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Department of Artificial Intelligence and Machine Learning

Course Code: : 21A163	Date : 27.08.24
Semester : VI	Time : 9.30-11.30
Max Marks : 60	Duration : 120 mins

Artificial Neural Networks and Deep Learning

Improvement Test

Note: Answer all the Questions

SL. No		Quiz Questions PART A	M	BT	CO
1		Give any two challenges faced by traditional Neural Networks?	2	2	2
2		Schematically represent a RNN for Named Entity Recognition system	2	2	3
3		LSTM overcomes _____ problem	1	1	1
4		_____ and _____ algorithms can be used to solve multi armed bandit	2	2	2
5		What the various challenges faced in reinforcement learning (any two)	2	2	2
6		SARSA refers to _____	1	1	1
		PART – B			
1	a	With a neat diagram, elaborate the architecture of RNN in detail	10	2	2
2	a	Assume a company decides to build a RNN model for language translation. Identify and elaborate an appropriate RNN architecture with a neat diagram. Give an example	05	4	3
	b	What is reinforcement learning? Explain any three applications of the same.	05	3	3
3	a	Consider the statement: "Ms Nayana and his sister wants to play football." Justify how LSTM is suitable for grammar checker and illustrate the solution for the given example. Give the architectural diagram of the same.	10	4	3
4	a	Consider the Multi-Armed Bandits , discuss why the problem is considered as stateless and elaborate Naïve bayes can be used to solve the problem. Discuss the drawbacks of the same.	10	2	2
5	a	With a neat sketch , elaborate the basic structure of reinforcement learning	5	2	2
	b	With reference to SARSA , discuss On-Policy Versus Off-Policy Methods.	5	2	3

M-Marks, BT-Blooms Taxonomy Levels, CO-Course Outcomes

Marks Distribution	Particulars	CO1	CO2	CO3	CO4	CO5	L1	L2	L3	L4	L5	L6
	Max Marks CIE	3	27	30	--	--	05	25	22	08	--	--

Course Outcomes: After completing the course, the students will be able to:-

CO1	Describe basic concepts of neural network, its applications and various learning models
CO2	Analyse different Network Architectures, learning tasks, convolutional networks, and deep learning models
CO3	Investigate and apply neural networks model and learning techniques to solve problems related to society and industry
CO4	Demonstrate a prototype application developed using any NN tools and APIs
CO5	Appraise the knowledge of Neural Networks and Deep Learning as an Individual /as a team member