**Lesson Plan of the 7th semester for session 2021-22**

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| **Name of the faculty:** | Ms. Anshita |
| **Designation:** | Assistant Professor |
| **Discipline:** | Computer Science and Engg. |
| **Semester:** | 7th |
| **Subject:** | **Neural network (**PCC**-**CSE-401G) |
| **Lesson Plan duration:** | 15 weeks |
| **Work Load per week in hours:** | Lectures- 03 |

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| **Week** | | **Lecture**  **day** | **Topic** |
| 1 | 1 | | Overview of biological neurons: Structure of biological neurons relevant to ANNs |
| 2 | | Models of ANNs; Feedforward & feedback networks |
| 3 | | learning rules; Hebbian learning rule |
| 2 | 4 | | perception learning rule |
| 5 | | delta learning rule |
| 6 | | Widrow-Hoff learning rule |
| 3 | 7 | | correction learning rule |
| 8 | | Winner –lake all learning rule |
| 9 | | Single layer Perception Classifier: Classification model |
| 4 | 10 | | Features & Decision regions; training & classification using discrete perceptron algo |
| 11 | | single layer continuous perceptron networks for linearly seperable classifications. |
| 12 | | Multi-layer Feed forward Networks: linearly non-seperable pattern classification |
| 5 | 13 | | Delta learning rule for multi-perceptron layer |
| 14 | | Generalized delta learning rule |
| 15 | | Error back-propagation training |
| 6 | 16 | | learning factors, examples |
| 17 | | Single layer feed back Networks: Basic Concepts |
| 18 | | Hopfield networks |
| 7 | 19 | | Training & Examples |
| 20 | | Associative memories: Linear Association |
| 21 | | Basic Concepts of recurrent Auto associative memory |
| 8 | 22 | | Retrieval algorithm |
| 23 | | storage algorithm |
| 24 | | By directional associative memory |
| 9 | 25 | | Architecture |
| 26 | | Association encoding & decoding |
| 27 | | Stability |
| 10 | 28 | | Self organizing networks |
| 29 | | UN supervised learning of clusters |
| 30 | | Winner-take-all learning |
| 11 | 31 | | Recall mode |
| 32 | | Initialisation of weights |
| 33 | | Separability limitations |
| 12 | 34 | | Assignment |
| 35 | | Revision of unit 1. |
| 36 | | Test of unit 1 |
| 13 | 37 | | Assignment |
| 38 | | Revision of unit 2. |
| 39 | | Test of unit 2. |
| 14 | 40 | | Revision of unit 3. |
| 41 | | Test of unit 3. |
| 42 | | Revision of unit 4. |
| 15 | 43 | | Test of unit 4. |
| 44 | | Revision of whole syllabus |
| 45 | | Problem solving. |