 **III-B.TECH II -SEM- I MID EXAMINATIONS**

**Common to CSE/IT/CSD/CSM/CSC**

**Date: 05-03-25 Time:10:00 AM to11:30 AM**

**Subject: Machine Learning Max.Marks:30 M**

Part-A **5 x 2M = 10 M**

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|  |  | **BTL** | **CO** |
| **1.** | Define the concept learning and version space? | **1** | **1** |
| **2.** | What are the issues in Machine Learning? | **1** | **1** |
| **3.** | What is Entropy and information gain | **1** | **1** |
| **4.** | What is perceptron? | **4** | **2** |
| **5.** | Write the Curse of Dimensionality. | **1** | **3** |

**PART-B 4 x 5M = 20 M**

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| --- | --- | --- | --- |
|  |  | **BTL** | **CO** |
| **6.** | Explain about Designing a Learning system | **1** | **1** |
| **7.** | A table with black text  Description automatically generated What is Find-S algorithm and find maximally specific hypothesis for the given training with an example. | **2** | **2** |
| **8.** | Briefly explain about the Back propagation algorithm and derivation? | **1** | **2** |
| **9.** | Write a short notes on the following   1. Radial Basis functions . 2. The Brain and Neuron |  |  |
| **10.** | Explain about Decision tree with example | **5** | **2** |
| **11.** | Explain about Linear Regression with an example. | **3** | **3** |

**SCHEME OF EVALUATION**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.NO** | **THEORY** | **MARKS** | **TOTAL** |
| 1 | Concept learning definition | 1 | 2 |
| Version space | 1 |
| 2 | Issues in Machine Learning | 2 | 2 |
| 3 | Definition of Entropy | 1 | 2 |
| Definition of Information gain | 1 |
| 4 | Define perceptron | 2 | 2 |
| 5 | Curse of Dimensionality explanation | 2 | 2 |
| 6 | **Part-B** |  |  |
| Design a learning system | 5 | 5 |
| 7 | Find-S Algorithm | 3 | 5 |
| Example of Find-S Algorithm | 2 |
| 8 | Back propagation Algorithm explanation | 2 | 5 |
| Derivation of Back propagation | 3 |
| 9 | Radial Basis functions | 3 | 5 |
| The Brain and Neuron | 2 |
| 10 | Explain about Decision tree | 3 | 5 |
| Example Of Decision Tree | 2 |
| 11 | Explain about linear Regression | 3 | 5 |
| Example Of Linear Regression | 2 |
| **TOTAL MARKS** | | **40** | **30** |