

**Faculty of Engineering & Technology**

**Electrical & Computer Systems Engineering Department**

**ENCS515: Midterm Exam**

**Date: 03.11.2015**

**Name: ID: Section:**

**Q1. Write a prolog code to find the middle element of a list. The function takes the list as an argument and a certain variable to store the result.**

 **(10 marks)**

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**Q2.**

**A- Explain what is the function of ‘Supervised Learning’? (3 marks)**

**B-Why features selection is used in machine learning? (3 marks)**

**C- Explain the concept of Cross-validation? (2 marks)**

**Q3. Based on the confusion matrix bellow, calculate the following measures:**

 **(3 marks)**

 **a b <-- classified as**

 **200 18 | a = class\_0**

 **48 361 | b = class\_1**

**1.Accuracy**

**2. False Positive Rate**

**Q4. True or False: (4 marks)**

1. ---------**Classification algorithm creates a model from the testing data that can be used to predict the classes of training data.**
2. **-------Discretization filter will be useful when applied to gender attribute.**
3. **------ Clustering is an unsupervised Machine Learning technique of finding patterns in the data.**
4. **-------Confusion matrix size should be 2X2.**

