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نات اتصال

<b>University</b> : Menoufia <b>Faculty</b> : Electronic <b>Engineering</b> <b>Department</b> : Electronics and Electrical Communications <b>Academic level</b> : BSc, Third Year <b>Course Name</b> : Elective Course (3) (Neural Networks) <b>Course Code</b> : EEC 326	 <p>جامعة المنوفية</p>	<b>Date</b> : 24 / 6/2019 <b>Time</b> : 3 Hours <b>No. of pages</b> : 2 <b>Full Mark</b> : 70 Marks <b>Exam</b> : Final Exam <b>Examiner</b> : Dr. Fathi Abd El-Samie
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**Answer the following questions:**

**Question 1:** (Answer two points only)

(5 Marks for each point)

- 1- Explain how the neural networks can be used to classify vertices of a cube in a 3D space.
- 2- Explain the basic idea of signal prediction based on the adaptive LMS algorithm.
- 3- What is meant by training of a neural network? Explain the training and testing strategies used for speaker identification.

**Question 2:** (Answer two points only)

(5 Marks for each point)

- 1- Show how neural networks can be used for automatic speaker identification. Explain the extraction method for the features used for automatic speaker identification.
- 2- What is the difference between supervised and unsupervised learning.
- 3- Explain the basic idea of neural compression of digital images.

**Question 3:** (Answer two points only)

(5 Marks for each point)

- 1- Explain the basic idea of device modeling based on neural networks.
- 2- Explain the steps of MPEG image compression.
- 3- Compare between the different activation function used in neural networks.

**Question 4:** (Answer two points only)

(5 Marks for each point)

- 1- In wireless communication systems, it is possible to switch between different modulation formats to accommodate for varying