|  |  |  |
| --- | --- | --- |
| **SISTec Logo-Revised (1).png** | | **SAGAR INSTITUTE OF SCIENCE & TECHNOLOGY(SISTec)**  **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**  **ASSIGNMENT-4** |
| **BRANCH** | **CSE** |
| **SESSION** |  |
| **NA NAME OF THE FACULTY:**  **SUBJECT/CODE :** | | |

|  |  |  |
| --- | --- | --- |
| Sr. No. | Enrollment No. | Set Number |
| 1 | 0187CE201038,40,76,95,0187cs201002,03 | SET-1 |
| 2 | 0187cs201004,05,06,07,09,10 | SET-2 |
| 3 | 0187cs201011,12,13,15,16, 17 | SET-3 |
| 4 | 0187cs201019,20,21,22,23,24 | SET-4 |
| 5 | 0187cs201025,26,27,28,29,30 | SET-5 |
| 6 | 0187cs201031,32,34,35,36,38 | SET-6 |
| 7 | 0187cs201039,40,41,43,44,45 | SET-7 |
| 8 | 0187cs201047,48,51,52,53,54 | SET-8 |
| 9 | 0187cs201055,56,58,59,60,61 | SET-9 |
| 10 | 0187cs201062,63,0536cs2012,14,41,60 | SET-10 |

**UNIT-4**

|  |  |  |  |
| --- | --- | --- | --- |
| **Q No.** | **QUESTIONS** | **Bloom’s Taxonomy Level** | **Course Outcomes** |
| **SET 1** | | |  |
| **1.** | **Define the sequence data. Why simple feed forward networks are not capable to implement the problems based on sequence data?** | **1(REMEMBERING)** | **CO4** |
| **2.** | **Explain Reinforcement Learning with an example. What are the various component of reinforcement system?** | **1(REMEMBERING)** | **CO4** |
| **3.** | **Write short notes on the following (any two):**   1. **Value iteration** 2. **Policy iteration** 3. **SARSA**   **Markov Decision Processes (MPD)** | **1(REMEMBERING)** | **CO4** |
| **SET 2** | | |  |
| **1.** | **Define the sequence data. Why simple feed forward networks are not capable to implement the problems based on sequence data?** | **1(REMEMBERING)** | **CO4** |
| **2.** | **Explain Q-learning algorithm assuming deterministic reward and actions.** | **1(REMEMBERING)** | **CO4** |
| **3.** | **Demonstrate the use of Q-learning with suitable example.** | **3(APPLYING)** | **CO4** |
| **SET 3** | | |  |
| **1.** | **Compare the Recurrent Neural Network with Simple dense networks. Also explain the fold and unfold architectures of neural network with suitable diagram.** | **2(UNDERSTANDING)** | **CO4** |
| **2.** | **Explain Reinforcement Learning with an example. What are the various component of reinforcement system?** | **1(REMEMBERING)** | **CO4** |
| **3.** | **Write short notes on the following (any two):**   1. **Value iteration** 2. **Policy iteration** 3. **SARSA**   **Markov Decision Processes (MPD)** | **1(REMEMBERING)** | **CO4** |
| **SET 4** | | |  |
| **1.** | **Compare the Recurrent Neural Network with Simple dense networks. Also explain the fold and unfold architectures of neural network with suitable diagram.** | **2(UNDERSTANDING)** | **CO4** |
| **2.** | **Explain Reinforcement Learning with an example. What are the various component of reinforcement system?** | **1(REMEMBERING)** | **CO4** |
| **3.** | **What are the elements of reinforcement learning?** | **1(REMEMBERING)** | **CO4** |
| **SET 5** | | |  |
| **1.** | **How to resolve the problem of vanishing/exploding gradient in deep RNN architectures. Also discuss vanishing/exploding gradient problem in detail.** | **6(CREATING)** | **CO4** |
| **2.** | **Describe the concept of MDP.** | **1(REMEMBERING)** | **CO4** |
| **3.** | **How reinforcement learning is different from Supervised and Unsupervised learning?** | **2(UNDERSTANDING)** | **CO4** |
| **SET 6** | | |  |
| **1.** | **How to resolve the problem of vanishing/exploding gradient in deep RNN architectures. Also discuss vanishing/exploding gradient problem in detail.** | **6(CREATING)** | **CO4** |
| **2.** | **Differentiate the GRU and LSTM RNN.** | **2(UNDERSTANDING)** | **CO4** |
| **3.** | **What are the elements of reinforcement learning?** | **1(REMEMBERING)** | **CO4** |
| **SET 7** | | |  |
| **1.** | **How gated recurrent network is different from recurrent network?** | **3(APPLYING)** | **CO4** |
| **2.** | **Describe the concept of MDP.** | **1(REMEMBERING)** | **CO4** |
| **3.** | **How reinforcement learning is different from Supervised and Unsupervised learning?** | **2(UNDERSTANDING)** | **CO4** |
| **SET 8** | | |  |
| **1.** | **Compare the Recurrent Neural Network with Simple dense networks. Also explain the fold and unfold architectures of neural network with suitable diagram.** | **2(UNDERSTANDING)** | **CO4** |
| **2.** | **How gated recurrent network is different from recurrent network?** | **3(APPLYING)** | **CO4** |
| **3.** | **Define Markov Decision Process. How reinforcement learning problem is modelled in MDP explain with suitable example?** | **1(REMEMBERING)** | **CO4** |
| **SET 9** | | |  |
| **1.** | **Differentiate the GRU and LSTM RNN.** | **2(UNDERSTANDING)** | **CO4** |
| **2.** | **Explain Q-learning algorithm assuming deterministic reward and actions.** | **1(REMEMBERING)** | **CO4** |
| **3.** | **Demonstrate the use of Q-learning with suitable example.** | **3(APPLYING)** | **CO4** |
| **SET 10** | | |  |
| **1.** | **How to resolve the problem of vanishing/exploding gradient in deep RNN architectures. Also discuss vanishing/exploding gradient problem in detail.** | **6(CREATING)** | **CO4** |
| **2.** | **Differentiate the GRU and LSTM RNN.** | **2(UNDERSTANDING)** | **CO4** |
| **3.** | **Define Markov Decision Process. How reinforcement learning problem is modelled in MDP explain with suitable example?** | **1(REMEMBERING)** | **CO4** |