

SPPU-BE-COMP-CONTENT – KSKA Git

Total No. of Questions : 8]

SEAT No. :

P-559

[Total No. of Pages : 2

[6004]-494

B.E. (Computer Engineering)

DEEP LEARNING

(2019 Pattern) (Semester - VIII) (410251)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8
- 2) Figures to the right indicate full marks.
- 3) Neat diagrams must be drawn whenever necessary.
- 4) Make suitable assumption whenever necessary.

Q1) a) Explain Pooling Layer with its need and different types. [6]

b) Draw and explain CNN (Convolution Neural Network) architecture in detail. [6]

c) Explain ReLU Layer in detail. What are the advantages of ReLU over Sigmoid? [6]

OR

Q2) a) Explain all the features of pooling layer. [6]

b) Explain Dropout Layer in Convolutional Neural Network. [6]

c) Explain working of Convolution Layer with its features. [6]

Q3) a) What is RNN? What is need of RNN? Explain in brief about working of RNN (Recurrent Neural Network). [6]

b) How LSTM and Bidirectional LSTM works. [6]

c) Explain Unfolding computational graphs with example. [5]

OR

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- Q4)** a) What are types of RNN (Recurrent Neural Network)? How to train RNN explain in brief. [6]
- b) Explain Encoder-Decoder Sequence to Sequence architecture with its application. [6]
- c) Differentiate between Recurrent and Recursive Neural Network. [5]

- Q5)** a) Explain Boltzmann machine in details. [6]
- b) Explain GAN (Generative Adversarial Network) architecture with an example. [6]
- c) Do GANs (Generative Adversarial Network) find real or fake images? If yes explain it in detail. [6]

OR

- Q6)** a) Differentiate generative and discriminative models in GAN (Generative Adversarial Network). [6]
- b) What are applications of GAN (Generative Adversarial Network)? Explain any four in detail. [6]
- c) Write Short Note on Deep generative model and Deep Belief Networks. [6]

- Q7)** a) Explain Markov Decision Process with Markov property. [6]
- b) Explain in detail Dynamic programming algorithms for reinforcement learning. [6]
- c) Explain Simple reinforcement learning for Tic-Tac-Toe. [5]

OR

- Q8)** a) Write Short Note on Q Learning and Deep Q-Networks. [6]
- b) What are the challenges of reinforcement learning? Explain any four in detail. [6]
- c) What is deep reinforcement learning? Explain in detail. [5]

