QP CODE: 24045071

24045071

Reg No : .....

Name : .....

M.Sc DEGREE (CSS) EXAMINATION, OCTOBER 2024

Third Semester

M.Sc ARTIFICIAL INTELLIGENCE

CORE - AI010301 - MACHINE LEARNING

2020 ADMISSION ONWARDS

8EF5BA81

Time: 3 Hours Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. Differentiate between overfitting and underfitting.
2. Differentiate between Machine learning and Deep learning algorithm.
3. What is the meaning of Rectified Linear Units activation function?
4. Draw the architecture of back-propagation algorithm.
5. Briefly explain about the layers in a regular neural network.
6. Explain pooling operation in CNN Network.
7. Explain about denoising autoencoder.
8. Explain about DBM attention model.
9. What is image segmentation?
10. Explain about any one application of deep learning in NLP.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Explain about Maximum Likelihood Estimation.
12. Differentiate between Supervised and Unsupervised learning algorithms.

13. Explain about Noise Robustness.

14. Briefly explain about early stopping.

15. Briefly explain about LSTM with a neat diagram.

16. Give a detailed study on Variational Auto-encoders.

17. Give a detailed study on the working of Adversarial Generative network.

18. Explain about the application of LSTM network model.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Give detailed study on different types of Machine learning Techniques with example.

20. Give detailed overview on the topics a) Bagging & Ensemble Methods b) Dropout

21. Explain about the architecture of Encoder-Decoder in detail.

22. Explain about any two application of deep learning in NLP.

(2×5=10 weightage)