**Quizz #2**

IST number: _____

Name: _____

**Duration: 20 minutes**

**Provide clear, legible, and succinct answers.**
**Always justify your assumptions.**

**Questions**

1.  List 3 methods (of different nature), which can be employed to verify a person's identity.

    For each, indicate at least one advantage and one disadvantage.

    | Identity verification method | Advantages | Disadvantages |
    |---|---|---|
    | | | |
    | | | |
    | | | |

2.  Biometrics recognition can operate in identification or verification modes.

    What is the main difference between them?

    For each case, indicate one metric that is typically used for evaluation purposes.

3.  In the context of biometric recognition what is understood by intra-class variation?

    Give an example of why this problem exists.

4.  Is there any advantage in combining the information captured by two different sensors, which acquire information of the same biometric trait? Why?

5.  Give 2 examples of applications where biometric recognition can be used, exemplifying how biometrics would provide an advantage.

Solutions

1

*(password – if well chosen can be hard to break; can be 'evesdropped'*
*token card – simple; can be borrowed*
*biometric – intrinsic of a person; cannot be easily changed)*

2

*(identification – 1:N, Rank-1 identification rate, CMC curve*
*verification – 1:1, FNMR, ROC curve)*

3

*(variation of the samples acquired from the same individual; e.g. due to aging)*

4

*(yes, if different features are acquired, they will complement each other, enriching the resulting*
*feature set)*

5

*(Law enforcement and public security (criminal/suspect identification)*
*Border, travel, and migration control(traveller/migrant/passenger identification))*