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| S.No | Note: Answer All Questions | Marks | LEVEL | CO | PO |
| 1. | **a)** Define Artificial Intelligence (AI) and explain its major types.(5M)  **b)** What are the key differences between Machine Learning, Deep Learning, and AI? (5M) | 10 | K 1 | CO 1 | PO 2,  PO 1 |
| 2. | Explain the key differences between biological vision and machine vision. | 10 | K 1 | CO 2 | PO 2,PO3 |
| 3. | Compare and contrast **Keras, TensorFlow, Theano, and CNTK** in terms of usability and performance | 10 | K 1 | CO 3 | PO 3,  PO 1 |

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| S.No | Note: Answer All Questions | Marks | LEVEL | CO | PO |
| 1. | Explain the difference between training error and testing error in machine learning models. | 10 | K2 | CO 1 | PO 2,  PO 1 |
| 2. | Define computer vision and list its major applications. | 10 | K1 | CO 2 | PO 2,PO3 |
| 3. | **a)** Differentiate between **Keras, TensorFlow, Theano, and CNTK**. (5M)  **b)** Explain the **architecture of a simple neural network**. (5M) | 10 | K2 | CO 3 | PO 3,  PO 1 |

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| Code: **21P61602**  SR21 SET-2 | | |
| SRINIVASA INSTITUTE OF ENGINEERING AND TECHNOLOGY  UGC – Autonomous Institution | | |
| III B. Tech II Semester I MID Examinations, FEBRUARY -2025 | | |
| DEEP LEARNING | | |
| ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING | | |
| Time : 90 Mins | Time : 90 Mins | Time : 90 Mins |

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| Code: **21P61602**  SR21 SET-1 | | |
| SRINIVASA INSTITUTE OF ENGINEERING AND TECHNOLOGY  UGC – Autonomous Institution | | |
| III B. Tech II Semester I MID Examinations, FEBRUARY -2025 | | |
| DEEP LEARNING | | |
| ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING | | |
| Time : 90 Mins | Max. Marks:30 | Date:24.02.2025 |

|  |  |  |
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| Code: **21P61602**  SR21 SET-3 | | |
| SRINIVASA INSTITUTE OF ENGINEERING AND TECHNOLOGY  UGC – Autonomous Institution | | |
| III B. Tech II Semester I MID Examinations, FEBRUARY -2025 | | |
| DEEP LEARNING | | |
| ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING | | |
| Time : 90 Mins | Time : 90 Mins | Time : 90 Mins |

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| S.No | Note: Answer All Questions | Marks | LEVEL | CO | PO |
| 1. | How do confusion matrices help in evaluating classification models? | 10 | K2 | CO 1 | PO 1,  PO 5 |
| 2. | a) Define an artificial neural network (ANN) and explain its components. b) What are activation functions? Explain ReLU, Sigmoid, and Softmax activation unctions. | 10 | K2 | CO 2 | PO 1 |
| 3. | Explain the difference between **overfitting and underfitting** in neural networks | 10 | K2 | CO 3 | PO 1,  PO 5 |