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P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belagavi)
Third Semester, Master of Computer Applications (MCA)
Semester End Examination; February / March - 2022
Deep Learning

Time: 3 hrs   Max. Marks: 100

Course Outcomes

The Students will be able to:

CO 1: Outline the machine learning techniques along with knowledge base.
CO2: Understand the applications deep neural networks.
CO3: Apply various deep networks.
CO4: Illustrate the various deep learning models.
CO5: Demonstrate a specific deep network architecture.

<u>**Note**</u>**:** **I)** Answer any **FIVE** full questions, selecting **ONE** full question from each unit.
   II) Any **THREE** units will have internal choice and remaining **TWO** unit questions are compulsory.
   III) Each unit carries 20 marks.

Q. No.	Questions	Marks	BLs	COs	PO
	UNIT - I				
1 a.	What is neural network? Explain in detail with neural architecture diagram.	10	L1,2	CO1	PO1,2
b.	What are the basic linear algebra concepts are essential to build models of neural networks.	10	L1,2	CO1	PO1,2
	UNIT - II				
2 a.	What is activation function? Explain some useful activation function in neural networks.	10	L1,2	CO2	PO1,2
b.	Explain common architectural principles of deep networks.	10	L1,2	CO2	PO1,2
	UNIT - III				
3 a.	With diagram, explain about 3D volumetric input in detail.	10	L2	CO3	PO1,2
b.	With neat diagram, explain CNN architecture.	10	L2	CO3	PO1,2
	OR				
3 c.	What is the hyper parameters convolution layer?	10	L2	CO3	PO1,2
d.	With neat diagram, discuss about LSTM architecture.	10	L2	CO3	PO1,2
	UNIT - IV				
4 a.	Illustrate how to match input data and network architecture to begin deep network design process?	10	L2	CO4	PO1,2
b.	Outline the following: i) Controlling Epochs ii) Mini batch networks	10	L2	CO4	PO1,2
	OR				

4 c.	Illustrate how to use regularization in turning deep networks?	10	L2	CO4	PO1,2
d.	Explain weight initialization strategies of deep networks.	10	L2	CO4	PO1,2

UNIT - V

5 a.	Illustrate network input data and input layers with a neat diagram.	10	L2	CO5	PO1,2
b.	Write about; i) Configuring pooling layer ii) Transfer learning	10	L2	CO5	PO1,2

OR

5 c.	Discuss about output layers and RNN output layer in detail.	10	L2	CO5	PO1,2
d.	Explain about padding and masking in detail.	10	L2	CO5	PO1,2

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