G.R. No.	
PAPER CODE	P.122 –233 Qsk/ESfc

May 2022 / INSEM+ENDSEM
F. Y. M. TECH.(COMPUTER ENGINEERING) (SEMESTER – II)
COURSE NAME: DEEP LEARNING
COURSE CODE: CSPA12203
(PATTERN 2020)

Time: [3 Hours]　　　　　　　　　　　　　　　　[Max. Marks: 60]

Instructions to candidates:
1) **All Questions are compulsory**
2) **Figures to the right indicate full marks.**
3) **Use of a scientific calculator is allowed**
4) **Use suitable data wherever required**

Q.1) (a) Differentiate between deep learning and machine learning.　[5]
　　(b) What Is Gradient Descent?　[5]

Q.2) Explain different phases (layers) of a convolution neural network (CNN), and describe what is the significance of convolution, pooling, fully connected, and output layers.
[10]

Q.3) Describe GRU and, why is GRU faster as compared to LSTM?　[10]

Q.4) (a)Describe the generative adversarial networks model　[5]
　　(b)How does GAN Training Scale with Batch Size?　[5]

Q.5) (a) What Is the Difference Between a Feedforward Neural Network and Recurrent Neural Network?　[5]

　(b) What Are the Applications of a Recurrent Neural Network (RNN)? [5]

Q.6) You build a sentiment analysis system that feeds a sentence into an RNN, and then computes the sentiment class between 0 (very negative) and 4 (very positive), based only on the final hidden state of the RNN. You

observe that your model predicts very positive sentiment for the following passage: Yesterday turned out to be a terrible day. I overslept my alarm clock, and to make matters worse, my dog ate my homework. At least my dog seems happy... Why might the model misclassify the appropriate sentiment for this sentence?

[10]