PRN:		Course Code :	AMT17043

Fourth Year **B. Tech** End Semester Examination Winter 2023

Fundamentals of Tensorflow

Day and Date: Tuesday, 05/12/2023 Max Marks: **100**

Time : 2.00 to 5.00 PM Duration: **03** hrs

Instructions:

1. All questions are compulsory.
2. Write equations wherever necessary.

			Marks	Bloom's Level	CO
Q.1		**Attempt the following**			
	a)	Explain Tensor and Graph in Tensorflow with an example.	08	L2	1
	b)	Explain Tensorflow servables and servable versions in Tensorflow	08	L2	1
		OR			
	b)	Explain any four features of Tensorflow.	08	L2	1
Q.2		**Attempt the following**			
	a)	Explain tf.constant and tf.variable with an example for each.	08	L2	1
	b)	Explain any four Tensorflow operators with examples.	08	L2	1
	b)	What is rank of tensorflow? Explain Rank 0, Rank 1 and Rank 2 tensors with an example for each.	08	L2	1
Q.3		**Attempt any two from the following**			
	a)	Explain single layer feed forward and multi-layer feed forward networks with neat diagram.	08	L2	2
	b)	Define neural network. Explain the layers of neural network with neat diagram.	08	L2	2
	c)	Write a brief note on Machine Learning and Deep Learning.	08	L2	2
Q.4		**Attempt any two from the following**			
	a)	Explain the steps involved in the training of CNN using Tensorflow.	08	L3	3
	b)	Explain Pooling and Fully dense layer in CNN.	08	L3	3
	c)	List the advantageous, disadvantageous and applications of CNN.	08	L3	3
Q.5		**Attempt any Two of the following**			
	a)	Explain RNN in detail. Explain any four applications of RNN.	09	L3	4
	b)	Long short-term memory (LSTM) RNN in Tensorflow.	09	L3	4
	c)	Explain the types of RNN.	09	L3	4
Q.6		**Attempt any Two of the following**			
	a)	Explain any four Tensorflow security loopholes in detail.	09	L2	5
	b)	Explain architecture Tensorflow Lite with neat diagram.	09	L4	5
	c)	Explain Tensorflow object detection with necessary diagram.	09	L4	5

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