagram?	1	4	2
	e	What are time constraints?	1	5	2
	f	Define component.	1	6	2
PART-B					
2	a	What are the features are of object oriented system? What are the advantages of UML in object oriented modeling?	2	1	6
	b	Explain building blocks of UML.	2	1	6
3	a	Explain simple dependencies in UML? Illustrate with example.	2	2	6
	b	Explain modeling of Structural Relationships in UML	2	2	6
4	a	Explain Collaboration diagrams and terms and concepts.	2	3	6
	b	What are interactions? Explain modeling of Flow of Control by Time ordering.	2	3	6
5	a	Explain modeling of Context of a System using use case diagrams.	2	4	6
	b	Explain modeling of workflow using Activity diagram.	2	4	6
6	a	What are State machines? Explain modeling of the Lifetime of an Object.	2	5	6
	b	Explain modeling of Multiple Flows of Controls in UML	2	5	6
7	a	Explain modeling of physical database using component diagram.	2	6	6
	b	Explain modeling of client Server system using deployment diagrams	2	6	6

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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	Write the functions of HRM.	K3	CO1	2
	b	Distinguish between on-the-job and off-the-job training.	K4	CO2	2
	c	Define job sharing. List the advantages and disadvantages of job sharing	K1	CO3	2
	d	What are behaviourally anchored rating scales (BARS)? What are its drawbacks?	K1	CO4	2
	e	Compile the theories of wage determination?	K5	CO5	2
	f	Identify the techniques to cope up with stress at workplace.	K2	CO6	2
PART-B					
2	a	Discuss the challenges faced by HR managers in 21st century.	K2	CO1	6
	b	Distinguish between personnel management and human resource management.	K2	CO1	6
3	a	What are the stages of the selection process? Summarize selection process.	K5	CO2	6
	b	What is the importance of training employees? Why is on-the-job training effective?	K4	CO2	6
4	a	List the objectives of job evaluation. Briefly explain the methods of job evaluation.	K1 & K2	CO3	6
	b	Differentiate between job description and job specification.	K3	CO3	6
5	a	What are the components of compensation? Describe steps in creating a compensation plan?	K1 & K2	CO4	6
	b	Examine latest trends in performance appraisal.	K3	CO4	6
6	a	Critically analyse the effectiveness of legal framework for welfare management in organisations.	K4	CO5	6
	b	Arrange the determinants of payment of wages. Briefly explain the concept of merit-based incentive payment system (MIPS).	K6	CO5	6
7	a	Describe grievance handling procedure.	K2	CO6	6
	b	Briefly explain methods of collective bargaining.	K3	CO6	6