



Regulation R20

Subject code: 3E7GA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VII Semester Supplementary Examinations, April 2024

DEEP LEARNING

(CSE(AI&ML))

Maximum Marks: 70

Date: 28.04.2024 Duration: 3 hours

- Note:**
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit, which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10X2M=20 Marks)

- 1 What is Maximum Likelihood Estimator?
- 2 What is Density Estimation
- 3 What is Principal Components Analysis?
- 4 What is Bagging?
- 5 What is Difference between Parameter Tying and Parameter Sharing?
- 6 What is Stochastic Gradient descent?
- 7 What Is Echo State Networks?
- 8 What is Explicit Memory?
- 9 What is Partition Function?
- 10 What is Transfer Learning?

Part-B

Answer All the following questions.

(10MX 5=50Marks)

- 11 A. Explain Parameter Norm Penalties in Deep Learning. [5]
B. Explain about Learning XOR in Deep Feed Forward Networks. [5]

OR

- 12 A. Explain Back-Propagation in Deep Learning. [5]
B. Explain Regularization and Under-Constrained Problems in Deep Learning. [5]

- 13 A. Explain about Overfitting and Underfitting in ML. [5]
B. Explain in detail about Supervised and Unsupervised Learning Algorithms. [5]

OR

- 14 A. Explain about Parameter Tying and Parameter Sharing. [5]
B. Explain about Manifold Tangent Classifier in Deep Learning. [5]

- 15 A. Explain Briefly about Parameter Initialization strategies in Training Deep Models. [5]
B. Explain Different Data Types in CNN. [5]

OR

- 16 A. Explain about algorithms with Adaptive Learning Rates in Training Deep Models. [5]
B. What are the Methods to Approximate second-Order Methods for Training Deep Models. [5]
- 17 A. Explain about the Long Short – Term Memory In Recurrent Neural Networks. [5]
B. Write the Applications of Natural Language Processing. [5]

OR

- 18 A. What are the Challenges of Long-Term Dependencies in CNN. [5]
B. Write the Applications of Large-Scale Deep Learning. [5]
- 19 A. Write the Challenges of Unstructured Modeling for Deep Learning. [5]
B. Explain about Denoising Autoencoders. [5]

OR

- 20 A. Write the Advantages of Structured Modeling for Deep Learning. [5]
B. Explain about Denoising Autoencoders. [5]