

Seat No.

MAR_APR 2025 SUMMER EXAMINATION**11731 Bachelor of Technology (NEP-2.0)****Sub. Name: Deep Learning****Sub. Code: 56518****Day and Date: MAY ,06-05-2025****Total Marks: 70****Time: 10:30 AM To 01:00 PM****Instructions:**

- Special Inst.:**
1. Question no. 6 is compulsory
 2. Solve any four questions from Q.1 to Q.5
 3. Assume suitable data wherever necessary
 4. Figures to the right indicate full marks

- Q1)** Solve the following [15]
- a. Describe the basic structure and working of a neural network [8]
 - b. Explain in detail Dropout Regularization. [7]
- Q2)** Solve the following [15]
- a. Discuss Convolution Neural Network (CNN) in detail. [8]
 - b. Explain Keras preprocessing layers in detail. [7]
- Q3)** Solve the following. [15]
- a. Describe the concept of word embeddings and how they improve over one-hot-encoding in neural networks. [8]
 - b. How can you inspect and monitor deep learning models using Keras callbacks? [7]
- Q4)** Solve the following. [15]
- a. Explain in detail Generative Adversarial Networks (GANs) and how the generator and discriminator work together [8]
 - b. Define the following terms : [7]
 - 1] Learning Rate
 - 2] Epoch and Batch
 - 3] Cross Entropy Loss function
- Q5)** Solve the following. [15]

- a. What is activation function? Explain different types of activation functions in Deep Learning. [8]
- b. Compare LSTM and GRU layers. How do they work, and what are the differences in their architecture and usage? [7]

Q6) Write a note on (any 2) [10]

- a. Recurrent Neural Network [5]
- b. Forward and Backward Propagation in ANN [5]
- c. Deep Dream [5]

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

1] (1154) B.Tech. CBCS (56518) Deep Learning Part 4 SEM 7