Seat No.

Total No. of Pages : 2

OCT-NOV 2025 WINTER EXAMINATION

1154 B.Tech. CBCS

Sub. Name: Deep Learning

Sub. Code: 67826/84720/84986

Day and Date: Tuesday ,09-12-2025 **Total Marks: 70**

Time: 10:30 AM To 01:00 PM

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

Q1) Solve any 2 questions of the following (7 Marks Each) **[14]**

a. What is the need of DL and what are the benefits of it. **[7]**

b. Explain tensor Math and NumPy. **[7]**

c. Explain the max pooling operation in detail with diagram. **[7]**

Q2) Solve any 2 questions of the following (7 Marks Each) **[14]**

a. Explain the Gradient based optimization technique in detail. **[7]**

b. Explain the following hyperparameter **[7]**
1) Choice of activation function
2) Number of iterations.

c. Explain Convolution operation with diagram **[7]**

Q3) Solve any 2 questions of the following (7 Marks Each) **[14]**

a. What are advanced uses of recurrent neural network? **[7]**

b. Explain inspecting and monitoring in Deep Learning models. **[7]**

c. Explain how LSTM is used for text generation? **[7]**

Q4) Solve any 2 questions of the following (7 Marks Each) **[14]**

a. Explain one hot encoding with example? **[7]**

b. Write note on Keras functional API. **[7]**

c. Explain neural style transfer. What is the style loss in neural style transfer **[7]**

Q5) Solve any 2 questions of the following (7 Marks Each) **[14]**

a. Explain Keras callbacks with suitable example. **[7]**

b. What are different steps for training ConvNet from starch on small dataset? **[7]**

c. What are the differences between LSTM and GRU **[7]**

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] (101) Bachelor of Engineering (84986) Deep Learning Part 4 SEM 8
2] (101) Bachelor of Engineering (67826) Real Time Operating System Part 4 SEM 8
3] (1154) B.Tech. CBCS (84720) Deep Learning Part 4 SEM 8