

Seat No.

OCT-NOV 2025 WINTER EXAMINATION**1154 B.Tech. CBCS****Sub. Name: Deep Learning****Sub. Code: 56518****Day and Date: Thursday ,18-12-2025****Total Marks: 70****Time: 02:30 PM To 05:00 PM**

Instructions: 1. Assume suitable data wherever necessary and mention it boldly
 2. Draw neat labelled diagrams wherever necessary
 3. Figures to the right indicate full marks

Special Inst.: 1. Question no. 6 is compulsory
 2. Solve any four questions from Q.1 to Q.5

- Q1) Solve the following questions [15]**
- a. Explain in detail Generative Adversarial Networks (GANs) and how the generator and discriminator work together [8]
- b. What do you mean by vanishing or exploding gradient descent problem? [7]
- Q2) Solve the following questions [15]**
- a. Explain in detail Recurrent Neural Network [8]
- b. Differentiate between Artificial Intelligence, Machine Learning, and Deep Learning with examples [7]
- Q3) Solve the following questions [15]**
- a. Define the following terms for Sequence Models: [8]
 1] One hot Encoding
 2] Word Embedding
- b. Explain in detail activation functions [7]
- Q4) Solve the following questions [15]**
- a. What is the Keras Functional API and how does it differ from the Sequential API? [8]
- b. Describe the process and applications of Neural Style Transfer [7]
- Q5) Solve the following questions [15]**
- a. Explain in brief Forward and Backward Propagation in ANN with example. [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. Keras callbacks [5]
- b. CNN [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