Total No. of Questions : 8]

SEAT No. : B19095427

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.7or 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

P.T.O.

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]**

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