

Reg. No.:

Name :



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TERM END EXAMINATIONS (TEE) – December 2023 – January 2024

Programme	: B.Tech.	Semester	: Interim 2023-24
Course Title	: Deep Learning	Course Code	: CSA4020
Faculty Name	: Dr. Ramraj Dangi	Slot	: C14+F14
Time	: 1½ hours	Max. Marks	: 50

Answer ALL the Questions

Q. No.	Question Description	Marks
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PART - A (30 Marks)

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| 1 | (a) Explain the term Eigen value and Eigen vector. Reduce the dimension using Eigen Decomposition. | 10 |
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OR

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| | (b) What is Gradient-based Optimization? Differentiate between Gradient-ascent Optimization and Gradient-descent Optimization | 10 |
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| 2 | (a) Write short note on: <ul style="list-style-type: none">• Deep Autoencoder• Deep Boltzmann Machines• Deep Belief Network. | 10 |
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OR

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| | (b) Explain LSTM Architecture with their gates with its derivation? | 10 |
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| 3 | (a) Explain various types of optimizers used in neural networks. Write down their disadvantages and advantages. | 10 |
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OR

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| | (b) Explain Generative Adversarial Network with Its architecture and why batch normalisation is used in it? | 10 |
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PART - B (20 Marks)

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| 4 | What is auto encoder? Justify the advantage of auto encoder over principal component analysis for dimensionality reduction. | 10 |
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| 5 | Why optimization is required in deep learning? Explain various challenges in neural network optimization. | 10 |
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