Code No: RR410212 **RR** **Set No. 2**

**IV B.Tech I Semester Examinations,NOVEMBER 2010**
**NEURAL NETWORKS AND APPLICATIONS**
**Electrical And Electronics Engineering**

**Time: 3 hours** **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**

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1. The MAXNET with four output nodes, P=4 receives the input vector.
   $Y^0 = [0.5\ 0.6\ 0.7\ 0.8]^t$
   (a) Find the $\in$ values that would be required to suppress the output of the weakest node exactly to the zero values after the first cycle.
   (b) Find subsequent responses of the network, $y^1$ and $y^2$, for the computed value of $\in$. [8+8]
2. What is gradient type Hopfield Network? Differentiate between Discrete time Hopfield Network and gradient type Hopfield network. [16]
3. (a) What are the requirements of learning laws.
   (b) Distinguish between activation and synaptic dynamics models. [16]
4. (a) Distinguish between Multi-layer Perceptron and Multi-layer feed forward neural network.
   (b) What are the ill-possed problems in the context of training a Multi-layer feed forward network. [16]
5. What do you understand by finite resolution and conversion error. Explain the circuit producing a single digitally programmable weight employing a multiplying D/A converters (MDAC). [16]
6. Discuss the classification of neural nets based on training, architecture and activation functions used. [16]
7. Write and discuss about Single layer Discrete Perceptron Training Algorithm. [16]
8. Derive a numerical solution for finding the solution of differential equation. [16]

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Code No: RR410212 **RR** **Set No. 4**

**IV B.Tech I Semester Examinations,NOVEMBER 2010**
**NEURAL NETWORKS AND APPLICATIONS**
**Electrical And Electronics Engineering**

**Time: 3 hours** **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**

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1. The MAXNET with four output nodes, P=4 receives the input vector.
   $Y^0 = [0.5\ 0.6\ 0.7\ 0.8]^t$
   (a) Find the $\in$ values that would be required to suppress the output of the weakest node exactly to the zero values after the first cycle.
   (b) Find subsequent responses of the network, $y^1$ and $y^2$, for the computed value of $\in$. [8+8]
2. What is gradient type Hopfield Network? Differentiate between Discrete time Hopfield Network and gradient type Hopfield network. [16]
3. What do you understand by finite resolution and conversion error. Explain the circuit producing a single digitally programmable weight employing a multiplying D/A converters (MDAC). [16]
4. Derive a numerical solution for finding the solution of differential equation. [16]
5. Discuss the classification of neural nets based on training, architecture and activation functions used. [16]
6. Write and discuss about Single layer Discrete Perceptron Training Algorithm. [16]
7. (a) What are the requirements of learning laws.
   (b) Distinguish between activation and synaptic dynamics models. [16]
8. (a) Distinguish between Multi-layer Perceptron and Multi-layer feed forward neural network.
   (b) What are the ill-possed problems in the context of training a Multi-layer feed forward network. [16]

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Code No: RR410212 **RR** **Set No. 1**

**IV B.Tech I Semester Examinations,NOVEMBER 2010**
**NEURAL NETWORKS AND APPLICATIONS**
**Electrical And Electronics Engineering**

**Time: 3 hours** **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**

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1. Discuss the classification of neural nets based on training, architecture and activation functions used. [16]
2. What is gradient type Hopfield Network? Differentiate between Discrete time Hopfield Network and gradient type Hopfield network. [16]
3. (a) What are the requirements of learning laws.
   (b) Distinguish between activation and synaptic dynamics models. [16]
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7. Derive a numerical solution for finding the solution of differential equation. [16]
8. The MAXNET with four output nodes, P=4 receives the input vector.
   $Y^0 = [0.5\ 0.6\ 0.7\ 0.8]^t$
   (a) Find the $\in$ values that would be required to suppress the output of the weakest node exactly to the zero values after the first cycle.
   (b) Find subsequent responses of the network, $y^1$ and $y^2$, for the computed value of $\in$. [8+8]

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Code No: RR410212 **RR** **Set No. 3**

**IV B.Tech I Semester Examinations,NOVEMBER 2010**
**NEURAL NETWORKS AND APPLICATIONS**
**Electrical And Electronics Engineering**

**Time: 3 hours** **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**

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   $Y^0 = [0.5\ 0.6\ 0.7\ 0.8]^t$
   (a) Find the $\in$ values that would be required to suppress the output of the weakest node exactly to the zero values after the first cycle.
   (b) Find subsequent responses of the network, $y^1$ and $y^2$, for the computed value of $\in$. [8+8]
8. Derive a numerical solution for finding the solution of differential equation. [16]

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