

Register No.: ..... Name: .....

**SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)**

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

**SECOND SEMESTER M.TECH DEGREE EXAMINATION (Regular), JULY 2022**

(2021 Scheme)

**Course Code: 21SE206-A****Course Name: Deep Learning****Max. Marks: 60****Duration: 3 Hours****PART A***(Answer all questions. Each question carries 3 marks)*

1. What is Gradient Descent?
2. What is Hyper parameter tuning?
3. Explain the concept of dataset augmentation
4. How backpropagation is different in RNN compared to ANN?
5. List any three GL Applications.
6. What is Generative Learning?
7. Explain Deep Q Learning.
8. Explain any three RL applications

**PART B***(Answer one full question from each module, each question carries 6 marks)***MODULE I**

9. Explain different types of Machine Learning Algorithms (6)

**OR**

10. Draw and Explain the structure of single and multi-layer perceptron (6)

**MODULE II**

11. Explain the following evaluation metrics in deep learning:  
i) Precision  
ii) Recall  
iii) F-measure (6)

**OR**

12. Explain Better weight initialization methods used in Neural networks (6)

**MODULE III**

13. Illustrate the AlexNet architecture (6)

**OR**

14. Describe the L1 regularization technique. (6)

**MODULE IV**

15. Justify how an LSTM solve the vanishing gradient challenge? (6)

**OR**

16. Explain Bidirectional LSTMs (6)

**MODULE V**

17. Compare the various types of Auto-encoders and state its applications (6)

**OR**

18. Explain about Variational Auto-encoders (6)

**MODULE VI**

19. What is Reinforcement Learning and also explain Q Function (6)

**OR**

20. Explain Deep Reinforcement Learning Algorithms (6)

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