Benha University
Faculty of Engineering (at Shoubra)
Electrical Engineering Department
3rd Year (Computer Systems Engineering**)**

Midterm Exam
Subject: Selected Topics - ECE 344C
Date: Thu 26/03/2015
Duration: 1 hour

№ of Questions: 5 in 1 page(s)
Total Mark: 15

Attempt the following questions.

Consider the following training data and answer the question (**3** Marks each):

1.
   a) How many *examples, instances, attributes, and classes*?
   b) Classify every attribute as *nominal*, *ordinal*, or *interval*.

2. Represent the output of classification learning as an annotated decision tree assuming that:
   a) **Two** attributes are used
   b) **Three** attributes are used

3. Represent the output of classification learning using linear models and specify classification error assuming that **two** attributes are used.

4. Represent the output of classification learning using rules and specify classification error assuming that **three** attributes are used.

5. Apply instance-based representation assuming that **two** attributes are used and specify:
   a) The two attributes
   b) The normalized values of the two attributes
   c) The learning prototypes

ID	A1	A2	A3	A4	Class
0	T	T	0.3	opaque	0
1	T	F	0.7	translucent	0
2	F	F	0.4	opaque	0
3	F	T	0.9	translucent	0
4	T	F	0.9	opaque	0
5	F	T	0.2	transparent	1
6	T	F	0.2	transparent	1
7	F	F	0.8	translucent	1
8	F	T	0.4	transparent	1
9	T	F	0.1	translucent	1

Good Luck
Dr. Islam Elshaarawy