

Code: 24MCA4003
ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
MCA IV Semester Regular Examinations, April, 2026
DEEP LEARNING
(MASTER OF COMPUTER APPLICATIONS)

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

<u>UNIT-I</u>		Marks	CO	Blooms Level
1.	a) Explain about McCulloch-pitts unit.	7M	CO1	Applying
	b) Analyze the linear perceptron learning algorithm through convergence.	7M	CO1	Analyzing
(OR)				
2.	a) Construct a perceptron model for logical AND/OR functions.	7M	CO1	Creating
	b) Propose modifications to improve perceptron learning for complex datasets.	7M	CO1	Creating
<u>UNIT-II</u>				
3.	a) Differentiate between IoT and M2M communication with examples.	7M	CO2	Understanding
	b) Apply the concept of Network Function Virtualization in IoT system design.	7M	CO2	Applying
(OR)				
4.	a) Demonstrate the use of NETCONF in IoT configuration.	7M	CO2	Applying
	b) Design a simple IoT architecture using SDN principles.	7M	CO2	Creating
<u>UNIT-III</u>				
5.	a) Compare Adadelta and RMSprop optimization methods.	7M	CO3	Understanding
	b) Illustrate the concept of Nesterov Accelerated Gradient (NAG).	7M	CO3	Understanding
(OR)				
6.	a) Analyze the saddle point problem in optimization.	7M	CO3	Analyzing
	b) Propose a hybrid optimization strategy combining Adam and NAG.	7M	CO3	Creating
<u>UNIT-IV</u>				
7.	a) Explain Backpropagation Through Time (BPTT) in RNNs.	7M	CO4	Understanding
	b) Discuss the innovations introduced in AlexNet compared to LeNet.	7M	CO4	Understanding
(OR)				
8.	a) Evaluate the effectiveness of Deep Boltzmann Machines in generative modeling.	7M	CO4	Evaluating
	b) Design a CNN model for handwritten digit recognition.	7M	CO4	Creating
<u>UNIT-V</u>				
9.	a) Define Variational Autoencoders (VAEs) and explain their working.	7M	CO5	Remembering
	b) Apply multi-task deep learning to a real-world problem.	7M	CO5	Applying
(OR)				
10.	a) Evaluate the strengths and weaknesses of GANs in image synthesis.	7M	CO5	Evaluating
	b) Assess the impact of deep learning in speech processing.	7M	CO5	Evaluating

Code: 24MCA4008 **SET-I**
ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
MCA IV Semester Regular Examinations, April- 2026
SOFTWARE TESTING METHODOLOGIES
(MASTER OF COMPUTER APPLICATIONS)

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

			Marks	CO	Blooms Level
<u>UNIT-I</u>					
1.	a)	Explain the evolution of software testing and its importance in SDLC.	7M	CO1	L2
	b)	Explain software testing terminology and its significance.	7M	CO1	L2
(OR)					
2.	a)	Discuss the model for testing in software engineering.	7M	CO1	L2
	b)	Define verification and validation, Explain about verification of requirements.	7M	CO1	L2
<u>UNIT-II</u>					
3.	a)	Explain Boundary Value Analysis with example.	7M	CO5	L3
	b)	Discuss in detail about state table-based testing.	7M	CO5	L2
(OR)					
4.	a)	Explain the different techniques used to test loops in software programs.	7M	CO2	L3
	b)	Describe the various logic coverage criteria applied in white-box testing	7M	CO2	L2
<u>UNIT-III</u>					
5.	a)	Explain in detail about Unit Testing with example.	7M	CO2	L3
	b)	Define integration testing. Explain about path-based integration.	7M	CO2	L2
(OR)					
6.	a)	Explain in detail about acceptance testing.	7M	CO1	L2
	b)	Differentiate Progressive vs Regressive testing.	7M	CO2	L4
<u>UNIT-IV</u>					
7.	a)	Explain the need for test suite management.	7M	CO3	L2
	b)	What are software quality metrics? Explain with examples	7M	CO4	L3
(OR)					
8.	a)	Discuss the minimization of test suite with an example	7M	CO3	L2
	b)	Write short notes on software quality management.	7M	CO4	L3
<u>UNIT-V</u>					
9.	a)	Explain the features of test automation. Give its merits and demerits over manual testing.	7M	CO5	L4
	b)	How to formulate and execute test scripts in load runner? Explain.	7M	CO5	L3
(OR)					
10.	a)	Explain about JMeter testing tool.	7M	CO5	L2
	b)	Give an overview of some commercial testing tools.	7M	CO5	L2