



QP CODE: 23002944



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Reg No :

Name :

M Sc DEGREE (CSS) EXAMINATION, MARCH 2023

Third Semester

Faculty of Science

M Sc Artificial Intelligence

CORE - AI010301 - MACHINE LEARNING

2020 ADMISSION ONWARDS

60F77FA1

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. What is the meaning of Mean squared Error?
2. Explain about Bayesian Statistics
3. Explain about Hidden units.
4. What is Regularized & Under-constrained problems?
5. Explain Max pooling operation in CNN network
6. Briefly explain about encoder-decoder model
7. Explain about Under complete autoencoder
8. What is dynamic memory network?
9. What is deep learning?
10. Discuss about LSTM model

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Differentiate between Supervised and Unsupervised learning algorithms
12. Explain about the challenges in simple machine learning algorithms





13. Explain about: a) Parameter Norm Penalties b) L1 Parameter Regularization
14. Give a description about deep learning neural network with dropout
15. Briefly explain about LSTM with a neat diagram.
16. What are the 4 hyperparameters that need to be set before training an autoencoder
17. Give a detailed study on the working of Adversarial Generative network
18. How deep learning can be used for automatic image captioning

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Give a detailed discussion about the terms a) overfitting and underfitting b) supervised and unsupervised learning c) classification and regression
20. Briefly explain about a) Supervised learning b) Unsupervised learning c) Semi-supervised learning
21. Briefly explain about CNN Architecture with neat diagram
22. Explain about different application area of deep learning in NLP

(2×5=10 weightage)

